# Appendix C
# Traffic Study

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# Schofield Generating Station Project

# FINAL

# Traffic Study

**Prepared By**
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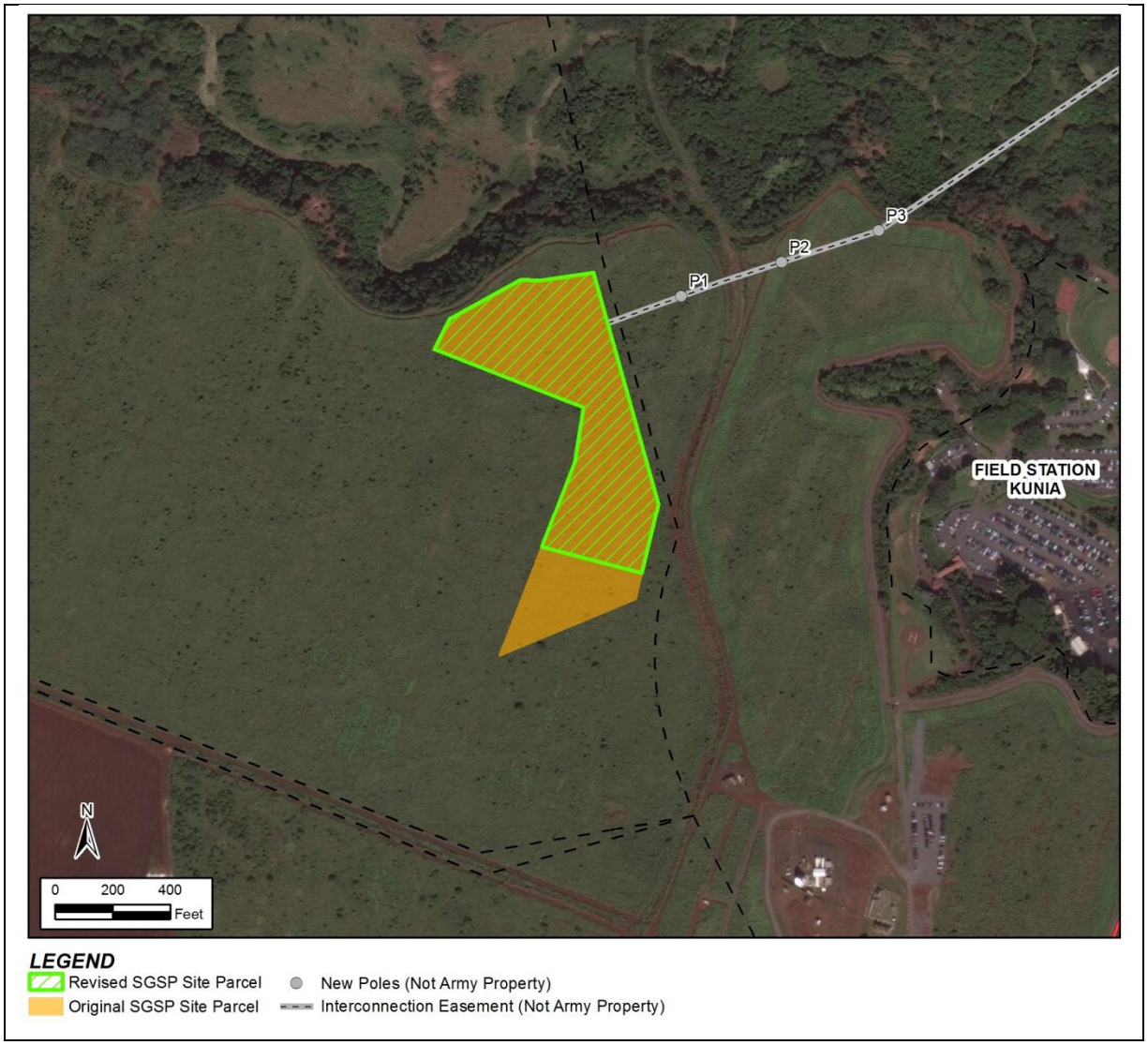
**May 2014**

**Errata**

Prepared on June 4, 2014

After completing the Traffic Study in support of the Joint Environmental Impact Statement (EIS) for the Schofield Generating Station Project, the Army and Hawaiian Electric reduced the size of the parcel on which the generating station will be located from 10.31 acres to 8.13 acres. The map below shows the reduced parcel indicated by hatch marks. Please note that the maps and discussions within the report are based on the larger 10.31 parcel, and therefore do not match the parcel size discussed in the EIS. The reduction in parcel size does not necessitate the revision of Traffic Study because it does not materially change the findings of this report.



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# EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers is preparing an Environmental Impact Statement for the Schofield Generating Station Project (SGSP) at Schofield Barracks (SB), Hawaii. The purpose of the proposed action is to establish a stable, renewable source of power that provides energy security for SB, Wheeler Army Airfield (WAAF), and Field Station Kunia on the island of Oahu, Hawaii.

This study presents the results of the traffic impact analysis for the proposed biodiesel plant establishment. The focus of the study is the peak hour traffic impacts resulting from the construction and operation of the biodiesel facility.

Today Kunia Road traffic near SB experiences delays and congestion during peak hours. Grow The Army (GTA) Phase 1 is under construction and will be completed and fully occupied by 2017. Traffic on Kunia Road and Lyman Road will continue experiencing delays because future traffic growth will increase demand on the study area intersections.

The traffic volumes that will be generated by the construction and operation of the SGSP project on the roadway network are minimal. Comparing with the future No-Build scenario, the increase on average vehicle delays from construction traffic is less than 4 seconds per vehicle, and the effects from SGSP operations are negligible.

# 1. INTRODUCTION

This traffic study analyzes the effects of building and operating a power generating station on 10.31 acres at Schofield Barracks (SB). The Schofield generating station project (SGSP) consists of a 10.31-acre parcel (generating station parcel) and a 2.5-acre linear interconnection easement. The heavily overgrown, undeveloped generating station parcel was once used for growing pineapples and is situated along the eastern boundary of the South Range Acquisition Area. It is about a third of a mile south of Lyman Road, about half a mile west of Kunia Road, and about 150 feet north of the Grow the Army (GTA) construction offices that are accessed from Hauula Street. This site is adjacent to the GTA infrastructure facilities, which are currently under construction. The long-term access route will go through Lyman Road and the access road for the GTA infrastructure facilities in SB. ***Figure 1*** presents the project site location and traffic study intersections.


**Figure 1: SGSP Site and Traffic Intersections Studied**

The traffic study includes eight intersections on Kunia Road and Lyman Road as shown in ***Figure 1***. Of the eight intersections, six are signal controlled and two are stop sign controlled (Flagler Road and Maili Street intersections on Lyman Road).

This study will evaluate traffic operations for 2014 (current year) and 2017 (estimated year plant will become operational). The construction traffic impact will be evaluated for 2017. It is

anticipated that the Flagler Road and Lyman Road intersection will be improved to a signalized intersection before the plant becomes operational, and the Maili Street intersection will remain a stop sign-controlled intersection.

The operations of these intersections were evaluated for a typical weekday during AM and PM peak hours for the following scenarios:

- Existing 2014 AM and PM Peak Hour Traffic Operations
- 2017 No-Build AM and PM Peak Hour Traffic Operations
- 2017 Construction AM and PM Peak Hour Traffic Operations
- 2017 Build AM and PM Peak Hour Traffic Operations

# 2. EXISTING CONDITIONS

## 2.1 Street Network

### Kunia Road (SR 750)

Kunia Road is State Route (SR) 750. It has no access control, and is not part of the National Highway System. The posted speed limit on Kunia Road is 35 miles per hour. At the north end, Kunia Road is a four-lane divided north-south major highway, and becomes a two-lane undivided roadway south of the Lyman Road intersection. At the north end, Kunia Road connects to SR 99 (Kamehameha Highway) with a signalized "T" intersection. Kunia Road, SR 99, and Highway (HI) 2 are three parallel roadways connecting the Pearl City/Waipahu area to Wahiawa, SB, and Wheeler Army Airfield (WAAF).

Most intersections on Kunia Road are signalized intersections within the study area. The three major intersections are SR 99, Foote Avenue, and Lyman Road (see ***Figure 2***). The Foote Avenue intersection is one of the two major gateways for SB. The Lyman Road intersection connects to two entrances—to the east is WAAF, and to the west is SB. There are sidewalks on the east side of Kunia Road from the Lyman Road intersection to the Wilikina Drive (SR 99) intersection. On the west end, sidewalk exits are only at the north end of Kunia Road. Utility poles are on the east side of Kunia Road, south of the study area, and cross to the west side south of Lyman Road. Roadway lighting poles are on both sides of Kunia Road north of the Lyman Road intersection.

Per the State of Hawaii, the 2009 Annual Average Daily Traffic (AADT) on Kunia Road in the study area is approximately 13,700 vehicles. The estimated 2014 AADT is approximately 15,400 vehicles.

### Lyman Road

Lyman Road is a two-lane east-west roadway going through the SB post. It connects Kunia Road at the entrance gates to both SB and WAAF, and it extends to the west end of the SB post. There are administrative and storage facilities at the east portion of Lyman Road. At the west portion of Lyman Road, it connects mainly to military housing. Lyman Road connects to the GTA infrastructure facilities through the Mellichamp Road extension at the west end of Lyman Road. The facilities and roadways are under construction.

The Humphreys Road intersection is the only signalized intersection on Lyman Road on the post. There are plans to add signals to the Flagler Road intersection in the near future to address the increasing traffic volumes.

The traffic volumes vary along Lyman Road. A 2009 traffic count shows the weekday average daily traffic by the gate was more than14,400 vehicles per day, and decreased to less than 2,000 vehicles per day at the west end section.

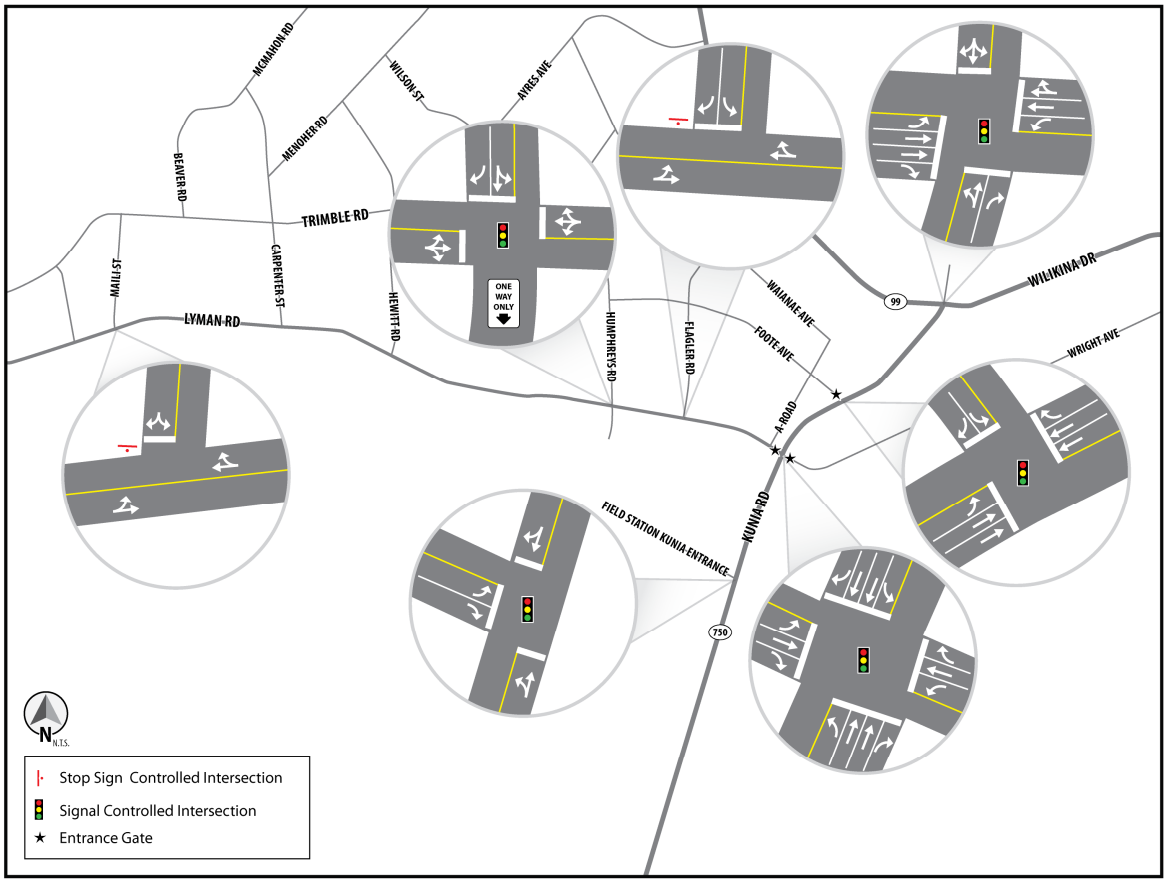


**Figure 2. Existing Lane Channelization**

## 2.2 Existing 2014 AM and PM Peak Hour Traffic Volumes

The peak hours observed on Lyman Road were 8:00 a.m.–10:00 a.m. for the morning and 4:00 p.m.–5:00 p.m. for the afternoon. The peak on Kunia Road (SR 750) is between 6:30 a.m.–8:30 a.m. and 3:30 p.m.–4:30 p.m. To capture the overall traffic peak for the study area, turn movement counts were conducted between 7:30 a.m. –9:30 a.m. and 3:30 p.m. –5:30 p.m. The turn movement volumes were then reviewed and balanced for all the study intersections to form the existing volumes.

***Figure 3*** shows the existing 2014 AM and PM peak hour traffic volumes and turning movement counts used as a baseline for this analysis. ***Appendix A*** provides traffic count data.

Kunia Road (SR 750) carries heavy traffic during AM and PM peak hours. The Kunia Road and Wilikina Drive (SR 99) intersection experiences long queues and delays during both AM and PM peak hours. The intersections at the Lyman Gate and Foot Avenue Gate entrances to the military installations have long cycles and delays.

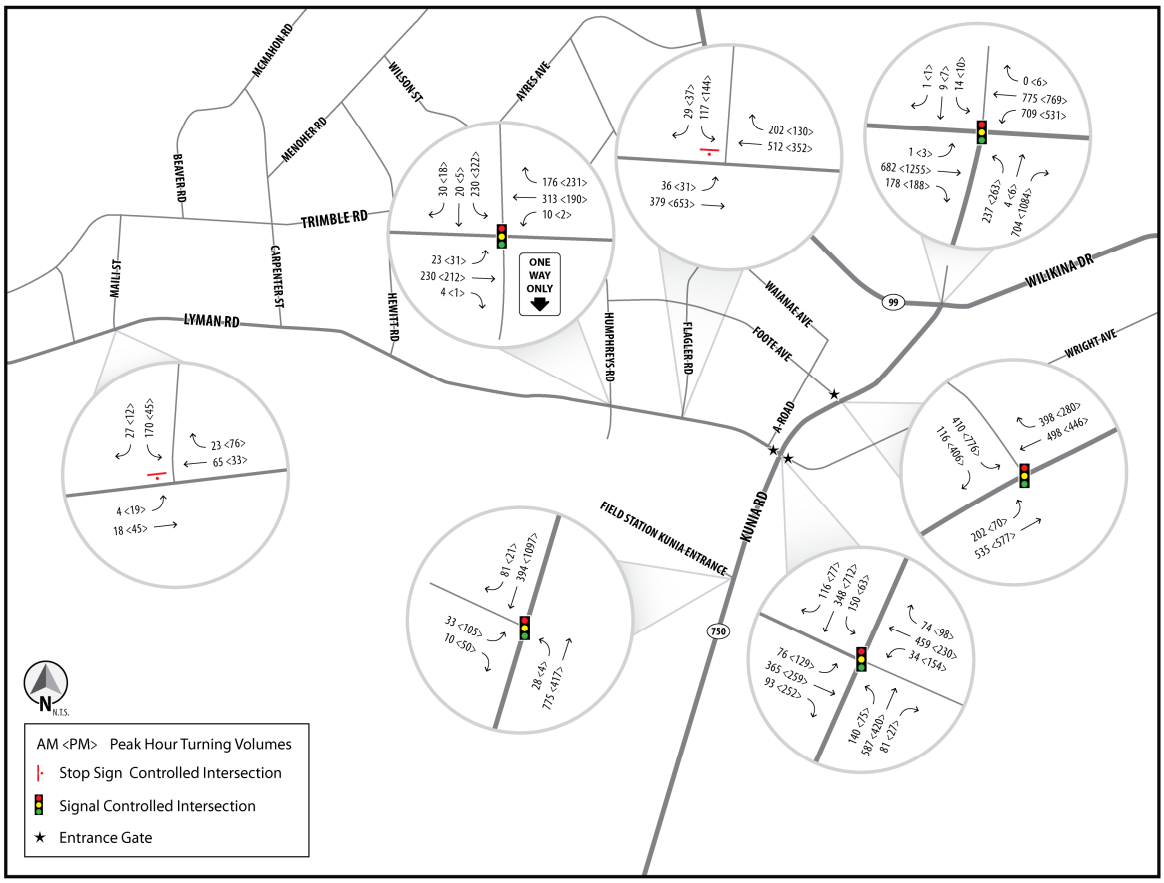


**Figure 3. Existing 2014 Peak Hour Traffic Volumes**

## 2.3 Existing 2014 AM and PM Peak Hour Traffic Operations

Trafficware's *Synchro 8* traffic modeling software was used to analyze traffic operations. Synchro is a traffic analysis software program that is based on methods outlined in the 2000 *Highway Capacity Manual* (HCM). The procedures measure the traffic flow obtained from traffic counts and future traffic forecasts to produce measures of effectiveness such as delay per vehicle, intersection level of service (LOS), and intersection queue length.

LOS, which ranges from LOS A to LOS F, is a tool to qualitatively measure the operational conditions of the traffic operations of the intersection. LOS A indicates the free-flow traffic with little or no delay, while LOS F indicates extreme conditions with lengthy delays. ***Appendix B*** provides an expanded definition of LOS.

***Table 1*** lists the results of the existing AM and PM peak hour traffic operations.

**Table 1. Existing 2014 Peak Hour LOS and Average Delay (sec/veh) Summary**

| *Evaluated Intersection* | *Intersection Control* | *Existing AM Peak 2014 LOS* | *Existing PM Peak 2014 LOS* |
|---|---|---|---|
| **Kunia Road & Wilikina Dr. (SR 99)** | **Signalized** | **D** (44.1 sec/veh) | **D** (42.3 sec/veh) |
| **Kunia Road & Foote Avenue** | **Signalized** | **C** (33.1 sec/veh) | **C** (33.3 sec/veh) |
| **Kunia Road & Lyman Road** | **Signalized** | **D** (50.4 sec/veh) | **D** (38.3 sec/veh) |
| **Kunia Road & Field Station Kunia Entrance** | **Signalized** | **A** (6.6 sec/veh) | **B** (18.0 sec/veh) |
| **Lyman Road & Flagler Road** | **Stop Sign** | **F** (53.8 sec/veh) | **F** (83.9 sec/veh) |
| **Lyman Road & Humphreys Road** | **Signalized** | **B** (12.6 sec/veh) | **B** (11.0 sec/veh) |
| **Lyman Road & Maili Street** | **Stop Sign** | **B** (10.7 sec/veh) | **B** (10.3 sec/veh) |

*Note*: sec/veh = seconds per vehicle.

***Appendix C*** provides detailed LOS output reports from Synchro.

Most intersections operate at LOS D or better during both AM and PM peak hours for existing conditions, except the Lyman Road and Flagler Road intersection, which is LOS F. The Flagler Road intersection is stop sign controlled; therefore, the intersection LOS is determined by the average delays on Flagler Road. The delay indicates that it takes a long time for a vehicle on Flagler Road to find gaps in Lyman Road traffic. This supports the plan to add a traffic signal and other improvements at this location.

The Kunia Road and Wilikina Drive (SR 99) intersection suffers long queues and delays during both AM and PM peak hours, especially the Wilikina Drive westbound left turn to southbound Kunia Road movement. At this location the short left turn pocket on Wilikina Drive westbound is not long enough to hold the queuing at the intersection, and spills back into the inside through lane, which worsens the intersection operations.

The Kunia Road and Lyman Gate intersection has long delays and queues due to the large traffic demands and long signal cycles. The security check at the gate entrance also increases the delay and queues at this intersection.

# 3. FUTURE TRAFFIC VOLUME FORECASTING

It is anticipated that by the end of 2017 the project will be built and fully occupied. The 2017 forecasted traffic demand is comprised of three elements: (1) existing traffic, (2) background traffic growth between 2014 and 2017, and (3) forecasted project-generated traffic. The sum of all three results in the total forecasted traffic volumes for the built condition.

## 3.1 Background Traffic Growth

The background traffic consists of the future traffic incremental growth added to the existing traffic volumes. This traffic volume growth does not include the project or major developments in the project vicinity.

In determining the traffic growth rate, average daily traffic on Kunia Road was reviewed. The 2009 AADT on Kunia Road is approximately 13,700 vehicles in the study area. The estimated 2014 AADT is approximately 15,400 vehicles. This represents a 2.5 percent straight line annual growth from 2009 to 2014. The 2.5 percent straight line annual growth was used to project peak hour traffic volumes for both Kunia Road and Lyman Road intersections, and applied to existing traffic volumes to generate future background traffic. With limited information, this percentage growth rate represents a reasonable average for the purpose of establishing future background traffic levels. The actual growth rates experienced by the different intersections might be higher or lower than this average.

## 3.2 Grow The Army Project Traffic

GTA Phase 1 is under construction and will be completed and occupied before 2017. The project expands SB capacity and will generate new traffic volumes in the study area. The GTA traffic is not included in the background traffic growth. Per the Transportation Impact Analysis Report[1] completed by Feher & Peers Transportation Consultants in 2009, the total traffic generated by the GTA development are 690 inbound and 100 outbound vehicle trips during the AM peak hour, with the reverse (100 inbound trips and 690 outbound trips) occurring during the PM peak hour. 70 percent of personnel at the GTA site were assumed to originate from within the base during the AM peak hour, while 30 percent will travel through Lyman Gate. The majority of on-site personnel were expected to use Menoher Road, Carpenter Street, Trimble Road, and Mellichamp Road to get to the GTA site.

The GTA traffic study did not state how traffic was assigned on Kunia Road outside Lyman Gate. For the purpose of this study, the traffic assignment was assumed based on Lyman Gate AM peak hour traffic volume distributions— 45 percent of traffic to/from north on Kunia Road, and 55 percent traffic to/from south on Kunia Road.

[1] Final Transportation Impact Analysis: FY09 Grow the Army Project at Schofield Barracks, June 29, 2009

## 3.3 Estimated Construction Traffic

During construction, the site will be accessed through a temporary access road from Kunia Road south of the Field Station Kunia entrance signalized intersection. Construction is estimated to start in May 2016 and finish by June 2017.

Hawaiian Electric Company (Hawaiian Electric) and Quanta's estimates indicate that there will be two types of traffic impacts: (1) light personal and noncommercial traffic, and (2) commercial traffic.

**Light personal and noncommercial traffic:**

- Vehicles on-site and personnel vehicle impact – Average vehicles on-site during construction – Using 1.5 occupants per vehicle.
- Seventy-seven average vehicles will result in 62 noncommercial vehicles commuting daily from September 2016 to July 2017.
- Ninety-eight peak vehicles will result in 79 noncommercial vehicles commuting daily from December 2016 to June 2017.
- Both average and peak vehicles on site traffic was considered twice a day (6:00 a.m. – 8:00 a.m. and 4:00 p.m.–6:00 p.m. Monday through Saturday).

For the purpose of the traffic study, a single-occupant vehicle is assumed for the 98 peak vehicles to ensure the traffic volume is on the conservative side.

A portion of the construction traffic will come from the north on Kunia Road, with the other portion coming from the south. Only the traffic from the north will affect the intersections on Kunia Road within the study area. There will be no construction traffic impacts on Lyman Road intersections.

There is no information to determine the distribution of this construction traffic. For the purpose of this study, it was assumed that half of the traffic comes from the north on Kunia Road, and half comes from the south.

**Commercial Traffic:**

- Light, local commercial delivery traffic is defined as weighing between 5 – 8 tons class delivery vehicles from the local surrounding markets, and will range from five to seven deliveries a day starting in May 2016 and continuing through July 2017.
- Heavy loads, 10 tons and greater, will range from 3 to 4 loads a day starting in August 2016 and continuing through February 2017.
- Wide and permitted loads for heavy equipment (modules, Wärtsiläs, radiators, and the like) are planned between November 2016 and April 2017.

Hawaiian Electric will use the Barbers Point Harbor as the point of entry for major equipment. The vehicles will leave the port traveling southeast on Malakole Street (HI-95); make a left on Kalaeloa Boulevard (HI-95) to the entrance of HI-1 East; use exit 5 to go north on Kunia Road (HI-750) for approximately 5 miles; and then make a left on the unimproved construction road, entering the project site on the south end.

All commercial traffic will come from the south on Kunia Road and will not affect the studied intersections.

## 3.4 Project Operation Traffic

Upon project completion, the temporary access road will be closed. All traffic will access the site through the Lyman Gate and the newly built Mellichamp Road extension for GTA facilities.

### Initial Fuel Delivery Traffic

Before normal operation begins, the facility fuel tanks need to be filled. According to Hawaiian Electric staff, initial fuel deliveries would occur on workdays at non-peak hours, and:

- Urea would require three 40-foot containers, one container per week.
- Fuel would be offloaded one truck at a time, and each truck will take an hour. Filling the the storage tanks will require 6 trucks per day and 60 fuel trucks over 2 weeks.
- Lube oil would require three trucks, one truck per day for 3 days.

Because the initial fueling delivery occurs during non-peak hours, peak hour traffic will be unaffected. Therefore, the initial fuel delivery traffic was not included in the traffic study.

### Normal Operational Traffic

According to Hawaiian Electric staff, normal facility operation requires three shifts, and each shift has one operator and one supervisor. There will be one shift change during the AM peak hours, and no shift changes during the PM peak hours. There will also be an off-duty shift during the AM peak hours. It is assumed that all personnel will drive in a single-occupancy vehicle. This operation will generate six personal vehicles in the morning peak hours—four inbound and two outbound vehicles. For the purposes of this traffic study, it is assumed this traffic will be split equally on Kunia Road in the north and south directions.

It is anticipated that full operation of the facility might require a daily maximum of 26 delivery trucks for fuel/urea and other deliveries. These trucks would spread out evenly over the 24-hour period. For the purpose of the traffic study, it is assumed there will be two truck deliveries during AM peak hours and no truck delivery during PM peak hours.

Overall, the operational traffic is minor during the AM peak hours. There is no induced traffic during the PM peak hours. This traffic study, therefore, will only analyze the AM peak hours for the operation traffic volumes.

# 4. 2017 NO-BUILD TRAFFIC OPERATIONS

The Army is planning to add a traffic signal to the Flagler Road and Lyman Road intersection. It is assumed that this improvement will be constructed before 2017 and become part of the No-Build roadway network. The improvement will not change the roadway network capacity, and no traffic volume will be added to the network. ***Figure 4*** depicts the 2017 roadway intersection geometry.

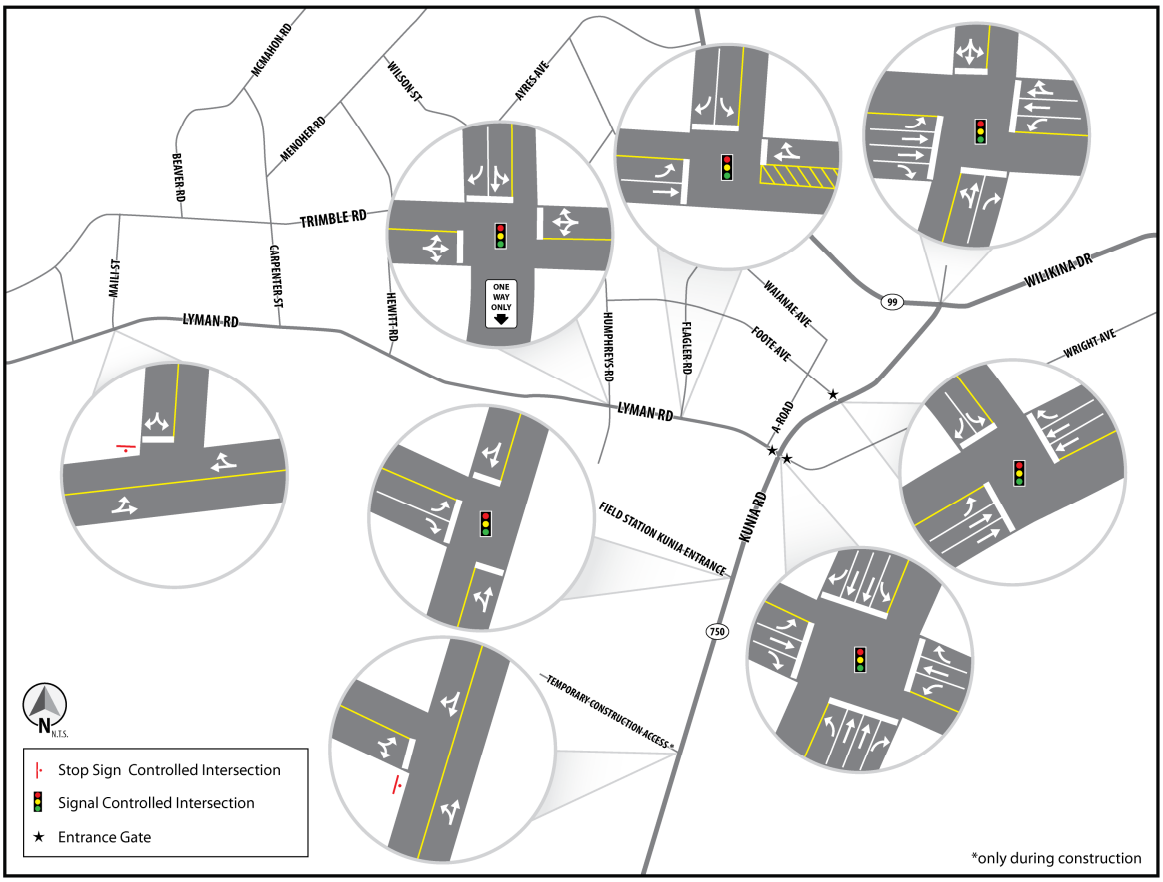


**Figure 4. 2017 Intersection Channelization**

The No-Build assumes the project will not be built. The construction for the GTA Phase 1 facilities will be finished and fully occupied before 2017. Therefore, the No-Build scenario will include traffic generated by GTA Phase 1 facilities. The 2017 No-Build scenario traffic comprises three elements: (1) existing traffic, (2) background traffic growth, and (3) GTA traffic. ***Figure 5*** shows the 2017 No-Build traffic volumes**.**

2017 No-Build Synchro models are based on the 2014 existing Synchro model. New traffic signal and intersection geometric improvements are added at Flagler Road and Lyman Road per design plans. The geometric and network data for the rest of the network was not modified.

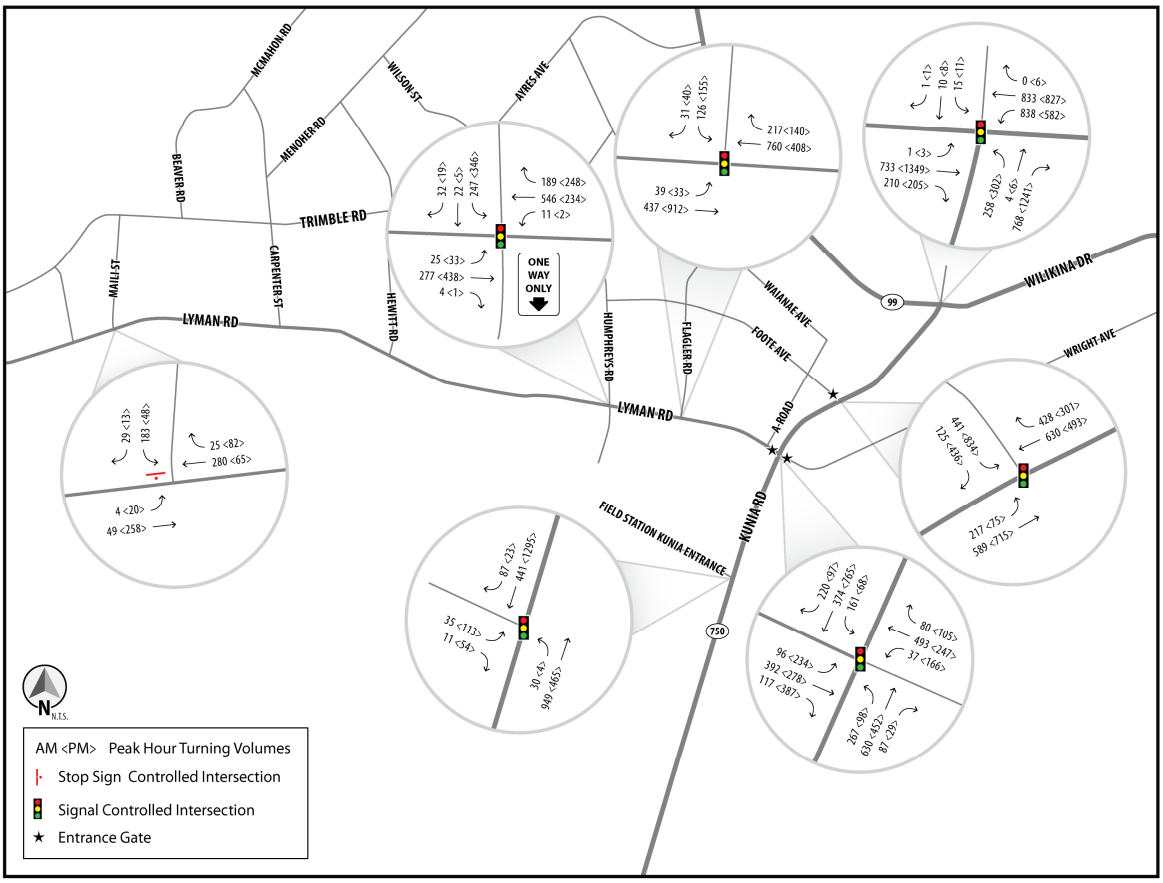


**Figure 5. 2017 No-Build Peak Hour Traffic Volumes**

Trafficware's *Synchro 8* was used to conduct the traffic operations analysis for the 2017 No-Build AM and PM peak hour scenario. ***Table 2*** lists the analysis results of the 2017 No-Build AM and PM peak hour traffic operations.

***Appendix C*** provides detailed LOS output reports from Synchro.

The GTA facility generates significant traffic volumes in the study area. The Wilikina Drive / Kunia Road and Lyman Road / Kunia Road intersections operate in LOS E during the AM peak hours and LOS D during the PM peak hours. Long queues will be formed on all three legs of the Wilikina Drive and Kunia Road intersection. The Lyman Road and Kunia Road intersection would also have a longer queue. The Kunia Road northbound left turn queue will be longer than the available storage during AM peak hours, and spill back onto the through lane.

The new traffic signal at the Flagler Road and Lyman Road intersection will significantly improve traffic operations. The intersection is anticipated to operate at LOS C during 2017 No-Build AM peak hours and LOS B during PM peak hours.

The rest of the intersections operate at LOS D or better for both AM and PM peak hours in the 2017 No-Build scenario.

**Table 2. 2017 No-Build Peak Hour LOS and Average Delay (sec/veh) Summary**

| *Evaluated Intersection* | *Intersection Control* | *2017 AM Peak LOS (Avg. Delay)* | *2017 PM Peak LOS (Avg. Delay)* |
|---|---|---|---|
| **Kunia Road & Wilikina Dr. (SR 99)** | **Signalized** | **E** (61.0 sec/veh) | **D** (54.6 sec/veh) |
| **Kunia Road & Foote Avenue** | **Signalized** | **D** (36.2 sec/veh) | **D** (41.8 sec/veh) |
| **Kunia Road & Lyman Road** | **Signalized** | **E** (60.0 sec/veh) | **D** (51.9 sec/veh) |
| **Kunia Road & Field Station Kunia Entrance** | **Signalized** | **A** (7.6 sec/veh) | **D** (35.8 sec/veh) |
| **Lyman Road & Flagler Road** | **Signalized** | **C** (24.2 sec/veh) | **B** (13.1 sec/veh) |
| **Lyman Road & Humphreys Road** | **Signalized** | **C** (20.2 sec/veh) | **B** (14.7 sec/veh) |
| **Lyman Road & Maili Street** | **Stop Sign** | **C** (15.5 sec/veh) | **B** (14.4 sec/veh) |

*Note*: sec/veh = seconds per vehicle.

# 5. TRAFFIC OPERATIONS DURING CONSTRUCTION

It is anticipated that by the end of 2017 the project will be built and fully occupied. 2017 is the construction and opening year for the project. The 2017 forecasted traffic demand during construction is comprised of four elements: (1) existing traffic, (2) background traffic growth, (3) GTA traffic, and (4) construction traffic. ***Figure 6*** shows the 2017 construction traffic volumes**.**

It is assumed that all construction traffic will access the site via a temporary construction access on Kunia Road south of the Field Station Kunia entrance intersection, and that all construction traffic will come from outside of the post. Construction, therefore, would only affect traffic on Kunia Road. The intersections inside the SB post will not be affected, and the operations will be the same as the No-Build operation.

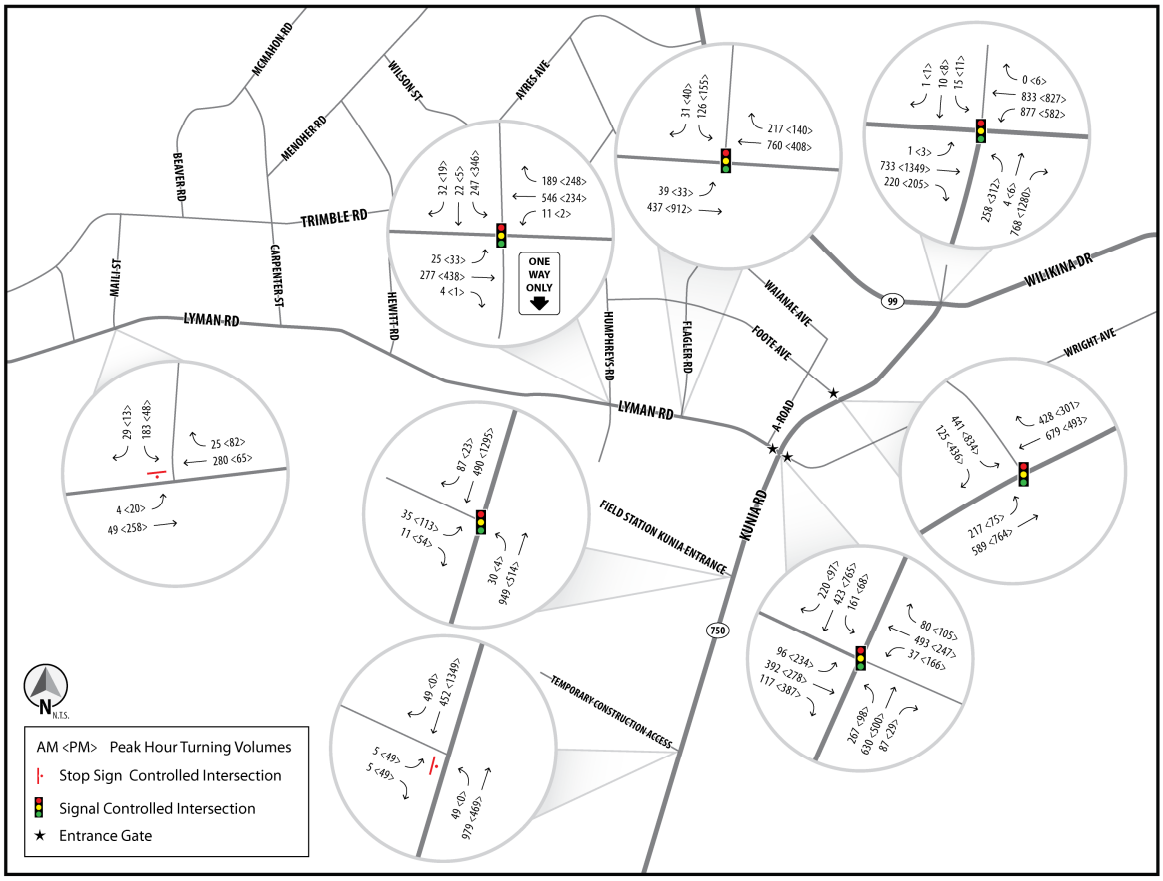


**Figure 6. 2017 Peak Hour Traffic Volumes During Construction**

2017 construction Synchro models are based on the 2017 No-Build Synchro model. It includes a new intersection on Kunia Road for the temporary construction access road. This intersection will be stop sign controlled with free traffic on Kunia Road.

Trafficware's *Synchro 8* was used to conduct the traffic operations analysis for the 2017 No-Build AM and PM peak hour scenario. ***Table 3*** lists the results of the existing AM and PM peak hour traffic operations.

**Table 3. 2017 Construction Peak Hour LOS and Average Delay (sec/veh) Summary**

| *Evaluated Intersection* | *Intersection Control* | *2017 AM Peak LOS (Avg. Delay)* | *2017 PM Peak LOS (Avg. Delay)* |
|---|---|---|---|
| **Kunia Road & Wilikina Dr. (SR 99)** | **Signalized** | **E** (64.6 sec/veh) | **E** (56.7 sec/veh) |
| **Kunia Road & Foote Avenue** | **Signalized** | **D** (36.6 sec/veh) | **D** (43.3 sec/veh) |
| **Kunia Road & Lyman Road** | **Signalized** | **E** (60.7 sec/veh) | **D** (51.8 sec/veh) |
| **Kunia Road & Field Station Kunia Entrance** | **Signalized** | **A** (7.7 sec/veh) | **D** (35.0 sec/veh) |
| **Kunia Road & Construction Access Rd** | **Stop Sign** | **E** (36.5 sec/veh) | **F** (234.5 sec/veh |

*Note*: sec/veh = seconds per vehicle.

***Appendix C*** provides detailed LOS output reports from Synchro.

The construction traffic will add to the existing traffic congestion within the study area. Although the LOS for the Wilikina Drive and Kunia Road intersection increased from LOS D to LOS E during the PM peak hours, the average delays only increased 2.1 seconds per vehicle. The increase of average control delays for all intersections is less than 4 seconds per vehicle, compared with the 2017 No-Build scenario. The queues and delays are slightly longer on Kunia Road, but the overall traffic impacts generated from construction vehicles are minor.

The vehicle leaving the temporary construction access road intersection will experience delays due to the high volumes on Kunia Road. The traffic on Kunia Road will be minimal. To avoid delays, it is recommended that construction vehicles leaving the site be limited to off-peak hours when possible.

# 6. 2017 BUILT TRAFFIC OPERATIONS

The Build scenario assumes the project has been constructed and is fully operational. It will include the traffic generated from the GTA facilities and the additional traffic signal at the Flagler Road and Lyman Road intersection. The 2017 Build scenario traffic comprises four elements: (1) existing traffic, (2) background traffic growth, (3) GTA traffic, and (4) facility operational traffic.

All operational traffic will go through the Lyman Gate intersection. It will only affect general traffic during AM peak hours and there will be minimal operational traffic during PM peak hours. ***Figure 7*** shows the 2017 Build traffic AM peak hour volumes**.**

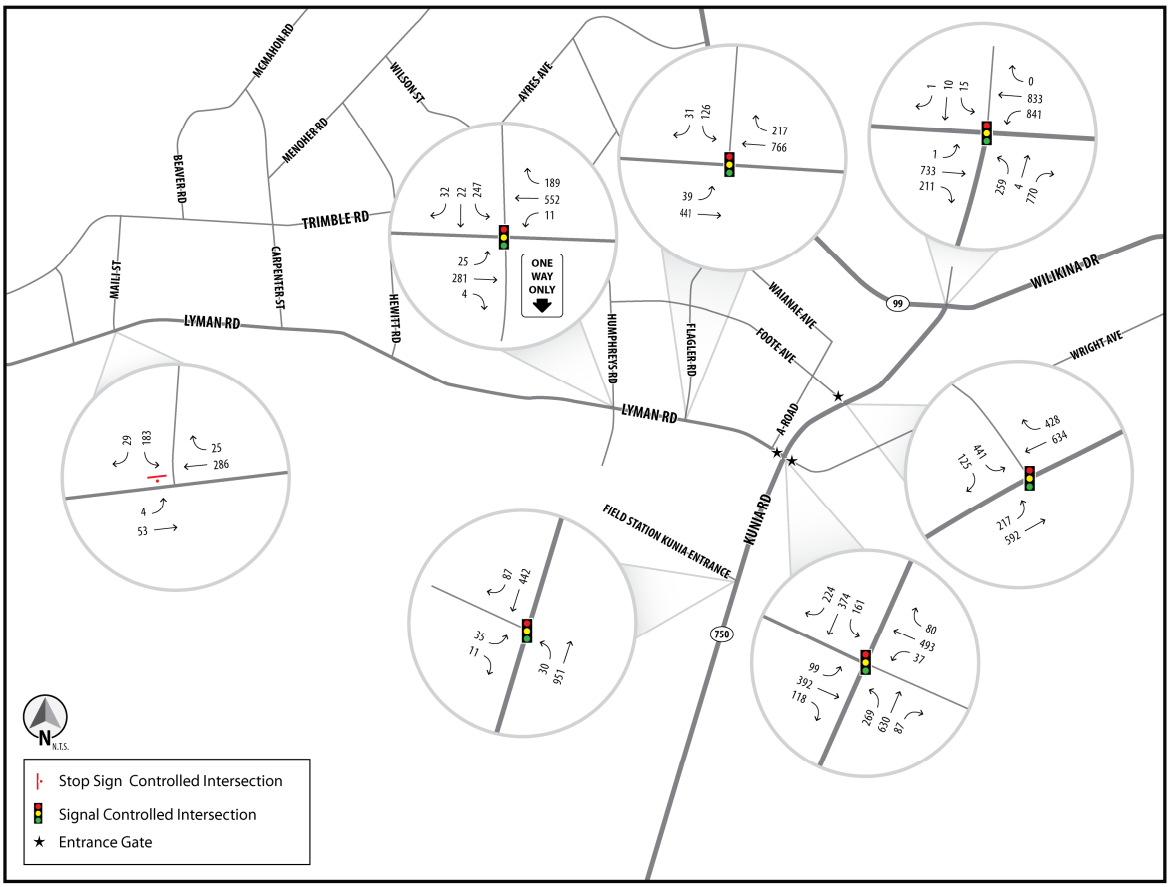


**Figure 7. 2017 Build AM Peak Hour Traffic Volumes**

2017 Build Synchro models are based on the 2017 No-Build Synchro model. The temporary construction access road is removed from the network.

Trafficware's *Synchro 8* was used to conduct the traffic operations analysis for the 2017 Build AM peak hour scenario. The 2017 Build PM peak hour operation is the same as the 2017 No-Build operation. ***Table 4*** lists the results of the 2017 Build AM peak hour traffic operational analysis. The PM peak hour result is copied from the 2017 No-Build scenario.

**Table 4. 2017 Build Peak Hour LOS and Average Delay (sec/veh) Summary**

| *Evaluated Intersection* | *Intersection Control* | *2017 AM Peak* | *2017 PM Peak* |
|---|---|---|---|
| | | *LOS (Avg. Delay)* | *LOS (Avg. Delay)* |
| **Kunia Road & Wilikina Dr. (SR 99)** | **Signalized** | **E** (61.4 sec/veh) | **D** (54.6 sec/veh) |
| **Kunia Road & Foote Avenue** | **Signalized** | **D** (36.2 sec/veh) | **D** (41.8 sec/veh) |
| **Kunia Road & Lyman Road** | **Signalized** | **E** (60.6 sec/veh) | **D** (51.9 sec/veh) |
| **Kunia Road & Field Station Kunia Entrance** | **Signalized** | **A** (7.6 sec/veh) | **D** (35.8 sec/veh) |
| **Lyman Road & Flagler Road** | **Signalized** | **C** (24.8 sec/veh) | **B** (13.1 sec/veh) |
| **Lyman Road & Humphreys Road** | **Signalized** | **C** (20.5 sec/veh) | **B** (14.7 sec/veh) |
| **Lyman Road & Maili Street** | **Stop Sign** | **C** (15.8 sec/veh) | **B** (14.4 sec/veh) |

*Note*: sec/veh = seconds per vehicle.

***Appendix C*** provides detailed LOS output reports from Synchro.

The facility operational traffic volume is small and only has minimal traffic impact during the AM peak hours. The average traffic delays increase less than 1 second per vehicle during the AM peak hour when compared with the No-Build scenario, and there are no noticeable impacts to queue lengths. All study intersections on the post operate in LOS C during the AM peak hours. No traffic impact is anticipated during the PM peak hours.

# 7. CONCLUSION

The traffic study analyzed traffic operations of eight intersections on Kunia Road and Lyman Road near SB. Today, the traffic on Kunia Road experiences delays and long queues at intersections during peak hours. By 2017 the traffic in the network will increase from the background growth and the completion of the GTA Phase 1 project. Traffic conditions will be worse on Kunia Road and Lyman Road as traffic demand increases.

The addition of traffic signal and intersection movements on the Flagler Road and Lyman Road intersection are necessary and will improve the operations dramatically compared with the current stop sign-controlled intersections.

The construction and operation of the SGSP project will generate more traffic volumes on the roadway network. These project-generated traffic volumes are small, and will not significantly affect traffic. Compared with the future No-Build scenario, the increase on average vehicle delays from construction traffic is less than 4 seconds per vehicle, and less than 1 second per vehicle for operational traffic during the AM peak hours. There is no traffic impact from operational traffic during the PM peak hour. Overall, the impact from the facility operation traffic is negligible.

The temporary construction access road will have long delays for the construction traffic. It is recommended that limiting the construction traffic to off-peak periods of time to reduce delays be considered if feasible. However, the construction traffic impacts to the general traffic are small because of the low volumes of construction traffic compared to general traffic during the peak hours.

# Traffic Study
# Appendix A.

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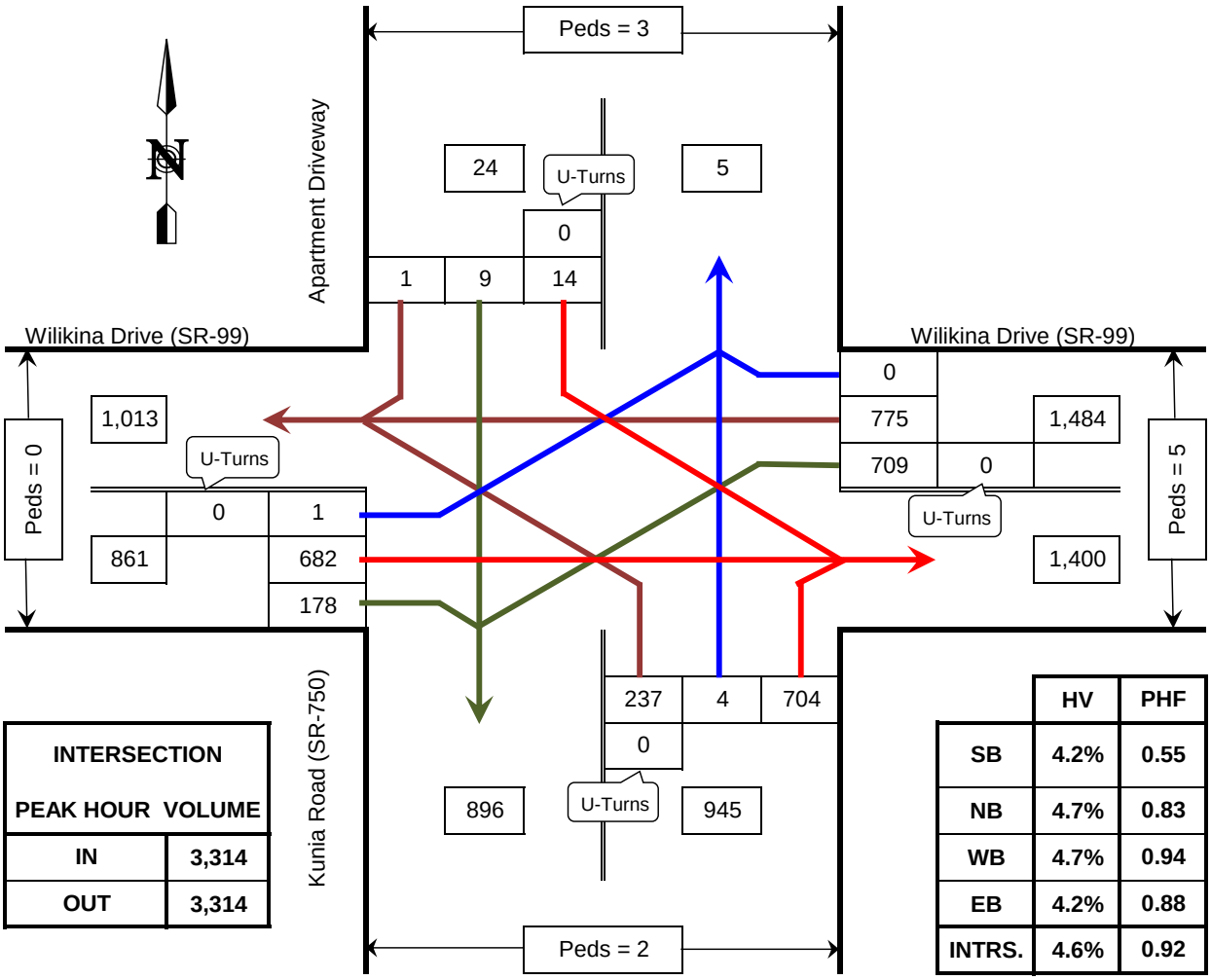
## Traffic Count Data

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**7:30 AM - 9:30 AM PEAK HOUR: 7:30 AM TO 8:30 AM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 3,314 |
| OUT | 3,314 |

| | HV | PHF |
|---|---|---|
| SB | 4.2% | 0.55 |
| NB | 4.7% | 0.83 |
| WB | 4.7% | 0.94 |
| EB | 4.2% | 0.88 |
| INTRS. | 4.6% | 0.92 |

PHF = Peak Hour Factor
HV = Heavy Vehicles

**Kunia Road (SR-750) @ Wilikina Drive (SR-99)**

**Schofield Barracks, HI**

COUNTED BY: CN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Thu. 2/27/14

TIME OF COUNT: 7:30 AM - 9:30 AM

WEATHER: Sunny

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Kunia Road (SR-750) @ Wilikina Drive (SR-99)
Schofield Barracks, HI

**DATE OF COUNT:** Thu. 2/27/14
**TIME OF COUNT:** 7:30 AM - 9:30 AM

**COUNTED BY:** CN
**WEATHER:** Sunny

| TIME INTERVAL ENDING AT | FROM NORTH ON Apartment Driveway | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON Wilikina Drive (SR-99) | | | | | | FROM WEST ON Wilikina Drive (SR-99) | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 05:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 1 | 1 | 0 | 6 | 5 | 0 | 2 | 10 | 0 | 65 | 2 | 216 | 5 | 21 | 0 | 165 | 196 | 0 | 0 | 6 | 0 | 0 | 189 | 57 | 901 |
| 08:00 AM | 0 | 0 | 0 | 4 | 2 | 1 | 0 | 12 | 0 | 53 | 0 | 176 | 0 | 17 | 0 | 180 | 214 | 0 | 0 | 10 | 0 | 1 | 155 | 51 | 837 |
| 08:15 AM | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 13 | 0 | 62 | 1 | 190 | 0 | 17 | 0 | 182 | 175 | 0 | 0 | 8 | 0 | 0 | 161 | 36 | 810 |
| 08:30 AM | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 9 | 0 | 57 | 1 | 122 | 0 | 15 | 0 | 182 | 190 | 0 | 0 | 12 | 0 | 0 | 177 | 34 | 766 |
| 08:45 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 7 | 0 | 30 | 0 | 98 | 0 | 15 | 0 | 148 | 178 | 0 | 0 | 2 | 0 | 0 | 163 | 27 | 646 |
| 09:00 AM | 5 | 0 | 0 | 5 | 1 | 0 | 1 | 10 | 0 | 50 | 0 | 109 | 0 | 14 | 0 | 151 | 216 | 0 | 0 | 8 | 0 | 0 | 128 | 38 | 698 |
| 09:15 AM | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 5 | 0 | 38 | 0 | 102 | 0 | 18 | 0 | 200 | 206 | 0 | 0 | 10 | 0 | 0 | 152 | 27 | 728 |
| 09:30 AM | 0 | 1 | 0 | 3 | 0 | 0 | 2 | 5 | 0 | 39 | 0 | 109 | 2 | 15 | 0 | 141 | 161 | 0 | 0 | 10 | 0 | 0 | 124 | 43 | 620 |
| **PEAK HOUR TOTALS** | **3** | **1** | **0** | **14** | **9** | **1** | **2** | **44** | **0** | **237** | **4** | **704** | **5** | **70** | **0** | **709** | **775** | **0** | **0** | **36** | **0** | **1** | **682** | **178** | **INTERSECTION** |
| **ALL MOVEMENTS** | **24** | | | | | | **945** | | | | | | **1484** | | | | | | **861** | | | | | | **3314** |
| **% HV** | **4.2%** | | | | | | **4.7%** | | | | | | **4.7%** | | | | | | **4.2%** | | | | | | **4.6%** |
| **PEAK HOUR FACTOR** | **0.55** | | | | | | **0.83** | | | | | | **0.94** | | | | | | **0.88** | | | | | | **0.92** |

**PHF = Peak Hour Factor**

**7:30 AM - 9:30 AM PEAK HOUR:** 7:30 AM TO 8:30 AM

REDUCED BY: CN

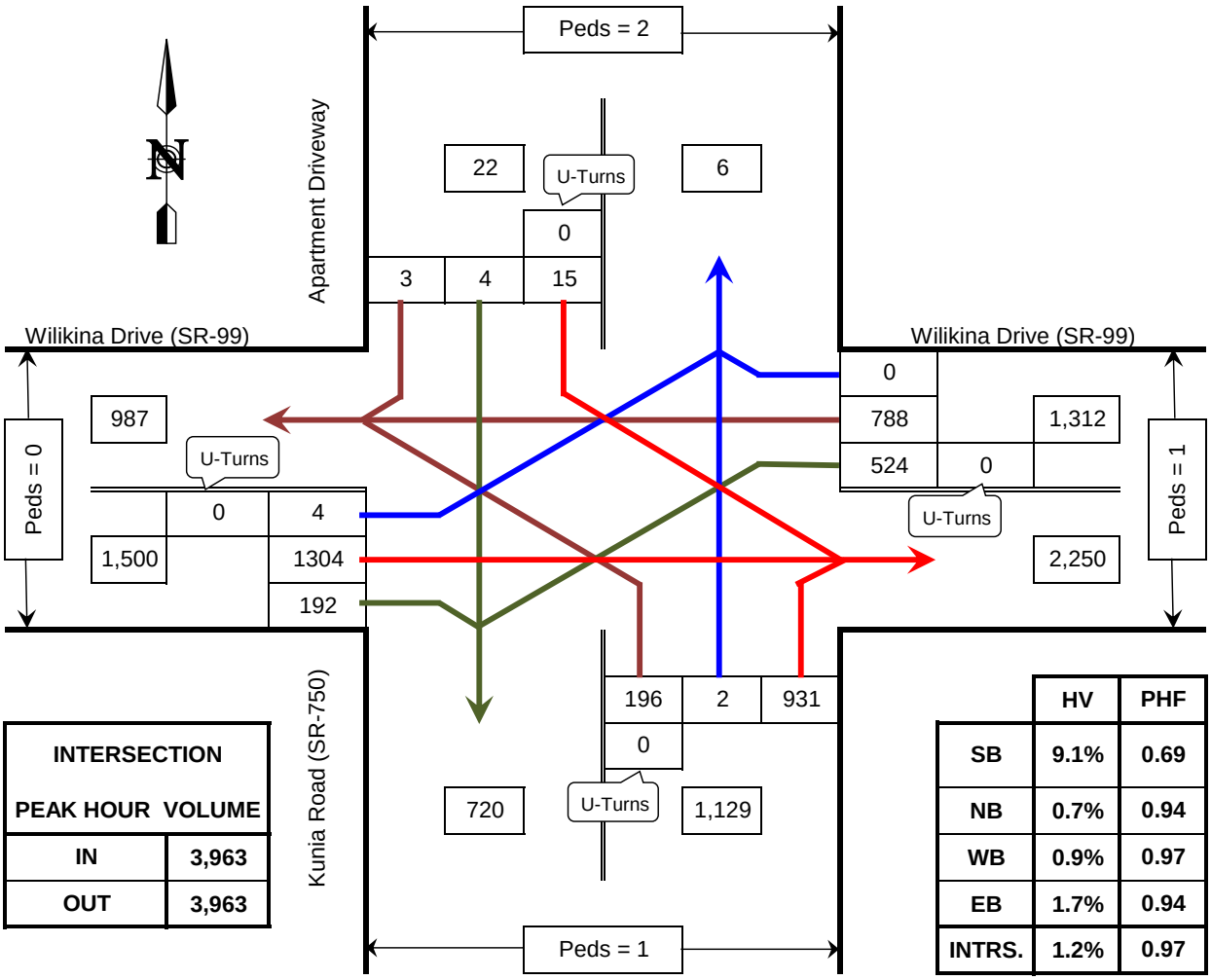
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Apartment Driveway | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON Wilikina Drive (SR-99) | | | | | | FROM WEST ON Wilikina Drive (SR-99) | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 5:30 AM - 6:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 AM - 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 AM - 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:15 AM - 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:30 AM - 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:45 AM - 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 AM - 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM - 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM - 8:30 AM | 3 | 1 | 0 | 14 | 9 | 1 | 2 | 44 | 0 | 237 | 4 | 704 | 5 | 70 | 0 | 709 | 775 | 0 | 0 | 36 | 0 | 1 | 682 | 178 | 3314 |
| 7:45 AM - 8:45 AM | 2 | 0 | 0 | 8 | 6 | 1 | 0 | 41 | 0 | 202 | 2 | 586 | 0 | 64 | 0 | 692 | 757 | 0 | 0 | 32 | 0 | 1 | 656 | 148 | 3059 |
| 8:00 AM - 9:00 AM | 7 | 0 | 0 | 9 | 5 | 0 | 1 | 39 | 0 | 199 | 2 | 519 | 0 | 61 | 0 | 663 | 759 | 0 | 0 | 30 | 0 | 0 | 629 | 135 | 2920 |
| 8:15 AM - 9:15 AM | 6 | 0 | 0 | 9 | 5 | 0 | 1 | 31 | 0 | 175 | 1 | 431 | 0 | 62 | 0 | 681 | 790 | 0 | 0 | 32 | 0 | 0 | 620 | 126 | 2838 |
| 8:30 AM - 9:30 AM | 5 | 1 | 0 | 10 | 4 | 0 | 3 | 27 | 0 | 157 | 0 | 418 | 2 | 62 | 0 | 640 | 761 | 0 | 0 | 30 | 0 | 0 | 567 | 135 | 2692 |

**TRAFFIC DATA GATHERING**

# TURNING MOVEMENTS DIAGRAM

**3:30 PM - 5:30 PM PEAK HOUR: 4:15 PM TO 5:15 PM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 3,963 |
| OUT | 3,963 |

| | HV | PHF |
|---|---|---|
| SB | 9.1% | 0.69 |
| NB | 0.7% | 0.94 |
| WB | 0.9% | 0.97 |
| EB | 1.7% | 0.94 |
| INTRS. | 1.2% | 0.97 |

PHF = Peak Hour Factor
HV = Heavy Vehicles

**Kunia Road (SR-750) @ Wilikina Drive (SR-99)**

**Schofield Barracks, HI**

COUNTED BY: CN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Thu. 2/27/14

TIME OF COUNT: 3:30 PM - 5:30 PM

WEATHER: Sunny

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Kunia Road (SR-750) @ Wilikina Drive (SR-99)
Schofield Barracks, HI

**DATE OF COUNT:** Thu. 2/27/14
**TIME OF COUNT:** 3:30 PM - 5:30 PM

**COUNTED BY:** CN
**WEATHER:** Sunny

| TIME INTERVAL ENDING AT | FROM NORTH ON Apartment Driveway | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON Wilikina Drive (SR-99) | | | | | | FROM WEST ON Wilikina Drive (SR-99) | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 PM | 3 | 0 | 0 | 2 | 1 | 0 | 1 | 9 | 0 | 53 | 0 | 241 | 1 | 5 | 0 | 121 | 187 | 6 | 0 | 7 | 0 | 0 | 278 | 28 | 917 |
| 04:00 PM | 1 | 0 | 0 | 3 | 3 | 0 | 0 | 2 | 0 | 51 | 3 | 240 | 0 | 9 | 0 | 113 | 200 | 0 | 0 | 10 | 0 | 0 | 305 | 43 | 961 |
| 04:15 PM | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 65 | 1 | 221 | 2 | 4 | 0 | 91 | 174 | 0 | 0 | 8 | 0 | 2 | 320 | 48 | 926 |
| 04:30 PM | 2 | 1 | 0 | 3 | 0 | 1 | 0 | 3 | 0 | 57 | 1 | 230 | 0 | 5 | 0 | 128 | 208 | 0 | 0 | 2 | 0 | 1 | 352 | 41 | 1022 |
| 04:45 PM | 0 | 1 | 0 | 5 | 2 | 1 | 0 | 1 | 0 | 36 | 1 | 222 | 0 | 2 | 0 | 118 | 196 | 0 | 0 | 9 | 0 | 1 | 343 | 55 | 980 |
| 05:00 PM | 0 | 0 | 0 | 3 | 1 | 1 | 1 | 2 | 0 | 49 | 0 | 251 | 1 | 2 | 0 | 152 | 186 | 0 | 0 | 9 | 0 | 2 | 291 | 55 | 991 |
| 05:15 PM | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 2 | 0 | 54 | 0 | 228 | 0 | 3 | 0 | 126 | 198 | 0 | 0 | 6 | 0 | 0 | 318 | 41 | 970 |
| 05:30 PM | 3 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 89 | 1 | 243 | 0 | 2 | 0 | 138 | 174 | 0 | 0 | 9 | 0 | 1 | 303 | 44 | 994 |
| **PEAK HOUR TOTALS** | **2** | **2** | **0** | **15** | **4** | **3** | **1** | **8** | **0** | **196** | **2** | **931** | **1** | **12** | **0** | **524** | **788** | **0** | **0** | **26** | **0** | **4** | **1304** | **192** | **INTERSECTION** |
| **ALL MOVEMENTS** | **22** | | | | | | **1129** | | | | | | **1312** | | | | | | **1500** | | | | | | **3963** |
| **% HV** | **9.1%** | | | | | | **0.7%** | | | | | | **0.9%** | | | | | | **1.7%** | | | | | | **1.2%** |
| **PEAK HOUR FACTOR** | **0.69** | | | | | | **0.94** | | | | | | **0.97** | | | | | | **0.94** | | | | | | **0.97** |

**PHF = Peak Hour Factor**

**3:30 PM - 5:30 PM PEAK HOUR:** **4:15 PM** **TO 5:15 PM**

REDUCED BY: CN

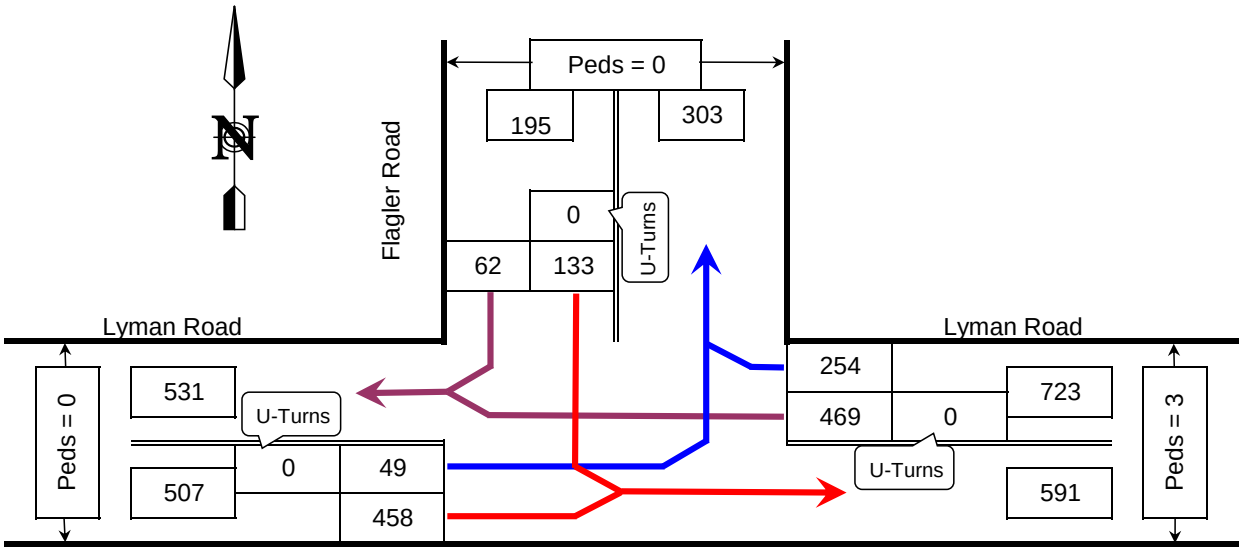
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Apartment Driveway | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON Wilikina Drive (SR-99) | | | | | | FROM WEST ON Wilikina Drive (SR-99) | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 1:30 PM - 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:45 PM - 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 PM - 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM - 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM - 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 PM - 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM - 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM - 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 PM - 4:30 PM | 6 | 1 | 0 | 10 | 6 | 1 | 3 | 16 | 0 | 226 | 5 | 932 | 3 | 23 | 0 | 453 | 769 | 6 | 0 | 27 | 0 | 3 | 1255 | 160 | 3826 |
| 3:45 PM - 4:45 PM | 3 | 2 | 0 | 13 | 7 | 2 | 2 | 8 | 0 | 209 | 6 | 913 | 2 | 20 | 0 | 450 | 778 | 0 | 0 | 29 | 0 | 4 | 1320 | 187 | 3889 |
| 4:00 PM - 5:00 PM | 2 | 2 | 0 | 13 | 5 | 3 | 3 | 8 | 0 | 207 | 3 | 924 | 3 | 13 | 0 | 489 | 764 | 0 | 0 | 28 | 0 | 6 | 1306 | 199 | 3919 |
| 4:15 PM - 5:15 PM | 2 | 2 | 0 | 15 | 4 | 3 | 1 | 8 | 0 | 196 | 2 | 931 | 1 | 12 | 0 | 524 | 788 | 0 | 0 | 26 | 0 | 4 | 1304 | 192 | 3963 |
| 4:30 PM - 5:30 PM | 3 | 1 | 0 | 13 | 4 | 2 | 2 | 6 | 0 | 228 | 2 | 944 | 1 | 9 | 0 | 534 | 754 | 0 | 0 | 33 | 0 | 4 | 1255 | 195 | 3935 |

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**7:30 AM - 9:30 AM PEAK HOUR: 8:30 AM TO 9:30 AM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| **IN** | **1,425** |
| **OUT** | **1,425** |

| | HV | PHF |
|---|---|---|
| **SB** | 1.5% | 0.86 |
| **WB** | 6.6% | 0.89 |
| **EB** | 11.6% | 0.84 |
| **INTRS.** | 7.7% | 0.89 |

HV = Heavy Vehicles
PHF = Peak Hour Factor

**Lyman Road @ Flagler Road**

**Schofield Barracks, HI**

COUNTED BY: SN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Thu. 2/27/14

TIME OF COUNT: 7:30 AM - 9:30 AM

WEATHER: Sunny

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Lyman Road @ Flagler Road
Schofield Barracks, HI

**DATE OF COUNT:** Thu. 2/27/14
**TIME OF COUNT:** 7:30 AM - 9:30 AM

**COUNTED BY:** SN
**WEATHER:** Sunny

| TIME INTERVAL ENDING AT | FROM NORTH ON Flagler Road | | | | | | FROM SOUTH ON | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 05:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 0 | 26 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 130 | 16 | 0 | 9 | 0 | 14 | 129 | 0 | 319 |
| 08:00 AM | 0 | 1 | 0 | 21 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 113 | 54 | 0 | 6 | 0 | 6 | 75 | 0 | 282 |
| 08:15 AM | 0 | 2 | 0 | 23 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 151 | 90 | 0 | 5 | 0 | 3 | 77 | 0 | 351 |
| 08:30 AM | 0 | 1 | 0 | 47 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 118 | 42 | 0 | 6 | 0 | 13 | 98 | 0 | 323 |
| 08:45 AM | 0 | 2 | 0 | 35 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 0 | 0 | 119 | 48 | 0 | 8 | 0 | 9 | 97 | 0 | 317 |
| 09:00 AM | 0 | 1 | 0 | 30 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 110 | 61 | 0 | 5 | 0 | 9 | 91 | 0 | 316 |
| 09:15 AM | 0 | 0 | 0 | 29 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 0 | 115 | 87 | 0 | 14 | 0 | 17 | 133 | 0 | 401 |
| 09:30 AM | 0 | 0 | 0 | 39 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 125 | 58 | 0 | 32 | 0 | 14 | 137 | 0 | 391 |
| **PEAK HOUR TOTALS** | **0** | **3** | **0** | **133** | **0** | **62** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **48** | **0** | **0** | **469** | **254** | **0** | **59** | **0** | **49** | **458** | **0** | **INTERSECTION** |
| **ALL MOVEMENTS** | **195** | | | | | | **0** | | | | | | **723** | | | | | | **507** | | | | | | **1425** |
| **% HV** | **1.5%** | | | | | | **#N/A** | | | | | | **6.6%** | | | | | | **11.6%** | | | | | | **7.7%** |
| **PEAK HOUR FACTOR** | **0.86** | | | | | | **#N/A** | | | | | | **0.89** | | | | | | **0.84** | | | | | | **0.89** |

**PHF = Peak Hour Factor**

**7:30 AM - 9:30 AM PEAK HOUR:** **8:30 AM** **TO 9:30 AM**

REDUCED BY: CN

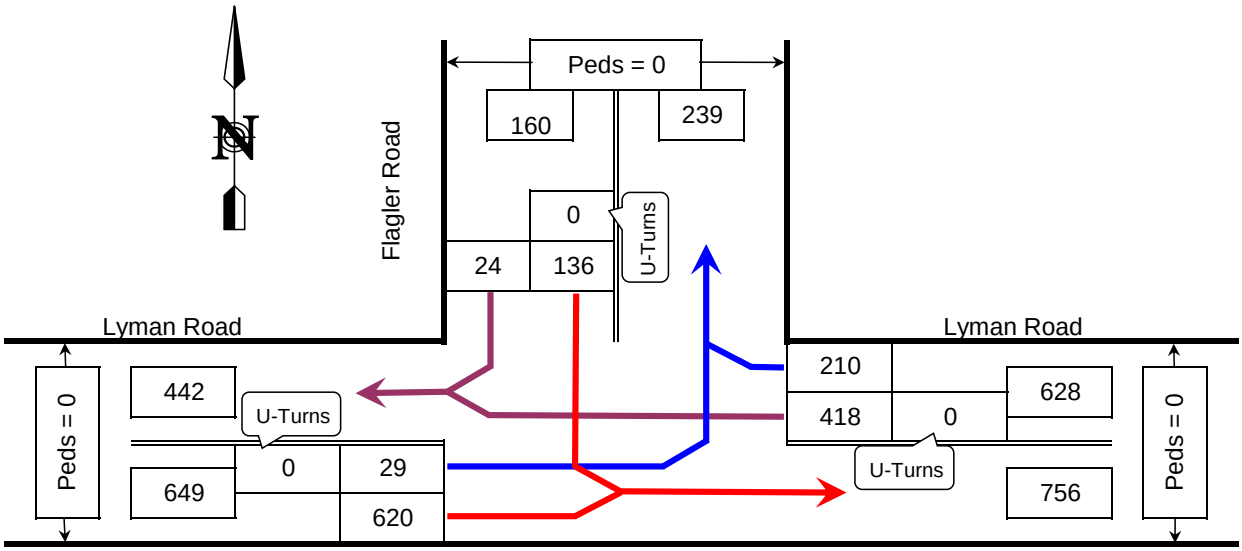
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Flagler Road | | | | | | FROM SOUTH ON | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 5:30 AM - 6:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 AM - 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 AM - 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:15 AM - 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:30 AM - 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:45 AM - 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 AM - 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM - 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM - 8:30 AM | 0 | 4 | 0 | 117 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 33 | 0 | 0 | 512 | 202 | 0 | 26 | 0 | 36 | 379 | 0 | 1275 |
| 7:45 AM - 8:45 AM | 0 | 6 | 0 | 126 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 35 | 0 | 0 | 501 | 234 | 0 | 25 | 0 | 31 | 347 | 0 | 1273 |
| 8:00 AM - 9:00 AM | 0 | 6 | 0 | 135 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 44 | 0 | 0 | 498 | 241 | 0 | 24 | 0 | 34 | 363 | 0 | 1307 |
| 8:15 AM - 9:15 AM | 0 | 4 | 0 | 141 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 46 | 0 | 0 | 462 | 238 | 0 | 33 | 0 | 48 | 419 | 0 | 1357 |
| 8:30 AM - 9:30 AM | 0 | 3 | 0 | 133 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 48 | 0 | 0 | 469 | 254 | 0 | 59 | 0 | 49 | 458 | 0 | 1425 |

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**3:30 PM - 5:30 PM PEAK HOUR: 4:30 PM TO 5:30 PM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| **IN** | **1,437** |
| **OUT** | **1,437** |

| | HV | PHF |
|---|---|---|
| **SB** | 1.9% | 0.87 |
| **WB** | 0.6% | 0.90 |
| **EB** | 1.4% | 0.92 |
| **INTRS.** | 1.1% | 0.92 |

HV = Heavy Vehicles
PHF = Peak Hour Factor

**Lyman Road @ Flagler Road**

**Schofield Barracks, HI**

COUNTED BY: SN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Thu. 2/27/14

TIME OF COUNT: 3:30 PM - 5:30 PM

WEATHER: Sunny

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Lyman Road @ Flagler Road
Schofield Barracks, HI

**DATE OF COUNT:** Thu. 2/27/14
**TIME OF COUNT:** 3:30 PM - 5:30 PM

**COUNTED BY:** SN
**WEATHER:** Sunny

| TIME INTERVAL ENDING | FROM NORTH ON Flagler Road | | | | | | FROM SOUTH ON | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AT | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 PM | 0 | 0 | 0 | 39 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 88 | 38 | 0 | 5 | 0 | 10 | 162 | 0 | 350 |
| 04:00 PM | 0 | 0 | 0 | 37 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 78 | 22 | 1 | 2 | 0 | 7 | 185 | 0 | 334 |
| 04:15 PM | 0 | 0 | 0 | 38 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 97 | 30 | 0 | 3 | 0 | 8 | 142 | 0 | 328 |
| 04:30 PM | 0 | 1 | 0 | 30 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 89 | 40 | 0 | 3 | 0 | 6 | 164 | 0 | 335 |
| 04:45 PM | 0 | 1 | 0 | 27 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 105 | 51 | 0 | 2 | 0 | 10 | 167 | 0 | 366 |
| 05:00 PM | 0 | 1 | 0 | 39 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 87 | 37 | 0 | 3 | 0 | 5 | 141 | 0 | 316 |
| 05:15 PM | 0 | 0 | 0 | 37 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 111 | 62 | 0 | 2 | 0 | 5 | 172 | 0 | 390 |
| 05:30 PM | 0 | 1 | 0 | 33 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 115 | 60 | 0 | 2 | 0 | 9 | 140 | 0 | 365 |
| **PEAK HOUR TOTALS** | **0** | **3** | **0** | **136** | **0** | **24** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **4** | **0** | **0** | **418** | **210** | **0** | **9** | **0** | **29** | **620** | **0** | **INTERSECTION** |
| **ALL MOVEMENTS** | **160** | | | | | | **0** | | | | | | **628** | | | | | | **649** | | | | | | **1437** |
| **% HV** | **1.9%** | | | | | | **#N/A** | | | | | | **0.6%** | | | | | | **1.4%** | | | | | | **1.1%** |
| **PEAK HOUR FACTOR** | **0.87** | | | | | | **#N/A** | | | | | | **0.90** | | | | | | **0.92** | | | | | | **0.92** |

**PHF = Peak Hour Factor**

**3:30 PM - 5:30 PM PEAK HOUR:** **4:30 PM** **TO 5:30 PM**

REDUCED BY: CN

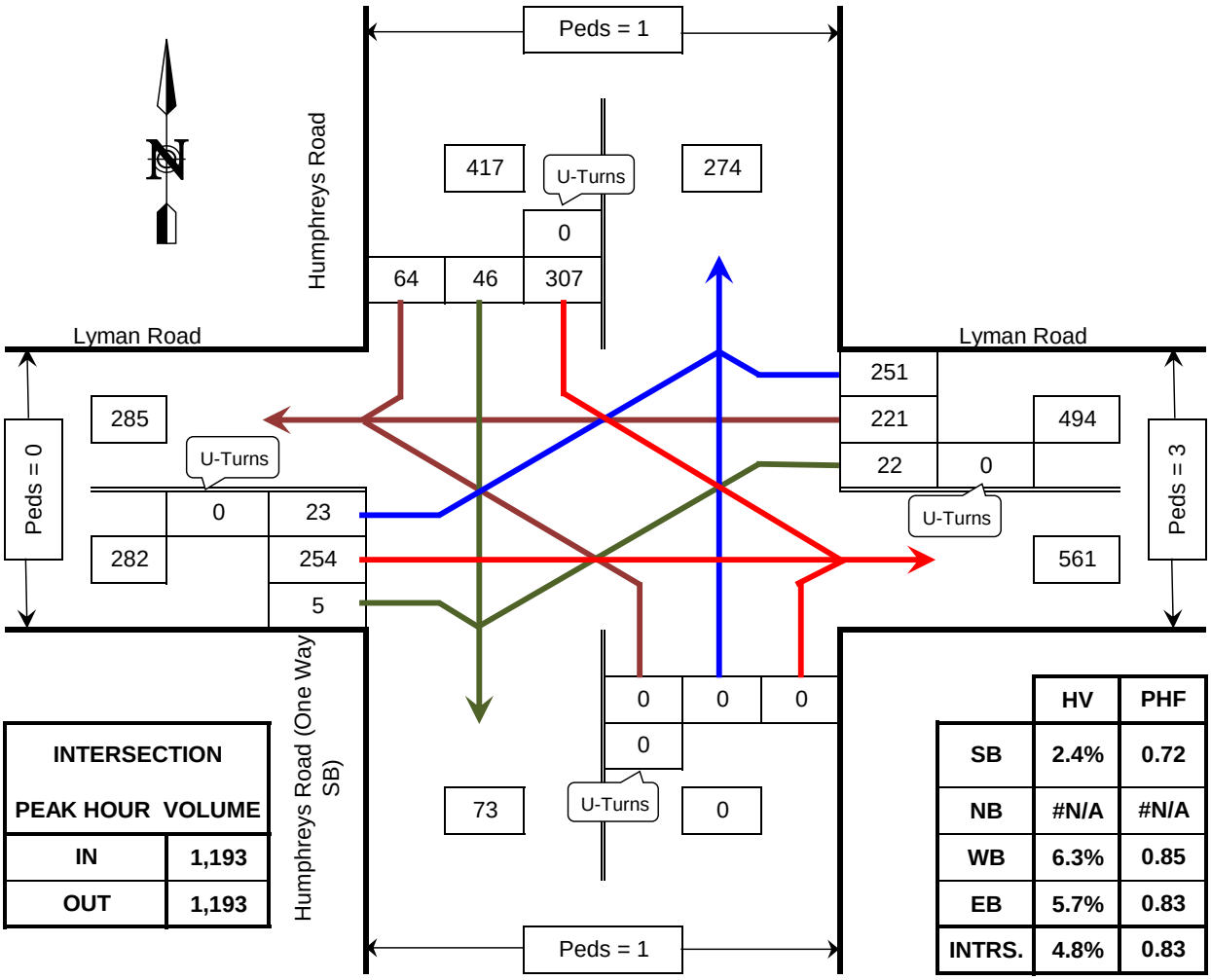
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Flagler Road | | | | | | FROM SOUTH ON | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 1:30 PM - 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:45 PM - 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 PM - 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM - 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM - 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 PM - 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM - 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM - 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 PM - 4:30 PM | 0 | 1 | 0 | 144 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 352 | 130 | 1 | 13 | 0 | 31 | 653 | 0 | 1347 |
| 3:45 PM - 4:45 PM | 0 | 2 | 0 | 132 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 369 | 143 | 1 | 10 | 0 | 31 | 658 | 0 | 1363 |
| 4:00 PM - 5:00 PM | 0 | 3 | 0 | 134 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 378 | 158 | 0 | 11 | 0 | 29 | 614 | 0 | 1345 |
| 4:15 PM - 5:15 PM | 0 | 3 | 0 | 133 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 392 | 190 | 0 | 10 | 0 | 26 | 644 | 0 | 1407 |
| 4:30 PM - 5:30 PM | 0 | 3 | 0 | 136 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 418 | 210 | 0 | 9 | 0 | 29 | 620 | 0 | 1437 |

**TRAFFIC DATA GATHERING**

# TURNING MOVEMENTS DIAGRAM

**7:30 AM - 9:30 AM PEAK HOUR: 8:30 AM TO 9:30 AM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 1,193 |
| OUT | 1,193 |

| | HV | PHF |
|---|---|---|
| SB | 2.4% | 0.72 |
| NB | #N/A | #N/A |
| WB | 6.3% | 0.85 |
| EB | 5.7% | 0.83 |
| INTRS. | 4.8% | 0.83 |

PHF = Peak Hour Factor
HV = Heavy Vehicles

**Lyman Road @ Humphreys Road**

**Schofield Barracks, HI**

COUNTED BY: SN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Wed. 2/26/14

TIME OF COUNT: 7:30 AM - 9:30 AM

WEATHER: Sunny

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Lyman Road @ Humphreys Road
Schofield Barracks, HI

**DATE OF COUNT:** Wed. 2/26/14
**TIME OF COUNT:** 7:30 AM - 9:30 AM

**COUNTED BY:** SN
**WEATHER:** Sunny

| TIME INTERVAL ENDING AT | FROM NORTH ON Humphreys Road | | | | | | FROM SOUTH ON Humphreys Road (One Way SB) | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 05:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 3 | 0 | 66 | 3 | 5 | 24 | 0 | 0 | 0 | 0 | 0 | 16 | 8 | 0 | 0 | 82 | 51 | 9 | 5 | 0 | 6 | 72 | 1 | 286 |
| 08:00 AM | 0 | 5 | 0 | 58 | 7 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 16 | 5 | 0 | 2 | 93 | 32 | 7 | 2 | 0 | 0 | 40 | 1 | 240 |
| 08:15 AM | 1 | 2 | 0 | 58 | 7 | 15 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 6 | 84 | 47 | 1 | 2 | 0 | 8 | 63 | 1 | 289 |
| 08:30 AM | 0 | 1 | 0 | 48 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 54 | 46 | 1 | 6 | 0 | 9 | 55 | 1 | 221 |
| 08:45 AM | 1 | 5 | 0 | 57 | 1 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 2 | 53 | 50 | 0 | 2 | 0 | 3 | 38 | 0 | 217 |
| 09:00 AM | 0 | 1 | 0 | 65 | 9 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 1 | 70 | 75 | 0 | 3 | 0 | 6 | 78 | 1 | 319 |
| 09:15 AM | 0 | 2 | 0 | 78 | 24 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 12 | 48 | 50 | 0 | 8 | 0 | 6 | 66 | 2 | 298 |
| 09:30 AM | 0 | 2 | 0 | 107 | 12 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 7 | 50 | 76 | 0 | 3 | 0 | 8 | 72 | 2 | 359 |
| **PEAK HOUR TOTALS** | **1** | **10** | **0** | **307** | **46** | **64** | **1** | **0** | **0** | **0** | **0** | **0** | **3** | **31** | **0** | **22** | **221** | **251** | **0** | **16** | **0** | **23** | **254** | **5** | **INTERSECTION** |
| **ALL MOVEMENTS** | **417** | | | | | | **0** | | | | | | **494** | | | | | | **282** | | | | | | **1193** |
| **% HV** | **2.4%** | | | | | | **#N/A** | | | | | | **6.3%** | | | | | | **5.7%** | | | | | | **4.8%** |
| **PEAK HOUR FACTOR** | **0.72** | | | | | | **#N/A** | | | | | | **0.85** | | | | | | **0.83** | | | | | | **0.83** |

**PHF = Peak Hour Factor**

**7:30 AM - 9:30 AM PEAK HOUR:** **8:30 AM** **TO 9:30 AM**

REDUCED BY: CN

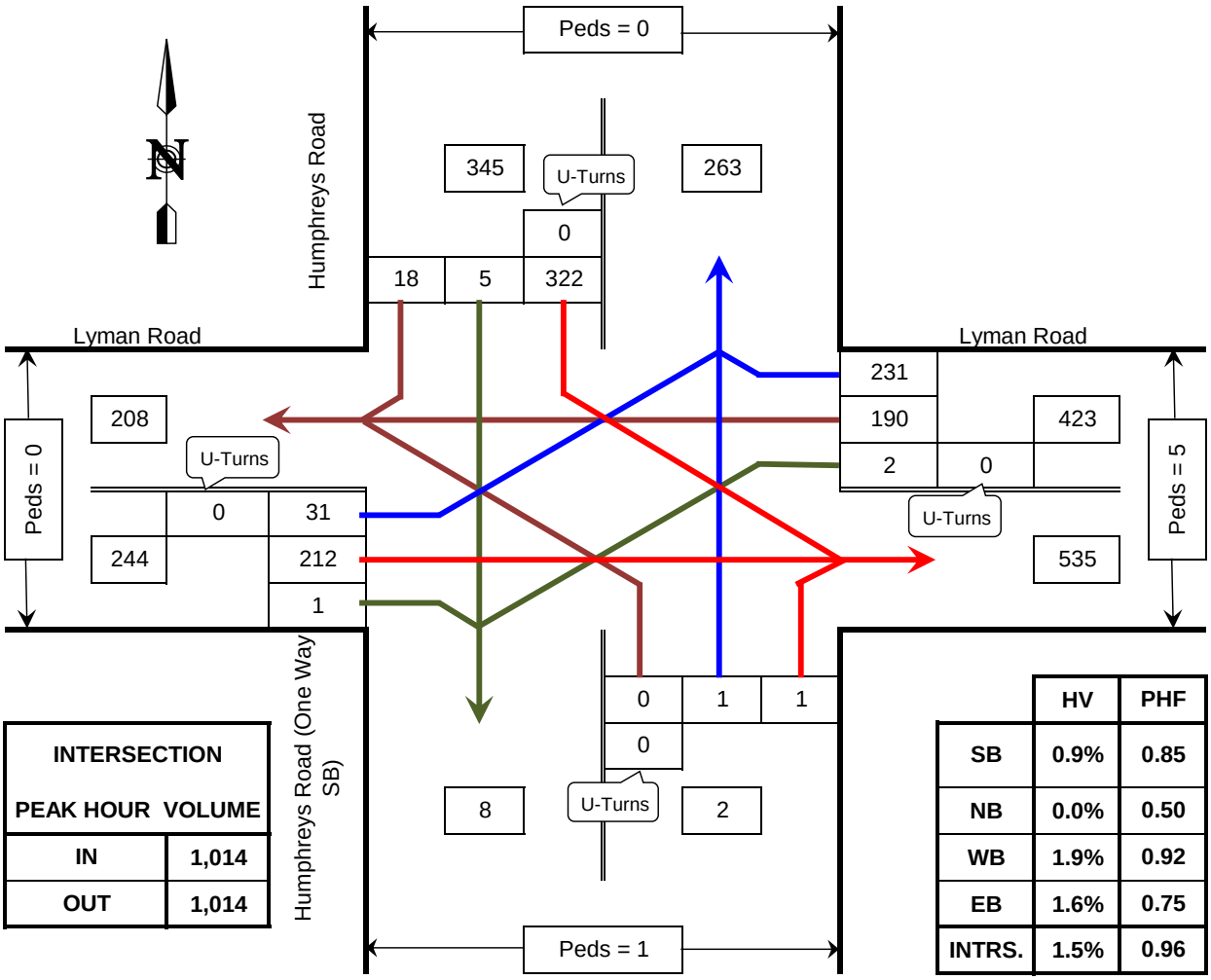
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Humphreys Road | | | | | | FROM SOUTH ON Humphreys Road (One Way SB) | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 5:30 AM - 6:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 AM - 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 AM - 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:15 AM - 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:30 AM - 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:45 AM - 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 AM - 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM - 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM - 8:30 AM | 1 | 11 | 0 | 230 | 20 | 30 | 28 | 0 | 0 | 0 | 0 | 0 | 32 | 25 | 0 | 10 | 313 | 176 | 18 | 15 | 0 | 23 | 230 | 4 | 1036 |
| 7:45 AM - 8:45 AM | 2 | 13 | 0 | 221 | 18 | 38 | 5 | 0 | 0 | 0 | 0 | 0 | 16 | 24 | 0 | 12 | 284 | 175 | 9 | 12 | 0 | 20 | 196 | 3 | 967 |
| 8:00 AM - 9:00 AM | 2 | 9 | 0 | 228 | 20 | 45 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 11 | 261 | 218 | 2 | 13 | 0 | 26 | 234 | 3 | 1046 |
| 8:15 AM - 9:15 AM | 1 | 9 | 0 | 248 | 37 | 42 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 27 | 0 | 17 | 225 | 221 | 1 | 19 | 0 | 24 | 237 | 4 | 1055 |
| 8:30 AM - 9:30 AM | 1 | 10 | 0 | 307 | 46 | 64 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 31 | 0 | 22 | 221 | 251 | 0 | 16 | 0 | 23 | 254 | 5 | 1193 |

**TRAFFIC DATA GATHERING**

# TURNING MOVEMENTS DIAGRAM

**3:30 PM - 5:30 PM PEAK HOUR: 3:30 PM TO 4:30 PM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 1,014 |
| OUT | 1,014 |

| | HV | PHF |
|---|---|---|
| SB | 0.9% | 0.85 |
| NB | 0.0% | 0.50 |
| WB | 1.9% | 0.92 |
| EB | 1.6% | 0.75 |
| INTRS. | 1.5% | 0.96 |

PHF = Peak Hour Factor
HV = Heavy Vehicles

**Lyman Road @ Humphreys Road**

**Schofield Barracks, HI**

COUNTED BY: SN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Wed. 2/26/14

TIME OF COUNT: 3:30 PM - 5:30 PM

WEATHER: Rainy

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Lyman Road @ Humphreys Road
Schofield Barracks, HI

**DATE OF COUNT:** Wed. 2/26/14
**TIME OF COUNT:** 3:30 PM - 5:30 PM

**COUNTED BY:** SN
**WEATHER:** Rainy

| TIME INTERVAL ENDING | FROM NORTH ON Humphreys Road | | | | | | FROM SOUTH ON Humphreys Road (One Way SB) | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AT | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 PM | 0 | 0 | 0 | 57 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 59 | 55 | 0 | 2 | 0 | 6 | 50 | 1 | 232 |
| 04:00 PM | 0 | 0 | 0 | 83 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 35 | 55 | 0 | 1 | 0 | 15 | 66 | 0 | 264 |
| 04:15 PM | 0 | 1 | 0 | 83 | 2 | 7 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 42 | 60 | 0 | 1 | 0 | 5 | 61 | 0 | 262 |
| 04:30 PM | 0 | 2 | 0 | 99 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 54 | 61 | 0 | 0 | 0 | 5 | 35 | 0 | 256 |
| 04:45 PM | 0 | 0 | 0 | 65 | 1 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 27 | 43 | 0 | 1 | 0 | 1 | 54 | 1 | 199 |
| 05:00 PM | 0 | 0 | 0 | 58 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 31 | 43 | 0 | 1 | 0 | 5 | 46 | 0 | 184 |
| 05:15 PM | 0 | 1 | 0 | 72 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 40 | 54 | 0 | 2 | 0 | 3 | 29 | 0 | 202 |
| 05:30 PM | 0 | 0 | 0 | 78 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 61 | 52 | 0 | 0 | 0 | 1 | 29 | 0 | 224 |
| PEAK HOUR TOTALS | 0 | 3 | 0 | 322 | 5 | 18 | 1 | 0 | 0 | 0 | 1 | 1 | 5 | 8 | 0 | 2 | 190 | 231 | 0 | 4 | 0 | 31 | 212 | 1 | INTERSECTION |
| ALL MOVEMENTS | 345 | | | | | | 2 | | | | | | 423 | | | | | | 244 | | | | | | 1014 |
| % HV | 0.9% | | | | | | 0.0% | | | | | | 1.9% | | | | | | 1.6% | | | | | | 1.5% |
| PEAK HOUR FACTOR | 0.85 | | | | | | 0.50 | | | | | | 0.92 | | | | | | 0.75 | | | | | | 0.96 |

**PHF = Peak Hour Factor**

**3:30 PM - 5:30 PM PEAK HOUR:** 3:30 PM TO 4:30 PM

REDUCED BY: CN

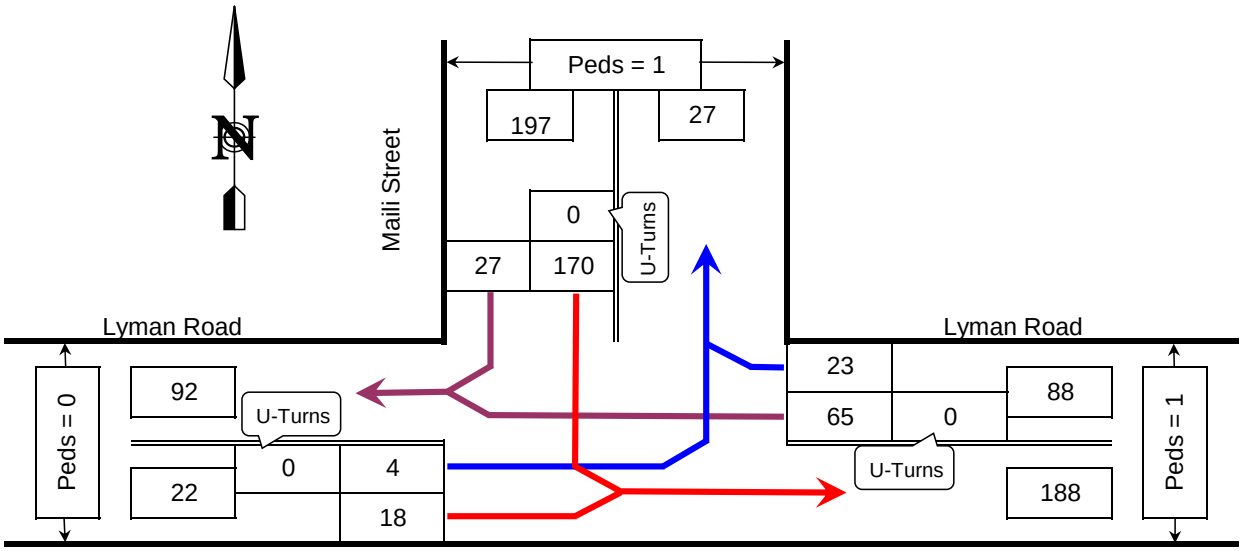
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Humphreys Road | | | | | | FROM SOUTH ON Humphreys Road (One Way SB) | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 1:30 PM - 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:45 PM - 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 PM - 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM - 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM - 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 PM - 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM - 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM - 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 PM - 4:30 PM | 0 | 3 | 0 | 322 | 5 | 18 | 1 | 0 | 0 | 0 | 1 | 1 | 5 | 8 | 0 | 2 | 190 | 231 | 0 | 4 | 0 | 31 | 212 | 1 | 1014 |
| 3:45 PM - 4:45 PM | 0 | 3 | 0 | 330 | 5 | 23 | 2 | 0 | 0 | 0 | 0 | 1 | 4 | 9 | 0 | 2 | 158 | 219 | 0 | 3 | 0 | 26 | 216 | 1 | 981 |
| 4:00 PM - 5:00 PM | 0 | 3 | 0 | 305 | 3 | 17 | 3 | 0 | 0 | 0 | 0 | 1 | 2 | 9 | 0 | 1 | 154 | 207 | 0 | 3 | 0 | 16 | 196 | 1 | 901 |
| 4:15 PM - 5:15 PM | 0 | 3 | 0 | 294 | 2 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 152 | 201 | 0 | 4 | 0 | 14 | 164 | 1 | 841 |
| 4:30 PM - 5:30 PM | 0 | 1 | 0 | 273 | 3 | 12 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 159 | 192 | 0 | 4 | 0 | 10 | 158 | 1 | 809 |

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**7:30 AM - 9:30 AM PEAK HOUR: 8:30 AM TO 9:30 AM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| **IN** | **307** |
| **OUT** | **307** |

| | HV | PHF |
|---|---|---|
| **SB** | 0.5% | 0.78 |
| **WB** | 10.2% | 0.88 |
| **EB** | 22.7% | 0.79 |
| **INTRS.** | 4.9% | 0.85 |

HV = Heavy Vehicles
PHF = Peak Hour Factor

**Lyman Road @ Maili Street**

**Schofield Barracks, HI**

COUNTED BY: SN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Tue. 2/25/14

TIME OF COUNT: 7:30 AM - 9:30 AM

WEATHER: Overcast

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Lyman Road @ Maili Street
Schofield Barracks, HI

**DATE OF COUNT:** Tue. 2/25/14
**TIME OF COUNT:** 7:30 AM - 9:30 AM

**COUNTED BY:** SN
**WEATHER:** Overcast

| TIME INTERVAL ENDING | FROM NORTH ON Maili Street | | | | | | FROM SOUTH ON | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AT | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 05:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 2 | 0 | 26 |
| 08:00 AM | 0 | 0 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 13 | 0 | 1 | 0 | 0 | 3 | 0 | 40 |
| 08:15 AM | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 13 | 0 | 1 | 0 | 1 | 5 | 0 | 36 |
| 08:30 AM | 0 | 0 | 0 | 8 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 8 | 9 | 0 | 1 | 0 | 1 | 2 | 0 | 32 |
| 08:45 AM | 0 | 1 | 0 | 23 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 14 | 5 | 0 | 0 | 0 | 1 | 4 | 0 | 54 |
| 09:00 AM | 1 | 0 | 0 | 39 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 8 | 0 | 3 | 0 | 1 | 3 | 0 | 76 |
| 09:15 AM | 0 | 0 | 0 | 52 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 19 | 6 | 0 | 0 | 0 | 1 | 6 | 0 | 87 |
| 09:30 AM | 0 | 0 | 0 | 56 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 17 | 4 | 0 | 2 | 0 | 1 | 5 | 0 | 90 |
| **PEAK HOUR TOTALS** | **1** | **1** | **0** | **170** | **0** | **27** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **9** | **0** | **0** | **65** | **23** | **0** | **5** | **0** | **4** | **18** | **0** | **INTERSECTION** |
| **ALL MOVEMENTS** | **197** | | | | | | **0** | | | | | | **88** | | | | | | **22** | | | | | | **307** |
| **% HV** | **0.5%** | | | | | | **#N/A** | | | | | | **10.2%** | | | | | | **22.7%** | | | | | | **4.9%** |
| **PEAK HOUR FACTOR** | **0.78** | | | | | | **#N/A** | | | | | | **0.88** | | | | | | **0.79** | | | | | | **0.85** |

**PHF = Peak Hour Factor**

**7:30 AM - 9:30 AM PEAK HOUR:** **8:30 AM** **TO 9:30 AM**

REDUCED BY: CN

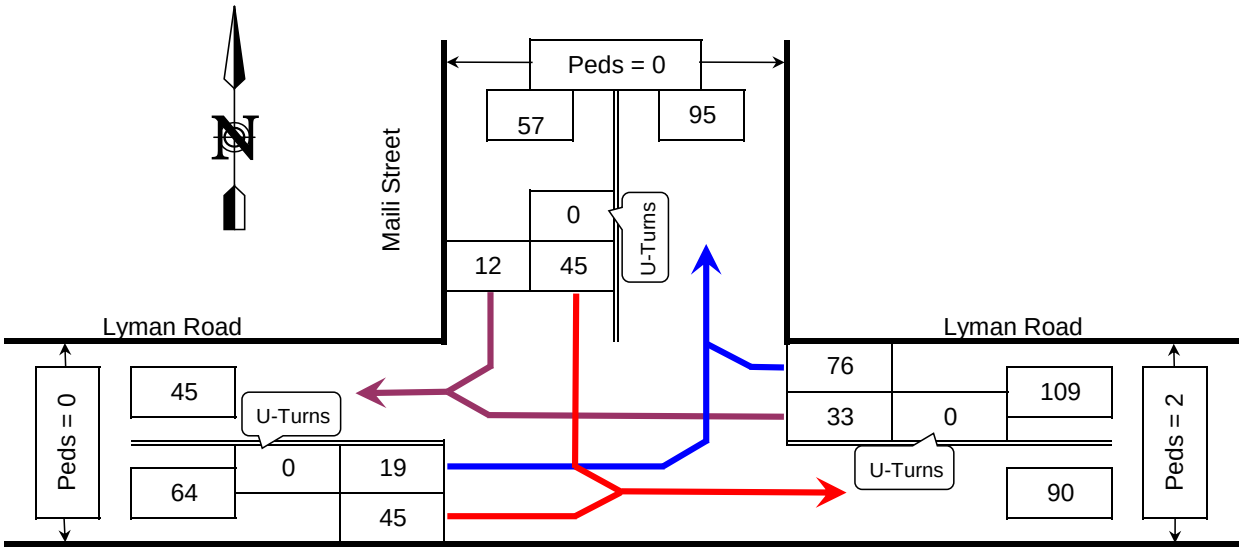
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Maili Street | | | | | | FROM SOUTH ON | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 5:30 AM - 6:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 AM - 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 AM - 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:15 AM - 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:30 AM - 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:45 AM - 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 AM - 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM - 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM - 8:30 AM | 0 | 0 | 0 | 38 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 35 | 41 | 0 | 3 | 0 | 2 | 12 | 0 | 134 |
| 7:45 AM - 8:45 AM | 0 | 1 | 0 | 49 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 43 | 40 | 0 | 3 | 0 | 3 | 14 | 0 | 162 |
| 8:00 AM - 9:00 AM | 1 | 1 | 0 | 80 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 43 | 35 | 0 | 5 | 0 | 4 | 14 | 0 | 198 |
| 8:15 AM - 9:15 AM | 1 | 1 | 0 | 122 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 0 | 0 | 56 | 28 | 0 | 4 | 0 | 4 | 15 | 0 | 249 |
| 8:30 AM - 9:30 AM | 1 | 1 | 0 | 170 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 0 | 65 | 23 | 0 | 5 | 0 | 4 | 18 | 0 | 307 |

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**3:30 PM - 5:30 PM PEAK HOUR: 3:30 PM TO 4:30 PM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 230 |
| OUT | 230 |

| | HV | PHF |
|---|---|---|
| SB | 7.0% | 0.79 |
| WB | 1.8% | 0.76 |
| EB | 7.8% | 0.57 |
| INTRS. | 4.8% | 0.94 |

HV = Heavy Vehicles
PHF = Peak Hour Factor

**Lyman Road @ Maili Street**

**Schofield Barracks, HI**

COUNTED BY: SN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Tue. 2/25/14

TIME OF COUNT: 3:30 PM - 5:30 PM

WEATHER: Overcast

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Lyman Road @ Maili Street
Schofield Barracks, HI

**DATE OF COUNT:** Tue. 2/25/14
**TIME OF COUNT:** 3:30 PM - 5:30 PM

**COUNTED BY:** SN
**WEATHER:** Overcast

| TIME INTERVAL ENDING AT | FROM NORTH ON Maili Street | | | | | | FROM SOUTH ON | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 PM | 0 | 0 | 0 | 15 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 18 | 0 | 1 | 0 | 6 | 9 | 0 | 55 |
| 04:00 PM | 0 | 1 | 0 | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 24 | 0 | 0 | 0 | 8 | 6 | 0 | 53 |
| 04:15 PM | 0 | 3 | 0 | 7 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 13 | 0 | 3 | 0 | 4 | 24 | 0 | 61 |
| 04:30 PM | 0 | 0 | 0 | 15 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 15 | 21 | 0 | 1 | 0 | 1 | 6 | 0 | 61 |
| 04:45 PM | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 9 | 14 | 2 | 0 | 0 | 3 | 20 | 0 | 54 |
| 05:00 PM | 1 | 0 | 0 | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 5 | 19 | 0 | 50 |
| 05:15 PM | 1 | 0 | 0 | 9 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 17 | 0 | 1 | 0 | 2 | 19 | 0 | 50 |
| 05:30 PM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 1 | 0 | 2 | 10 | 0 | 30 |
| **PEAK HOUR TOTALS** | **0** | **4** | **0** | **45** | **0** | **12** | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **2** | **0** | **0** | **33** | **76** | **0** | **5** | **0** | **19** | **45** | **0** | **INTERSECTION** |
| **ALL MOVEMENTS** | **57** | | | | | | **0** | | | | | | **109** | | | | | | **64** | | | | | | **230** |
| **% HV** | **7.0%** | | | | | | **#N/A** | | | | | | **1.8%** | | | | | | **7.8%** | | | | | | **4.8%** |
| **PEAK HOUR FACTOR** | **0.79** | | | | | | **#N/A** | | | | | | **0.76** | | | | | | **0.57** | | | | | | **0.94** |

**PHF = Peak Hour Factor**

**3:30 PM - 5:30 PM PEAK HOUR:** 3:30 PM TO 4:30 PM

REDUCED BY: CN

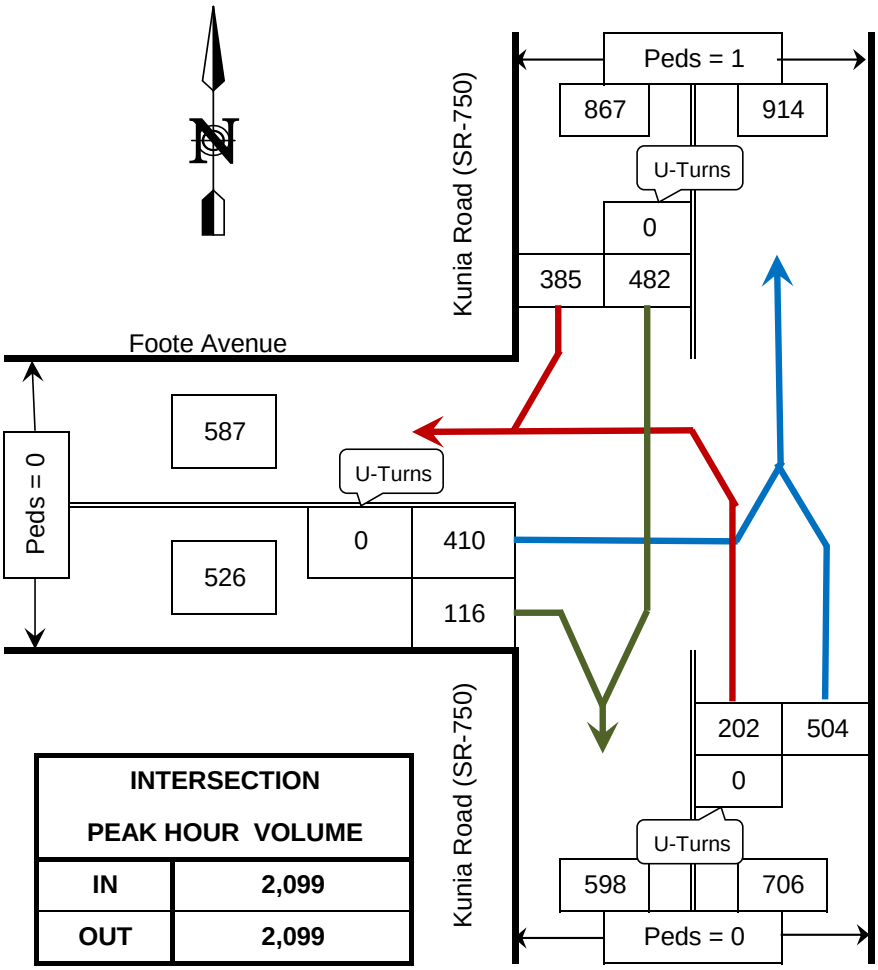
DATE OF REDUCTION: 2/28/2014

| TIME INTERVAL | FROM NORTH ON Maili Street | | | | | | FROM SOUTH ON | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 1:30 PM - 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:45 PM - 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 PM - 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM - 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM - 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 PM - 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM - 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM - 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 PM - 4:30 PM | 0 | 4 | 0 | 45 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 33 | 76 | 0 | 5 | 0 | 19 | 45 | 0 | 230 |
| 3:45 PM - 4:45 PM | 0 | 4 | 0 | 35 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 37 | 72 | 2 | 4 | 0 | 16 | 56 | 0 | 229 |
| 4:00 PM - 5:00 PM | 1 | 3 | 0 | 35 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 41 | 56 | 2 | 4 | 0 | 13 | 69 | 0 | 226 |
| 4:15 PM - 5:15 PM | 2 | 0 | 0 | 37 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 34 | 60 | 2 | 2 | 0 | 11 | 64 | 0 | 215 |
| 4:30 PM - 5:30 PM | 2 | 0 | 0 | 25 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 24 | 49 | 2 | 2 | 0 | 12 | 68 | 0 | 184 |

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**7:30 AM - 9:30 AM PEAK HOUR: 7:30 AM TO 8:30 AM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 2,099 |
| OUT | 2,099 |

| | HV | PHF |
|---|---|---|
| SB | 5.0% | 0.87 |
| NB | 3.4% | 0.92 |
| EB | 2.5% | 0.84 |
| INTRS. | 3.8% | 0.88 |

HV = Heavy Vehicles
PHF = Peak Hour Factor

**Kunia Road (SR-750) @ Foote Avenue**

**Schofield Barracks, HI**

COUNTED BY: CN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Wed. 2/26/14

TIME OF COUNT: 7:30 AM - 9:30 AM

WEATHER: Sunny

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Kunia Road (SR-750) @ Foote Avenue
Schofield Barracks, HI

**DATE OF COUNT:** Wed. 2/26/14
**TIME OF COUNT:** 7:30 AM - 9:30 AM

**COUNTED BY:** CN
**WEATHER:** Sunny

| TIME INTERVAL ENDING | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON | | | | | | FROM WEST ON Foote Avenue | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AT | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 05:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 9 | 0 | 0 | 129 | 74 | 0 | 6 | 0 | 41 | 146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 119 | 0 | 37 | 546 |
| 08:00 AM | 0 | 11 | 0 | 0 | 128 | 90 | 0 | 6 | 0 | 47 | 115 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 97 | 0 | 24 | 501 |
| 08:15 AM | 1 | 13 | 0 | 0 | 121 | 128 | 0 | 7 | 0 | 53 | 139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 124 | 0 | 29 | 594 |
| 08:30 AM | 0 | 10 | 0 | 0 | 104 | 93 | 0 | 5 | 0 | 61 | 104 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 70 | 0 | 26 | 458 |
| 08:45 AM | 1 | 16 | 0 | 0 | 110 | 90 | 0 | 12 | 0 | 67 | 109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 43 | 0 | 17 | 436 |
| 09:00 AM | 0 | 13 | 0 | 0 | 111 | 129 | 0 | 8 | 0 | 43 | 93 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 75 | 0 | 30 | 481 |
| 09:15 AM | 0 | 5 | 0 | 0 | 99 | 114 | 0 | 5 | 0 | 71 | 82 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 70 | 0 | 30 | 466 |
| 09:30 AM | 1 | 8 | 0 | 0 | 95 | 96 | 0 | 2 | 0 | 56 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 76 | 0 | 23 | 415 |
| **PEAK HOUR TOTALS** | **1** | **43** | **0** | **0** | **482** | **385** | **0** | **24** | **0** | **202** | **504** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **13** | **0** | **410** | **0** | **116** | **INTERSECTION** |
| **ALL MOVEMENTS** | **867** | | | | | | **706** | | | | | | **0** | | | | | | **526** | | | | | | **2099** |
| **% HV** | **5.0%** | | | | | | **3.4%** | | | | | | **#N/A** | | | | | | **2.5%** | | | | | | **3.8%** |
| **PEAK HOUR FACTOR** | **0.87** | | | | | | **0.92** | | | | | | **#N/A** | | | | | | **0.84** | | | | | | **0.88** |

**PHF = Peak Hour Factor**

**7:30 AM - 9:30 AM PEAK HOUR:** 7:30 AM TO 8:30 AM

REDUCED BY: CN

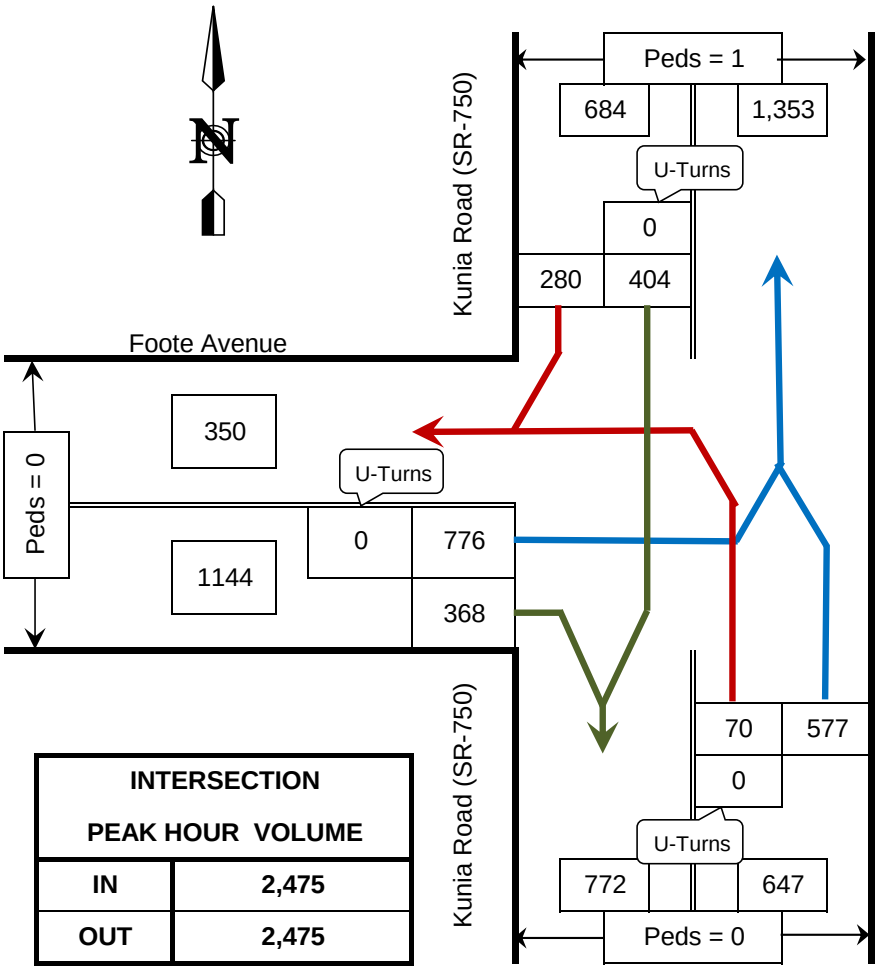
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON | | | | | | FROM WEST ON Foote Avenue | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 5:30 AM - 6:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 AM - 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 AM - 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:15 AM - 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:30 AM - 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:45 AM - 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 AM - 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM - 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM - 8:30 AM | 1 | 43 | 0 | 0 | 482 | 385 | 0 | 24 | 0 | 202 | 504 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 410 | 0 | 116 | 2099 |
| 7:45 AM - 8:45 AM | 2 | 50 | 0 | 0 | 463 | 401 | 0 | 30 | 0 | 228 | 467 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 334 | 0 | 96 | 1989 |
| 8:00 AM - 9:00 AM | 2 | 52 | 0 | 0 | 446 | 440 | 0 | 32 | 0 | 224 | 445 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 312 | 0 | 102 | 1969 |
| 8:15 AM - 9:15 AM | 1 | 44 | 0 | 0 | 424 | 426 | 0 | 30 | 0 | 242 | 388 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 258 | 0 | 103 | 1841 |
| 8:30 AM - 9:30 AM | 2 | 42 | 0 | 0 | 415 | 429 | 0 | 27 | 0 | 237 | 353 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 264 | 0 | 100 | 1798 |

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**3:30 PM - 5:30 PM PEAK HOUR: 3:30 PM TO 4:30 PM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| **IN** | **2,475** |
| **OUT** | **2,475** |

| | HV | PHF |
|---|---|---|
| **SB** | **2.2%** | **0.87** |
| **NB** | **0.8%** | **0.83** |
| **EB** | **0.5%** | **0.81** |
| **INTRS.** | **1.1%** | **0.93** |

HV = Heavy Vehicles
PHF = Peak Hour Factor

**Kunia Road (SR-750) @ Foote Avenue**

**Schofield Barracks, HI**

COUNTED BY: CN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Wed. 2/26/14

TIME OF COUNT: 3:30 PM - 5:30 PM

WEATHER: Rainy

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Kunia Road (SR-750) @ Foote Avenue
Schofield Barracks, HI

**DATE OF COUNT:** Wed. 2/26/14
**TIME OF COUNT:** 3:30 PM - 5:30 PM

**COUNTED BY:** CN
**WEATHER:** Rainy

| TIME INTERVAL ENDING AT | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON | | | | | | FROM WEST ON Foote Avenue | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 PM | 1 | 0 | 0 | 0 | 82 | 71 | 0 | 2 | 0 | 15 | 116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 220 | 0 | 134 | 638 |
| 04:00 PM | 0 | 5 | 0 | 0 | 105 | 75 | 0 | 0 | 0 | 23 | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 198 | 0 | 89 | 663 |
| 04:15 PM | 0 | 7 | 0 | 0 | 105 | 50 | 0 | 1 | 0 | 11 | 154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 185 | 0 | 93 | 598 |
| 04:30 PM | 0 | 3 | 0 | 0 | 112 | 84 | 0 | 2 | 0 | 21 | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 173 | 0 | 52 | 576 |
| 04:45 PM | 0 | 1 | 0 | 0 | 89 | 76 | 0 | 2 | 0 | 26 | 130 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 141 | 0 | 53 | 515 |
| 05:00 PM | 0 | 2 | 0 | 0 | 84 | 69 | 0 | 2 | 0 | 24 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 152 | 0 | 47 | 459 |
| 05:15 PM | 0 | 4 | 0 | 0 | 109 | 88 | 0 | 2 | 0 | 17 | 129 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 179 | 0 | 62 | 584 |
| 05:30 PM | 0 | 3 | 0 | 0 | 86 | 56 | 0 | 1 | 0 | 19 | 115 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 166 | 0 | 44 | 486 |
| **PEAK HOUR TOTALS** | **1** | **15** | **0** | **0** | **404** | **280** | **0** | **5** | **0** | **70** | **577** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **6** | **0** | **776** | **0** | **368** | **INTERSECTION** |
| **ALL MOVEMENTS** | **684** | | | | | | **647** | | | | | | **0** | | | | | | **1144** | | | | | | **2475** |
| **% HV** | **2.2%** | | | | | | **0.8%** | | | | | | **#N/A** | | | | | | **0.5%** | | | | | | **1.1%** |
| **PEAK HOUR FACTOR** | **0.87** | | | | | | **0.83** | | | | | | **#N/A** | | | | | | **0.81** | | | | | | **0.93** |

**PHF = Peak Hour Factor**

**3:30 PM - 5:30 PM PEAK HOUR:** **3:30 PM** **TO 4:30 PM**

REDUCED BY: CN

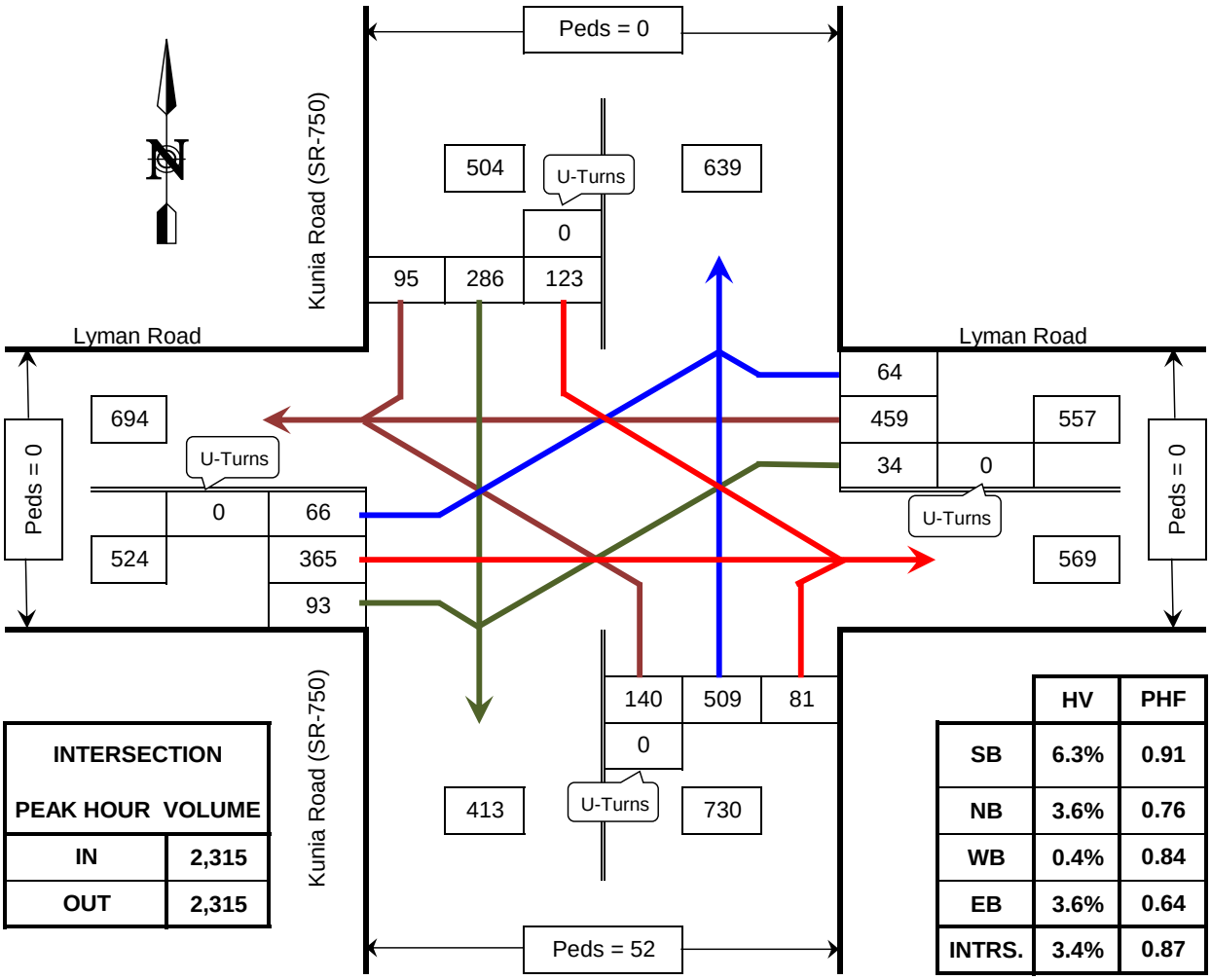
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON | | | | | | FROM WEST ON Foote Avenue | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 1:30 PM - 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:45 PM - 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 PM - 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM - 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM - 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 PM - 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM - 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM - 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 PM - 4:30 PM | 1 | 15 | 0 | 0 | 404 | 280 | 0 | 5 | 0 | 70 | 577 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 776 | 0 | 368 | 2475 |
| 3:45 PM - 4:45 PM | 0 | 16 | 0 | 0 | 411 | 285 | 0 | 5 | 0 | 81 | 591 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 697 | 0 | 287 | 2352 |
| 4:00 PM - 5:00 PM | 0 | 13 | 0 | 0 | 390 | 279 | 0 | 7 | 0 | 82 | 501 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 651 | 0 | 245 | 2148 |
| 4:15 PM - 5:15 PM | 0 | 10 | 0 | 0 | 394 | 317 | 0 | 8 | 0 | 88 | 476 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 645 | 0 | 214 | 2134 |
| 4:30 PM - 5:30 PM | 0 | 10 | 0 | 0 | 368 | 289 | 0 | 7 | 0 | 86 | 457 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 638 | 0 | 206 | 2044 |

**TRAFFIC DATA GATHERING**

# TURNING MOVEMENTS DIAGRAM

**7:30 AM - 9:30 AM PEAK HOUR: 7:30 AM TO 8:30 AM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 2,315 |
| OUT | 2,315 |

| | HV | PHF |
|---|---|---|
| SB | 6.3% | 0.91 |
| NB | 3.6% | 0.76 |
| WB | 0.4% | 0.84 |
| EB | 3.6% | 0.64 |
| INTRS. | 3.4% | 0.87 |

PHF = Peak Hour Factor
HV = Heavy Vehicles

**Kunia Road (SR-750) @ Lyman Road**

**Schofield Barracks, HI**

COUNTED BY: CN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Tue. 2/25/14

TIME OF COUNT: 7:30 AM - 9:30 AM

WEATHER: Overcast

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Kunia Road (SR-750) @ Lyman Road
Schofield Barracks, HI

**DATE OF COUNT:** Tue. 2/25/14
**TIME OF COUNT:** 7:30 AM - 9:30 AM

**COUNTED BY:** CN
**WEATHER:** Overcast

| TIME INTERVAL ENDING | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AT | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 05:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 8 | 0 | 41 | 59 | 29 | 42 | 3 | 0 | 30 | 140 | 20 | 0 | 0 | 0 | 7 | 121 | 12 | 0 | 1 | 0 | 11 | 168 | 26 | 664 |
| 08:00 AM | 0 | 9 | 0 | 30 | 68 | 20 | 9 | 7 | 0 | 38 | 168 | 33 | 0 | 0 | 0 | 7 | 141 | 10 | 0 | 6 | 0 | 20 | 100 | 33 | 668 |
| 08:15 AM | 0 | 8 | 0 | 29 | 93 | 16 | 1 | 10 | 0 | 40 | 126 | 18 | 0 | 1 | 0 | 14 | 127 | 24 | 0 | 6 | 0 | 18 | 46 | 23 | 574 |
| 08:30 AM | 0 | 7 | 0 | 23 | 66 | 30 | 0 | 6 | 0 | 32 | 75 | 10 | 0 | 1 | 0 | 6 | 70 | 18 | 0 | 6 | 0 | 17 | 51 | 11 | 409 |
| 08:45 AM | 0 | 11 | 0 | 23 | 65 | 35 | 0 | 5 | 0 | 44 | 123 | 22 | 0 | 2 | 0 | 6 | 99 | 15 | 0 | 3 | 0 | 6 | 45 | 7 | 490 |
| 09:00 AM | 0 | 10 | 0 | 23 | 48 | 44 | 0 | 7 | 0 | 31 | 105 | 18 | 0 | 6 | 0 | 6 | 143 | 14 | 0 | 2 | 0 | 8 | 66 | 15 | 521 |
| 09:15 AM | 0 | 8 | 0 | 22 | 74 | 47 | 1 | 5 | 0 | 36 | 113 | 18 | 0 | 2 | 0 | 2 | 110 | 16 | 0 | 4 | 0 | 19 | 101 | 17 | 575 |
| 09:30 AM | 0 | 16 | 0 | 28 | 60 | 29 | 0 | 8 | 0 | 42 | 103 | 20 | 0 | 4 | 0 | 3 | 89 | 18 | 0 | 7 | 0 | 13 | 83 | 9 | 497 |
| PEAK HOUR TOTALS | 0 | 32 | 0 | 123 | 286 | 95 | 52 | 26 | 0 | 140 | 509 | 81 | 0 | 2 | 0 | 34 | 459 | 64 | 0 | 19 | 0 | 66 | 365 | 93 | INTERSECTION |
| ALL MOVEMENTS | 504 | | | | | | 730 | | | | | | 557 | | | | | | 524 | | | | | | 2315 |
| % HV | 6.3% | | | | | | 3.6% | | | | | | 0.4% | | | | | | 3.6% | | | | | | 3.4% |
| PEAK HOUR FACTOR | 0.91 | | | | | | 0.76 | | | | | | 0.84 | | | | | | 0.64 | | | | | | 0.87 |

PHF = Peak Hour Factor

**7:30 AM - 9:30 AM PEAK HOUR:** 7:30 AM TO 8:30 AM

REDUCED BY: CN

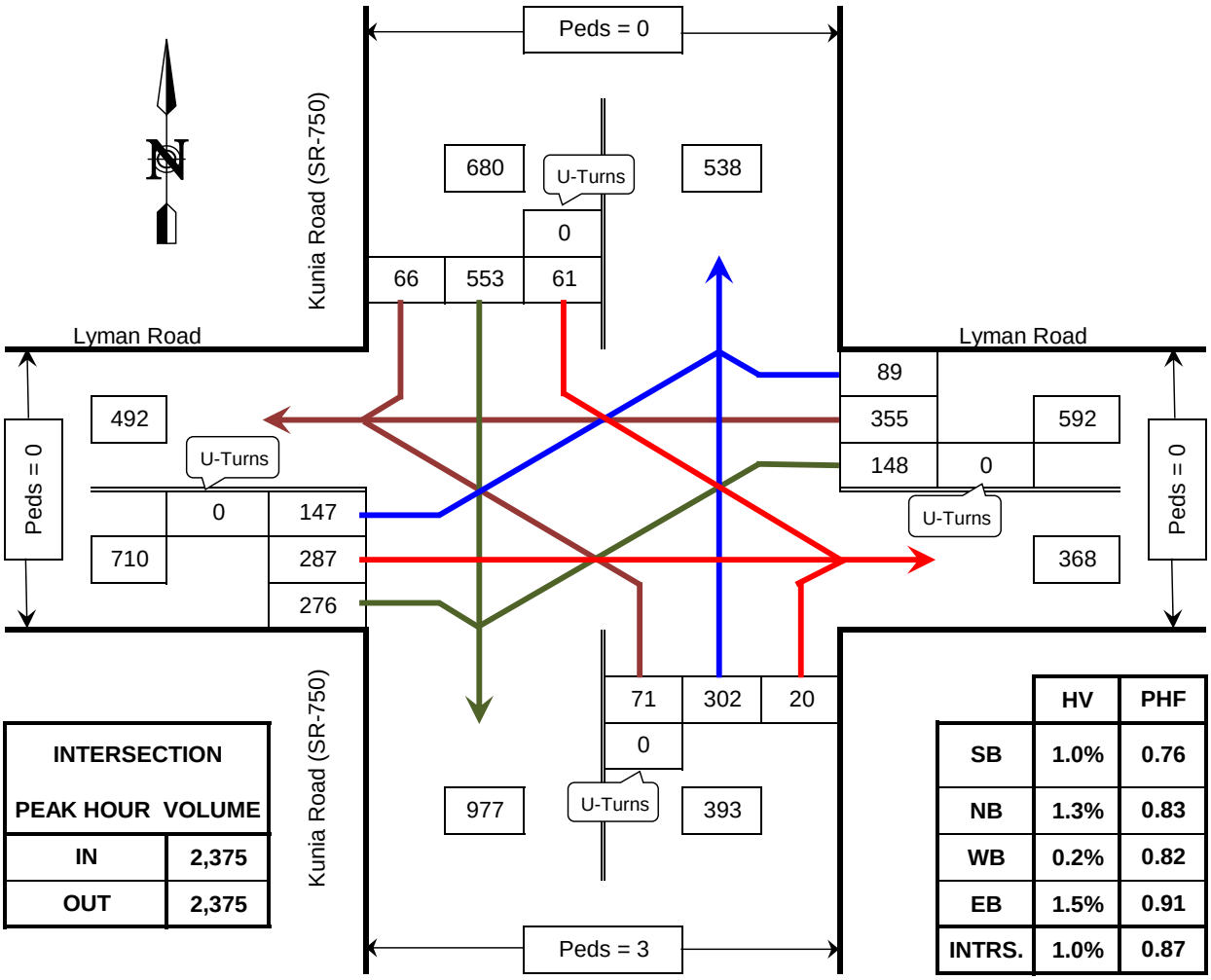
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 5:30 AM - 6:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 AM - 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 AM - 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:15 AM - 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:30 AM - 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:45 AM - 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 AM - 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM - 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM - 8:30 AM | 0 | 32 | 0 | 123 | 286 | 95 | 52 | 26 | 0 | 140 | 509 | 81 | 0 | 2 | 0 | 34 | 459 | 64 | 0 | 19 | 0 | 66 | 365 | 93 | 2315 |
| 7:45 AM - 8:45 AM | 0 | 35 | 0 | 105 | 292 | 101 | 10 | 28 | 0 | 154 | 492 | 83 | 0 | 4 | 0 | 33 | 437 | 67 | 0 | 21 | 0 | 61 | 242 | 74 | 2141 |
| 8:00 AM - 9:00 AM | 0 | 36 | 0 | 98 | 272 | 125 | 1 | 28 | 0 | 147 | 429 | 68 | 0 | 10 | 0 | 32 | 439 | 71 | 0 | 17 | 0 | 49 | 208 | 56 | 1994 |
| 8:15 AM - 9:15 AM | 0 | 36 | 0 | 91 | 253 | 156 | 1 | 23 | 0 | 143 | 416 | 68 | 0 | 11 | 0 | 20 | 422 | 63 | 0 | 15 | 0 | 50 | 263 | 50 | 1995 |
| 8:30 AM - 9:30 AM | 0 | 45 | 0 | 96 | 247 | 155 | 1 | 25 | 0 | 153 | 444 | 78 | 0 | 14 | 0 | 17 | 441 | 63 | 0 | 16 | 0 | 46 | 295 | 48 | 2083 |

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**3:30 PM - 5:30 PM PEAK HOUR: 4:30 PM TO 5:30 PM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 2,375 |
| OUT | 2,375 |

| | HV | PHF |
|---|---|---|
| SB | 1.0% | 0.76 |
| NB | 1.3% | 0.83 |
| WB | 0.2% | 0.82 |
| EB | 1.5% | 0.91 |
| INTRS. | 1.0% | 0.87 |

PHF = Peak Hour Factor
HV = Heavy Vehicles

**Kunia Road (SR-750) @ Lyman Road**

**Schofield Barracks, HI**

COUNTED BY: CN

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Tue. 2/25/14

TIME OF COUNT: 3:30 PM - 5:30 PM

WEATHER: Overcast

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Kunia Road (SR-750) @ Lyman Road
Schofield Barracks, HI

**DATE OF COUNT:** Tue. 2/25/14
**TIME OF COUNT:** 3:30 PM - 5:30 PM

**COUNTED BY:** CN
**WEATHER:** Overcast

| TIME INTERVAL ENDING AT | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 PM | 0 | 5 | 0 | 27 | 129 | 23 | 0 | 3 | 0 | 20 | 107 | 11 | 0 | 2 | 0 | 30 | 50 | 18 | 0 | 6 | 0 | 41 | 55 | 30 | 541 |
| 04:00 PM | 0 | 3 | 0 | 12 | 147 | 17 | 0 | 2 | 0 | 16 | 134 | 8 | 0 | 1 | 0 | 23 | 47 | 19 | 0 | 2 | 0 | 27 | 63 | 41 | 554 |
| 04:15 PM | 0 | 5 | 0 | 13 | 117 | 19 | 1 | 0 | 0 | 18 | 79 | 5 | 0 | 6 | 0 | 36 | 60 | 28 | 0 | 1 | 0 | 28 | 72 | 49 | 524 |
| 04:30 PM | 0 | 2 | 0 | 11 | 119 | 18 | 0 | 0 | 0 | 21 | 82 | 3 | 0 | 2 | 0 | 22 | 73 | 29 | 0 | 2 | 0 | 27 | 69 | 61 | 535 |
| 04:45 PM | 0 | 1 | 0 | 10 | 130 | 13 | 2 | 1 | 0 | 22 | 73 | 3 | 0 | 1 | 0 | 43 | 62 | 15 | 0 | 5 | 0 | 21 | 69 | 58 | 519 |
| 05:00 PM | 0 | 5 | 0 | 14 | 127 | 16 | 0 | 2 | 0 | 9 | 73 | 7 | 0 | 0 | 0 | 32 | 67 | 14 | 0 | 6 | 0 | 48 | 69 | 78 | 554 |
| 05:15 PM | 0 | 0 | 0 | 16 | 114 | 15 | 1 | 0 | 0 | 20 | 95 | 3 | 0 | 0 | 0 | 30 | 117 | 31 | 0 | 0 | 0 | 31 | 72 | 78 | 622 |
| 05:30 PM | 0 | 1 | 0 | 21 | 182 | 22 | 0 | 2 | 0 | 20 | 61 | 7 | 0 | 0 | 0 | 43 | 109 | 29 | 0 | 0 | 0 | 47 | 77 | 62 | 680 |
| **PEAK HOUR TOTALS** | **0** | **7** | **0** | **61** | **553** | **66** | **3** | **5** | **0** | **71** | **302** | **20** | **0** | **1** | **0** | **148** | **355** | **89** | **0** | **11** | **0** | **147** | **287** | **276** | **INTERSECTION** |
| **ALL MOVEMENTS** | **680** | | | | | | **393** | | | | | | **592** | | | | | | **710** | | | | | | **2375** |
| **% HV** | **1.0%** | | | | | | **1.3%** | | | | | | **0.2%** | | | | | | **1.5%** | | | | | | **1.0%** |
| **PEAK HOUR FACTOR** | **0.76** | | | | | | **0.83** | | | | | | **0.82** | | | | | | **0.91** | | | | | | **0.87** |

**PHF = Peak Hour Factor**

**3:30 PM - 5:30 PM PEAK HOUR:** **4:30 PM** **TO 5:30 PM**

REDUCED BY: CN

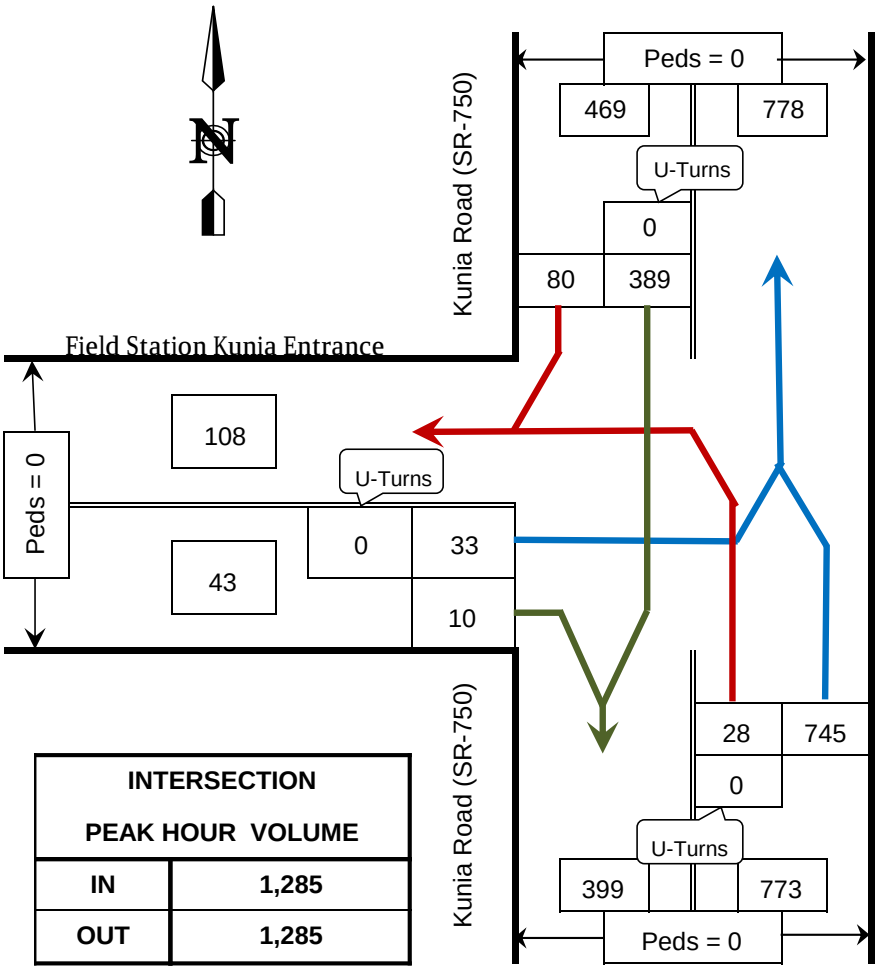
DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON Lyman Road | | | | | | FROM WEST ON Lyman Road | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 1:30 PM - 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:45 PM - 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 PM - 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM - 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM - 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 PM - 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM - 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM - 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 PM - 4:30 PM | 0 | 15 | 0 | 63 | 512 | 77 | 1 | 5 | 0 | 75 | 402 | 27 | 0 | 11 | 0 | 111 | 230 | 94 | 0 | 11 | 0 | 123 | 259 | 181 | 2154 |
| 3:45 PM - 4:45 PM | 0 | 11 | 0 | 46 | 513 | 67 | 3 | 3 | 0 | 77 | 368 | 19 | 0 | 10 | 0 | 124 | 242 | 91 | 0 | 10 | 0 | 103 | 273 | 209 | 2132 |
| 4:00 PM - 5:00 PM | 0 | 13 | 0 | 48 | 493 | 66 | 3 | 3 | 0 | 70 | 307 | 18 | 0 | 9 | 0 | 133 | 262 | 86 | 0 | 14 | 0 | 124 | 279 | 246 | 2132 |
| 4:15 PM - 5:15 PM | 0 | 8 | 0 | 51 | 490 | 62 | 3 | 3 | 0 | 72 | 323 | 16 | 0 | 3 | 0 | 127 | 319 | 89 | 0 | 13 | 0 | 127 | 279 | 275 | 2230 |
| 4:30 PM - 5:30 PM | 0 | 7 | 0 | 61 | 553 | 66 | 3 | 5 | 0 | 71 | 302 | 20 | 0 | 1 | 0 | 148 | 355 | 89 | 0 | 11 | 0 | 147 | 287 | 276 | 2375 |

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**7:30 AM - 9:30 AM PEAK HOUR: 7:30 AM TO 8:30 AM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 1,285 |
| OUT | 1,285 |

| | HV | PHF |
|---|---|---|
| SB | 4.7% | 0.92 |
| NB | 4.3% | 0.89 |
| EB | 14.0% | 0.51 |
| INTRS. | 4.7% | 0.95 |

HV = Heavy Vehicles
PHF = Peak Hour Factor

**Kunia Road (SR-750) @ Field Station Kunia Entrance**

**Schofield Barracks, HI**

COUNTED BY: VT

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Wed. 2/26/14

TIME OF COUNT: 7:30 AM - 9:30 AM

WEATHER: Overcast

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Kunia Road (SR-750) @ FSK Entrance
Schofield Barracks, HI

**DATE OF COUNT:** Wed. 2/26/14
**TIME OF COUNT:** 7:30 AM - 9:30 AM

**COUNTED BY:** VT
**WEATHER:** Overcast

| TIME INTERVAL ENDING AT | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON | | | | | | FROM WEST ON FSK Entrance | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 05:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 0 | 5 | 0 | 0 | 92 | 25 | 0 | 4 | 0 | 5 | 211 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 1 | 339 |
| 08:00 AM | 0 | 8 | 0 | 0 | 105 | 23 | 0 | 5 | 0 | 13 | 165 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 1 | 313 |
| 08:15 AM | 0 | 5 | 0 | 0 | 100 | 20 | 0 | 10 | 0 | 4 | 171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 2 | 304 |
| 08:30 AM | 0 | 4 | 0 | 0 | 92 | 12 | 0 | 14 | 0 | 6 | 198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 15 | 0 | 6 | 329 |
| 08:45 AM | 0 | 7 | 0 | 0 | 76 | 12 | 0 | 18 | 0 | 7 | 195 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 2 | 307 |
| 09:00 AM | 0 | 9 | 0 | 0 | 71 | 9 | 0 | 10 | 0 | 2 | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 243 |
| 09:15 AM | 0 | 5 | 0 | 0 | 49 | 16 | 0 | 13 | 0 | 6 | 164 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 3 | 249 |
| 09:30 AM | 0 | 6 | 0 | 0 | 59 | 18 | 0 | 7 | 0 | 5 | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 1 | 213 |
| **PEAK HOUR TOTALS** | **0** | **22** | **0** | **0** | **389** | **80** | **0** | **33** | **0** | **28** | **745** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **6** | **0** | **33** | **0** | **10** | **INTERSECTION** |
| **ALL MOVEMENTS** | **469** | | | | | | **773** | | | | | | **0** | | | | | | **43** | | | | | | **1285** |
| **% HV** | **4.7%** | | | | | | **4.3%** | | | | | | **#N/A** | | | | | | **14.0%** | | | | | | **4.7%** |
| **PEAK HOUR FACTOR** | **0.92** | | | | | | **0.89** | | | | | | **#N/A** | | | | | | **0.51** | | | | | | **0.95** |

**PHF = Peak Hour Factor**

**7:30 AM - 9:30 AM PEAK HOUR:** 7:30 AM TO 8:30 AM

REDUCED BY: CN

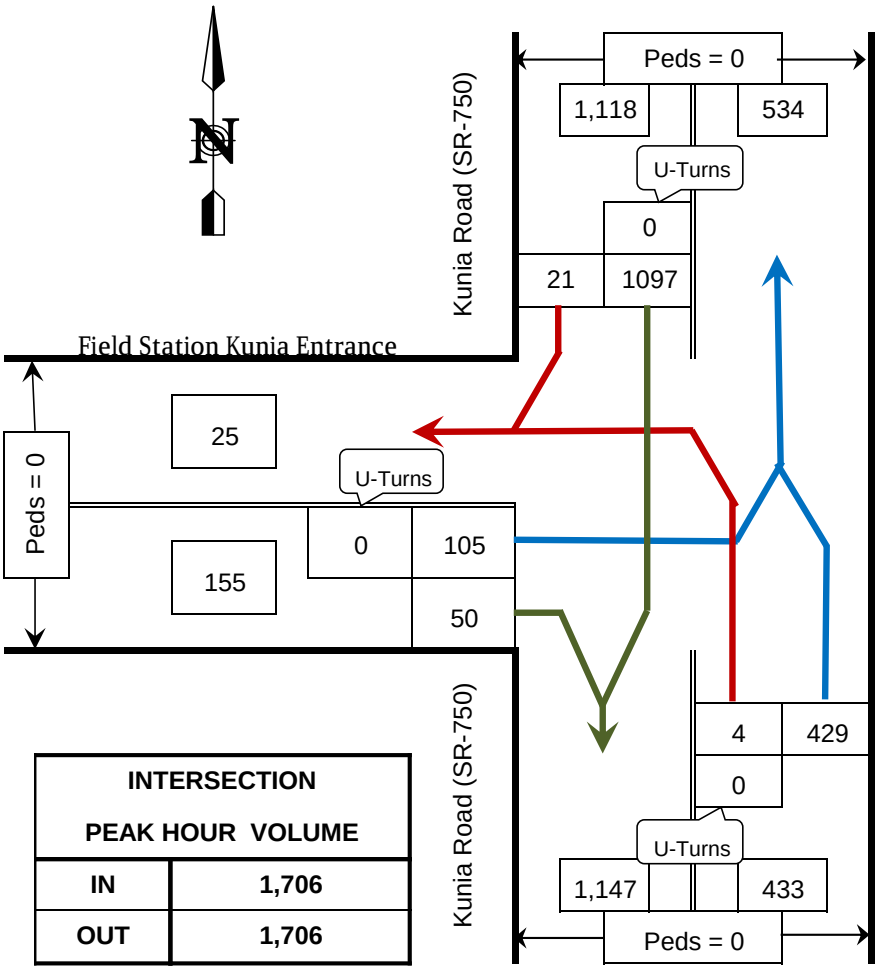
DATE OF REDUCTION: 2/28/2014

| TIME INTERVAL | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON | | | | | | FROM WEST ON FSK Entrance | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 5:30 AM - 6:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 AM - 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 AM - 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:15 AM - 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:30 AM - 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:45 AM - 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 AM - 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM - 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM - 8:30 AM | 0 | 22 | 0 | 0 | 389 | 80 | 0 | 33 | 0 | 28 | 745 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 33 | 0 | 10 | 1285 |
| 7:45 AM - 8:45 AM | 0 | 24 | 0 | 0 | 373 | 67 | 0 | 47 | 0 | 30 | 729 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 43 | 0 | 11 | 1253 |
| 8:00 AM - 9:00 AM | 0 | 25 | 0 | 0 | 339 | 53 | 0 | 52 | 0 | 19 | 714 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 48 | 0 | 10 | 1183 |
| 8:15 AM - 9:15 AM | 0 | 25 | 0 | 0 | 288 | 49 | 0 | 55 | 0 | 21 | 707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 52 | 0 | 11 | 1128 |
| 8:30 AM - 9:30 AM | 0 | 27 | 0 | 0 | 255 | 55 | 0 | 48 | 0 | 20 | 626 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 6 | 1012 |

TRAFFIC DATA GATHERING

# TURNING MOVEMENTS DIAGRAM

**3:30 PM - 5:30 PM PEAK HOUR: 3:30 PM TO 4:30 PM**




| INTERSECTION PEAK HOUR VOLUME | |
|---|---|
| IN | 1,706 |
| OUT | 1,706 |

| | HV | PHF |
|---|---|---|
| SB | 1.3% | 0.87 |
| NB | 2.5% | 0.87 |
| EB | 0.6% | 0.97 |
| INTRS. | 1.6% | 0.90 |

HV = Heavy Vehicles
PHF = Peak Hour Factor

**Kunia Road (SR-750) @ Field Station Kunia Entrance**

**Schofield Barracks, HI**

COUNTED BY: VT

REDUCED BY: CN

REDUCTION DATE: Fri. 2/28/14

DATE OF COUNT: Wed. 2/26/14

TIME OF COUNT: 3:30 PM - 5:30 PM

WEATHER: Overcast

**TRAFFIC DATA GATHERING**

## INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

**LOCATION:** Kunia Road (SR-750) @ FSK Entrance
Schofield Barracks, HI

**DATE OF COUNT:** Wed. 2/26/14
**TIME OF COUNT:** 3:30 PM - 5:30 PM

**COUNTED BY:** VT
**WEATHER:** Overcast

| TIME INTERVAL ENDING AT | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON | | | | | | FROM WEST ON FSK Entrance | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 PM | 0 | 4 | 0 | 0 | 260 | 6 | 0 | 3 | 0 | 2 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 12 | 398 |
| 04:00 PM | 0 | 3 | 0 | 0 | 264 | 6 | 0 | 4 | 0 | 2 | 122 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 0 | 18 | 433 |
| 04:15 PM | 0 | 4 | 0 | 0 | 314 | 6 | 0 | 1 | 0 | 0 | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 13 | 475 |
| 04:30 PM | 0 | 4 | 0 | 0 | 259 | 3 | 0 | 3 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 7 | 400 |
| 04:45 PM | 0 | 5 | 0 | 0 | 271 | 2 | 0 | 1 | 0 | 1 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 8 | 390 |
| 05:00 PM | 0 | 3 | 0 | 0 | 221 | 4 | 0 | 3 | 0 | 2 | 92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 9 | 341 |
| 05:15 PM | 0 | 2 | 0 | 0 | 160 | 3 | 0 | 4 | 0 | 1 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 4 | 260 |
| 05:30 PM | 0 | 2 | 0 | 0 | 211 | 1 | 0 | 1 | 0 | 1 | 85 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 3 | 316 |
| PEAK HOUR TOTALS | 0 | 15 | 0 | 0 | 1097 | 21 | 0 | 11 | 0 | 4 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 105 | 0 | 50 | INTERSECTION |
| ALL MOVEMENTS | 1118 | | | | | | 433 | | | | | | 0 | | | | | | 155 | | | | | | 1706 |
| % HV | 1.3% | | | | | | 2.5% | | | | | | #N/A | | | | | | 0.6% | | | | | | 1.6% |
| PEAK HOUR FACTOR | 0.87 | | | | | | 0.87 | | | | | | #N/A | | | | | | 0.97 | | | | | | 0.90 |

PHF = Peak Hour Factor

**3:30 PM - 5:30 PM PEAK HOUR:** 3:30 PM TO 4:30 PM

REDUCED BY: CN

DATE OF REDUCTION: 2/28/2014

| | FROM NORTH ON Kunia Road (SR-750) | | | | | | FROM SOUTH ON Kunia Road (SR-750) | | | | | | FROM EAST ON | | | | | | FROM WEST ON FSK Entrance | | | | | | INTERVAL TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INTERVAL | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | Peds | HV | UTurn | Left | Thru | Right | |
| 1:30 PM - 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:45 PM - 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 PM - 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM - 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM - 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 PM - 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM - 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM - 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 PM - 4:30 PM | 0 | 15 | 0 | 0 | 1097 | 21 | 0 | 11 | 0 | 4 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 105 | 0 | 50 | 1706 |
| 3:45 PM - 4:45 PM | 0 | 16 | 0 | 0 | 1108 | 17 | 0 | 9 | 0 | 3 | 429 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 95 | 0 | 46 | 1698 |
| 4:00 PM - 5:00 PM | 0 | 16 | 0 | 0 | 1065 | 15 | 0 | 8 | 0 | 3 | 399 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87 | 0 | 37 | 1606 |
| 4:15 PM - 5:15 PM | 0 | 14 | 0 | 0 | 911 | 12 | 0 | 11 | 0 | 4 | 356 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 0 | 28 | 1391 |
| 4:30 PM - 5:30 PM | 0 | 12 | 0 | 0 | 863 | 10 | 0 | 9 | 0 | 5 | 341 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 24 | 1307 |

# Traffic Study
# Appendix B.

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## Level of Service (LOS) Definitions

## Level of Service (LOS) Definitions

The following sections describe the Level of Service (LOS) definitions for unsignalized and signalized intersection capacity.

The objective of applied traffic analysis is to provide a method of quantifying the degree of expected traffic congestion and compare this to the overall traffic-related performance of the roadway[1].

The capacity of any transportation facility reflects its ability to accommodate a moving stream of people or vehicles. It is a measure of the supply side of transportation facilities. LOS uses qualitative measures that characterize operational conditions within a traffic stream and perception of these conditions by motorists and passengers. The descriptions of individual LOS characterize these conditions in terms of factors such as speed and travel time, freedom to maneuver, traffic interruptions, and driver comfort and convenience[2].

Six LOS are defined for each type of transportation facility for which analysis procedures are available. They are given letter designations, ranging from "A" to "F," with "A" representing the best operating conditions and "F" representing the worst. Each LOS represents a range of operating conditions that are defined by quantitative factors known as measures of effectiveness.

The volume of traffic that can be served under stop-and-go conditions of LOS F is generally accepted as being lower than that possible at LOS E. Typically a facility that operates a LOS E is at the maximum service flow rate. For most design or planning purposes, however, obtaining service flow rates of C are usually the desired norm because they ensure a more acceptable quality of service to all users of the transportation facility.

## Unsignalized Intersection Capacity

The LOS for an unsignalized intersection is determined by the amount of delay experienced at the intersection. Delay is measured as the average time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The LOS is determined from the length of the average delay experienced at the intersection during the peak commute hour. LOS A indicates short delays associated with very small queues, while LOS F indicates very long delays associated with longer queues.

Unsignalized intersections were evaluated according to the methodologies presented in Chapter 17 of the 2000 update of the *Highway Capacity Manual* (HCM)[3]. For the purposes of this report, the worst movement at each unsignalized intersection was used to compare LOS and delay to other intersections. The following table summarizes the LOS criteria for unsignalized intersections.

[1] *Principals of Highway Engineering and Traffic Analysis*, Mannering and Kilareksi (1997).
[2] *Traffic Engineering Handbook*, Institute of Transportation Engineers (1999).
[3] *Highway Capacity Manual: Special Report 209*, Transportation Research Board (2000 Update).

**Unsignalized Intersection LOS Criteria**

| *Average Control Delay (sec/veh)* | *Intersection Level of Service* |
|---|---|
| ≤ 10 | A |
| > 10 and ≤ 15 | B |
| >15 and ≤ 25 | C |
| >25 and ≤ 35 | D |
| >35 and ≤ 50 | E |
| > 50 | F |

*Note*: sec/veh = seconds per vehicle.

It should be mentioned that equal LOS values at several locations do not necessarily indicate equal overall performance of intersections. One location might experience a higher degree of delay for a considerable period of the day while at another the peak period is of short duration.

In addition, a poor LOS is more tolerable to drivers at a low-volume intersection than at a high-volume intersection. Capacity analysis for any stop sign-controlled approach is based on the assumption that the major street traffic is not affected by the minor street movements, and left turns from the major streets to the minor streets are influenced only by opposing major street traffic flow. The calculated LOS for stop sign-controlled intersections is only for movements on the minor street and left turn movements on the major street.

## Signalized Intersection Capacity

LOS for signalized intersections is defined in terms of delay, and is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay a driver experiences is due to a number of factors related to intersection traffic control phasing and timing, roadway geometrics, traffic volumes, and incidents (traffic accidents) or events.

Signalized intersections were evaluated according to the methodologies presented in Chapter 16 of the 2000 update of the HCM[4]. The table below summarizes the intersection LOS criteria for signalized intersections.

**Signalized Intersection LOS Criteria**

| *Control Delay per Vehicle (sec/veh)* | *Intersection Level of Service* |
|---|---|
| ≤ 10 | A |
| >10 and ≤ 20 | B |
| >20 and ≤ 35 | C |
| >35 and ≤ 55 | D |
| >55 and ≤ 80 | E |
| > 80 | F |

*Note*: sec/veh = seconds per vehicle.

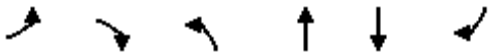
[4] *Highway Capacity Manual: Special Report 209*, Transportation Research Board (2000 Update).

# Traffic Study
# Appendix C.

## Synchro Level of Service Analysis Reports

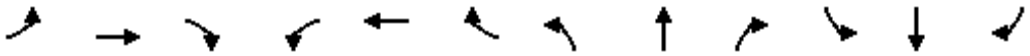
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 410 | 116 | 202 | 535 | 498 | 398 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1752 | 1568 | 1752 | 3505 | 3438 | 1538 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1752 | 1568 | 1752 | 3505 | 3438 | 1538 |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.92 | 0.92 | 0.87 | 0.87 |
| Adj. Flow (vph) | 488 | 138 | 220 | 582 | 572 | 457 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 297 |
| Lane Group Flow (vph) | 488 | 138 | 220 | 582 | 572 | 160 |
| Confl. Peds. (#/hr) | 1 | | | | | |
| Heavy Vehicles (%) | 3% | 3% | 3% | 3% | 5% | 5% |
| Turn Type | NA | custom | Prot | NA | NA | Perm |
| Protected Phases | 4 | 4 | 1 | 6 | 2 | |
| Permitted Phases | | 6 | | | | 2 |
| Actuated Green, G (s) | 55.6 | 109.0 | 19.9 | 53.4 | 28.5 | 28.5 |
| Effective Green, g (s) | 55.6 | 109.0 | 19.9 | 53.4 | 28.5 | 28.5 |
| Actuated g/C Ratio | 0.47 | 0.92 | 0.17 | 0.45 | 0.24 | 0.24 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 819 | 1568 | 293 | 1573 | 823 | 368 |
| v/s Ratio Prot | c0.28 | 0.04 | c0.13 | 0.17 | c0.17 | |
| v/s Ratio Perm | | 0.05 | | | | 0.10 |
| v/c Ratio | 0.60 | 0.09 | 0.75 | 0.37 | 0.70 | 0.44 |
| Uniform Delay, d1 | 23.4 | 0.5 | 47.2 | 21.7 | 41.3 | 38.4 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.2 | 0.0 | 10.3 | 0.1 | 2.6 | 0.8 |
| Delay (s) | 26.6 | 0.5 | 57.5 | 21.8 | 43.8 | 39.3 |
| Level of Service | C | A | E | C | D | D |
| Approach Delay (s) | 20.8 | | | 31.6 | 41.8 | |
| Approach LOS | C | | | C | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 33.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 119.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 60.2% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 488 | 138 | 220 | 582 | 572 | 457 |
| v/c Ratio | 0.60 | 0.09 | 0.75 | 0.37 | 0.70 | 0.69 |
| Control Delay | 29.8 | 0.1 | 64.4 | 21.8 | 46.5 | 13.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 29.8 | 0.1 | 64.4 | 21.8 | 46.5 | 13.0 |
| Queue Length 50th (ft) | 270 | 0 | 161 | 150 | 211 | 41 |
| Queue Length 95th (ft) | 444 | 0 | 272 | 191 | 281 | 139 |
| Internal Link Dist (ft) | 1099 | | | 1376 | 2153 | |
| Turn Bay Length (ft) | | | 150 | | | 150 |
| Base Capacity (vph) | 818 | 1568 | 416 | 2232 | 1226 | 799 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.60 | 0.09 | 0.53 | 0.26 | 0.47 | 0.57 |

Intersection Summary



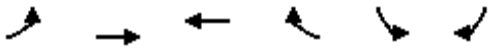
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 1 | 682 | 178 | 709 | 775 | 6 | 237 | 4 | 704 | 14 | 9 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | | 1.00 | 0.99 | | 1.00 | |
| Flpb, ped/bikes | 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 | | | 1.00 | 0.85 | | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | 1736 | 3471 | 1533 | 1719 | 3433 | | | 1725 | 1517 | | 1764 | |
| Flt Permitted | 0.34 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.70 | 1.00 | | 0.59 | |
| Satd. Flow (perm) | 620 | 3471 | 1533 | 1719 | 3433 | | | 1264 | 1517 | | 1069 | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.94 | 0.94 | 0.94 | 0.83 | 0.83 | 0.83 | 0.55 | 0.55 | 0.55 |
| Adj. Flow (vph) | 1 | 775 | 202 | 754 | 824 | 6 | 286 | 5 | 848 | 25 | 16 | 2 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 1 | 775 | 202 | 754 | 830 | 0 | 0 | 291 | 848 | 0 | 42 | 0 |
| Confl. Peds. (#/hr) | | | 2 | | | 3 | | | 5 | 5 | | |
| Heavy Vehicles (%) | 4% | 4% | 4% | 5% | 5% | 5% | 5% | 5% | 5% | 4% | 4% | 4% |
| Turn Type | Perm | NA | Free | Prot | NA | | Perm | NA | Free | Perm | NA | |
| Protected Phases | | 6 | | 5 | 2 | | | 8 | | | 4 | |
| Permitted Phases | 6 | | Free | | | | 8 | | Free | 4 | | |
| Actuated Green, G (s) | 47.6 | 47.6 | 200.1 | 89.9 | 142.5 | | | 47.6 | 200.1 | | 47.6 | |
| Effective Green, g (s) | 49.6 | 49.6 | 200.1 | 91.9 | 144.5 | | | 49.6 | 200.1 | | 49.6 | |
| Actuated g/C Ratio | 0.25 | 0.25 | 1.00 | 0.46 | 0.72 | | | 0.25 | 1.00 | | 0.25 | |
| Clearance Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 154 | 860 | 1533 | 789 | 2479 | | | 313 | 1517 | | 265 | |
| v/s Ratio Prot | | c0.22 | | c0.44 | 0.24 | | | | | | | |
| v/s Ratio Perm | 0.00 | | 0.13 | | | | | c0.23 | 0.56 | | 0.04 | |
| v/c Ratio | 0.01 | 0.90 | 0.13 | 0.96 | 0.33 | | | 0.93 | 0.56 | | 0.16 | |
| Uniform Delay, d1 | 56.7 | 72.9 | 0.0 | 52.1 | 10.2 | | | 73.5 | 0.0 | | 58.9 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.0 | 12.5 | 0.2 | 21.7 | 0.1 | | | 32.6 | 1.5 | | 0.3 | |
| Delay (s) | 56.7 | 85.4 | 0.2 | 73.8 | 10.3 | | | 106.2 | 1.5 | | 59.2 | |
| Level of Service | E | F | A | E | B | | | F | A | | E | |
| Approach Delay (s) | | 67.8 | | | 40.5 | | | 28.2 | | | 59.2 | |
| Approach LOS | | E | | | D | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 44.1 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.93 | | |
| Actuated Cycle Length (s) | 200.1 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 88.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBT | NBR | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1 | 775 | 202 | 754 | 830 | 291 | 848 | 43 |
| v/c Ratio | 0.01 | 0.90 | 0.13 | 0.96 | 0.33 | 0.93 | 0.56 | 0.16 |
| Control Delay | 60.0 | 88.1 | 0.2 | 74.9 | 10.7 | 109.0 | 1.5 | 62.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 60.0 | 88.1 | 0.2 | 74.9 | 10.7 | 109.0 | 1.5 | 62.4 |
| Queue Length 50th (ft) | 1 | 554 | 0 | 998 | 207 | 399 | 0 | 46 |
| Queue Length 95th (ft) | 7 | 624 | 0 | #1288 | 239 | #520 | 0 | 52 |
| Internal Link Dist (ft) | | 1998 | | | 2306 | 2153 | | 237 |
| Turn Bay Length (ft) | 150 | | 200 | 150 | | | | |
| Base Capacity (vph) | 162 | 911 | 1533 | 842 | 2636 | 332 | 1517 | 282 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.01 | 0.85 | 0.13 | 0.90 | 0.31 | 0.88 | 0.56 | 0.15 |

Intersection Summary

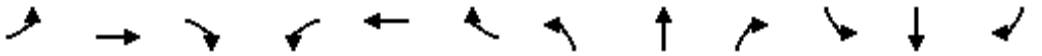
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 36 | 379 | 512 | 202 | 117 | 29 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.84 | 0.84 | 0.89 | 0.89 | 0.86 | 0.86 |
| Hourly flow rate (vph) | 43 | 451 | 575 | 227 | 136 | 34 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 3 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | 1279 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 802 | | | | 1226 | 689 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 802 | | | | 1226 | 689 |
| tC, single (s) | 4.2 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.5 | 3.3 |
| p0 queue free % | 94 | | | | 27 | 92 |
| cM capacity (veh/h) | 779 | | | | 186 | 446 |

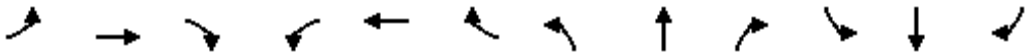
| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 494 | 802 | 170 |
| Volume Left | 43 | 0 | 136 |
| Volume Right | 0 | 227 | 34 |
| cSH | 779 | 1700 | 233 |
| Volume to Capacity | 0.06 | 0.47 | 0.73 |
| Queue Length 95th (ft) | 4 | 0 | 124 |
| Control Delay (s) | 1.5 | 0.0 | 53.8 |
| Lane LOS | A | | F |
| Approach Delay (s) | 1.5 | 0.0 | 53.8 |
| Approach LOS | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.7 | | |
| Intersection Capacity Utilization | 63.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |



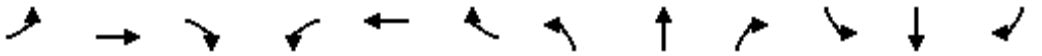
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 76 | 365 | 93 | 34 | 459 | 74 | 140 | 587 | 81 | 150 | 348 | 116 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.87 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 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 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1736 | 1827 | 1356 | 1787 | 1881 | 1599 | 1736 | 3471 | 1553 | 1703 | 3406 | 1524 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1736 | 1827 | 1356 | 1787 | 1881 | 1599 | 1736 | 3471 | 1553 | 1703 | 3406 | 1524 |
| Peak-hour factor, PHF | 0.64 | 0.64 | 0.64 | 0.84 | 0.84 | 0.84 | 0.76 | 0.76 | 0.76 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 119 | 570 | 145 | 40 | 546 | 88 | 184 | 772 | 107 | 165 | 382 | 127 |
| RTOR Reduction (vph) | 0 | 0 | 15 | 0 | 0 | 12 | 0 | 0 | 41 | 0 | 0 | 67 |
| Lane Group Flow (vph) | 119 | 570 | 130 | 40 | 546 | 76 | 184 | 772 | 66 | 165 | 382 | 60 |
| Confl. Peds. (#/hr) | | | 52 | | | | | | | | | |
| Heavy Vehicles (%) | 4% | 4% | 4% | 1% | 1% | 1% | 4% | 4% | 4% | 6% | 6% | 6% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | | | 4 | | | 8 | | | 6 | | | 2 |
| Actuated Green, G (s) | 16.7 | 65.4 | 65.4 | 6.9 | 55.6 | 55.6 | 23.1 | 43.8 | 43.8 | 21.6 | 42.3 | 42.3 |
| Effective Green, g (s) | 18.7 | 67.4 | 66.4 | 8.9 | 57.6 | 56.6 | 25.1 | 45.8 | 44.8 | 23.6 | 44.3 | 43.3 |
| Actuated g/C Ratio | 0.12 | 0.43 | 0.42 | 0.06 | 0.37 | 0.36 | 0.16 | 0.29 | 0.28 | 0.15 | 0.28 | 0.27 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 206 | 781 | 571 | 101 | 687 | 574 | 276 | 1008 | 441 | 255 | 957 | 418 |
| v/s Ratio Prot | c0.07 | 0.31 | | 0.02 | c0.29 | | c0.11 | c0.22 | | 0.10 | 0.11 | |
| v/s Ratio Perm | | | 0.10 | | | 0.05 | | | 0.04 | | | 0.04 |
| v/c Ratio | 0.58 | 0.73 | 0.23 | 0.40 | 0.79 | 0.13 | 0.67 | 0.77 | 0.15 | 0.65 | 0.40 | 0.14 |
| Uniform Delay, d1 | 65.8 | 37.6 | 29.2 | 71.8 | 44.8 | 34.0 | 62.4 | 51.1 | 42.2 | 63.1 | 45.9 | 43.2 |
| 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 | 3.9 | 3.4 | 0.2 | 2.5 | 6.3 | 0.1 | 6.0 | 3.5 | 0.2 | 5.6 | 0.3 | 0.2 |
| Delay (s) | 69.7 | 41.0 | 29.4 | 74.4 | 51.1 | 34.1 | 68.3 | 54.6 | 42.4 | 68.7 | 46.2 | 43.3 |
| Level of Service | E | D | C | E | D | C | E | D | D | E | D | D |
| Approach Delay (s) | | 43.1 | | | 50.3 | | | 55.7 | | | 51.2 | |
| Approach LOS | | D | | | D | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 50.4 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 157.7 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 66.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 119 | 570 | 145 | 40 | 546 | 88 | 184 | 772 | 107 | 165 | 382 | 127 |
| v/c Ratio | 0.57 | 0.73 | 0.26 | 0.33 | 0.81 | 0.15 | 0.66 | 0.76 | 0.22 | 0.64 | 0.40 | 0.26 |
| Control Delay | 84.5 | 46.4 | 28.3 | 89.9 | 58.5 | 30.9 | 79.8 | 58.9 | 25.7 | 81.0 | 49.9 | 18.0 |
| 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 | 84.5 | 46.4 | 28.3 | 89.9 | 58.5 | 30.9 | 79.8 | 58.9 | 25.7 | 81.0 | 49.9 | 18.0 |
| Queue Length 50th (ft) | 118 | 503 | 81 | 40 | 510 | 48 | 181 | 384 | 38 | 163 | 169 | 26 |
| Queue Length 95th (ft) | 167 | 491 | 104 | 97 | 744 | 102 | 282 | 480 | 82 | 313 | 282 | 100 |
| Internal Link Dist (ft) | | 1752 | | | 1465 | | | 949 | | | 1376 | |
| Turn Bay Length (ft) | 150 | | 60 | 240 | | 80 | 250 | | 200 | 250 | | 130 |
| Base Capacity (vph) | 283 | 1140 | 811 | 145 | 1021 | 866 | 400 | 1460 | 676 | 370 | 1386 | 666 |
| 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 | 0.50 | 0.18 | 0.28 | 0.53 | 0.10 | 0.46 | 0.53 | 0.16 | 0.45 | 0.28 | 0.19 |

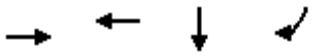
Intersection Summary



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 23 | 230 | 4 | 10 | 313 | 176 | 0 | 0 | 0 | 230 | 20 | 30 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Frt | | 1.00 | | | 0.95 | | | | | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | | | 1.00 | | | | | | 0.96 | 1.00 |
| Satd. Flow (prot) | | 1781 | | | 1705 | | | | | | 1781 | 1583 |
| Flt Permitted | | 0.93 | | | 0.99 | | | | | | 0.96 | 1.00 |
| Satd. Flow (perm) | | 1660 | | | 1693 | | | | | | 1781 | 1583 |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.85 | 0.85 | 0.85 | 0.92 | 0.92 | 0.92 | 0.72 | 0.72 | 0.72 |
| Adj. Flow (vph) | 28 | 277 | 5 | 12 | 368 | 207 | 0 | 0 | 0 | 319 | 28 | 42 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| Lane Group Flow (vph) | 0 | 309 | 0 | 0 | 557 | 0 | 0 | 0 | 0 | 0 | 347 | 14 |
| Heavy Vehicles (%) | 6% | 6% | 6% | 6% | 6% | 6% | 2% | 2% | 2% | 2% | 2% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | | | | Split | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | 2 | 2 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 2 |
| Actuated Green, G (s) | | 21.5 | | | 21.5 | | | | | | 15.4 | 15.4 |
| Effective Green, g (s) | | 21.5 | | | 21.5 | | | | | | 15.4 | 15.4 |
| Actuated g/C Ratio | | 0.46 | | | 0.46 | | | | | | 0.33 | 0.33 |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 761 | | | 776 | | | | | | 585 | 520 |
| v/s Ratio Prot | | | | | | | | | | | c0.19 | |
| v/s Ratio Perm | | 0.19 | | | c0.33 | | | | | | | 0.01 |
| v/c Ratio | | 0.41 | | | 0.72 | | | | | | 0.59 | 0.03 |
| Uniform Delay, d1 | | 8.5 | | | 10.2 | | | | | | 13.1 | 10.7 |
| Progression Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 0.4 | | | 3.2 | | | | | | 1.6 | 0.0 |
| Delay (s) | | 8.8 | | | 13.4 | | | | | | 14.8 | 10.7 |
| Level of Service | | A | | | B | | | | | | B | B |
| Approach Delay (s) | | 8.8 | | | 13.4 | | | 0.0 | | | 14.3 | |
| Approach LOS | | A | | | B | | | A | | | B | |

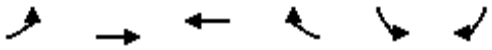
| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 12.6 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 46.9 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 51.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group



| Lane Group | EBT | WBT | SBT | SBR |
|---|---|---|---|---|
| Lane Group Flow (vph) | 310 | 587 | 347 | 42 |
| v/c Ratio | 0.42 | 0.74 | 0.61 | 0.08 |
| Control Delay | 11.2 | 16.8 | 20.1 | 5.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.2 | 16.8 | 20.1 | 5.9 |
| Queue Length 50th (ft) | 48 | 100 | 74 | 0 |
| Queue Length 95th (ft) | 116 | 242 | 143 | 12 |
| Internal Link Dist (ft) | 2460 | 1199 | 1412 | |
| Turn Bay Length (ft) | | | | 200 |
| Base Capacity (vph) | 1266 | 1304 | 1020 | 925 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.24 | 0.45 | 0.34 | 0.05 |

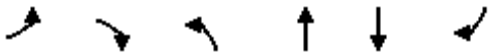
Intersection Summary



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 4 | 18 | 65 | 23 | 170 | 27 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.79 | 0.79 | 0.88 | 0.88 | 0.78 | 0.78 |
| Hourly flow rate (vph) | 5 | 23 | 74 | 26 | 218 | 35 |
| Pedestrians | | | 1 | | 1 | |
| Lane Width (ft) | | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | | | 4.0 | | 4.0 | |
| Percent Blockage | | | 0 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 101 | | | | 122 | 88 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 101 | | | | 122 | 88 |
| tC, single (s) | 4.3 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.4 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 75 | 96 |
| cM capacity (veh/h) | 1369 | | | | 871 | 972 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 28 | 100 | 253 |
| Volume Left | 5 | 0 | 218 |
| Volume Right | 0 | 26 | 35 |
| cSH | 1369 | 1700 | 884 |
| Volume to Capacity | 0.00 | 0.06 | 0.29 |
| Queue Length 95th (ft) | 0 | 0 | 30 |
| Control Delay (s) | 1.4 | 0.0 | 10.7 |
| Lane LOS | A | | B |
| Approach Delay (s) | 1.4 | 0.0 | 10.7 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 7.2 | | |
| Intersection Capacity Utilization | 22.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



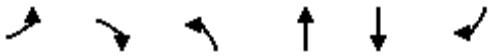
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 33 | 10 | 28 | 775 | 394 | 81 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1583 | 1417 | 1736 | 1827 | 1768 | |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1583 | 1417 | 1736 | 1827 | 1768 | |
| Peak-hour factor, PHF | 0.51 | 0.51 | 0.89 | 0.89 | 0.92 | 0.92 |
| Adj. Flow (vph) | 65 | 20 | 31 | 871 | 428 | 88 |
| RTOR Reduction (vph) | 0 | 17 | 0 | 0 | 6 | 0 |
| Lane Group Flow (vph) | 65 | 3 | 31 | 871 | 510 | 0 |
| Heavy Vehicles (%) | 14% | 14% | 4% | 4% | 5% | 5% |
| Turn Type | NA | Perm | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 6.5 | 6.5 | 2.8 | 40.2 | 32.4 | |
| Effective Green, g (s) | 8.5 | 7.5 | 4.8 | 42.2 | 34.4 | |
| Actuated g/C Ratio | 0.15 | 0.13 | 0.08 | 0.74 | 0.61 | |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 237 | 187 | 147 | 1360 | 1073 | |
| v/s Ratio Prot | c0.04 | | 0.02 | c0.48 | 0.29 | |
| v/s Ratio Perm | | 0.00 | | | | |
| v/c Ratio | 0.27 | 0.01 | 0.21 | 0.64 | 0.48 | |
| Uniform Delay, d1 | 21.4 | 21.4 | 24.2 | 3.5 | 6.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.6 | 0.0 | 0.7 | 1.0 | 0.3 | |
| Delay (s) | 22.0 | 21.4 | 24.9 | 4.6 | 6.5 | |
| Level of Service | C | C | C | A | A | |
| Approach Delay (s) | 21.9 | | | 5.3 | 6.5 | |
| Approach LOS | C | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 6.6 | HCM Level of Service | A |
| HCM Volume to Capacity ratio | 0.58 | | |
| Actuated Cycle Length (s) | 56.7 | Sum of lost time (s) | 6.0 |
| Intersection Capacity Utilization | 51.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

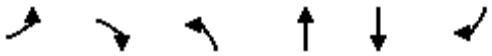
| Lane Group | EBL | EBR | NBL | NBT | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 65 | 20 | 31 | 871 | 516 |
| v/c Ratio | 0.20 | 0.07 | 0.10 | 0.62 | 0.43 |
| Control Delay | 22.1 | 11.1 | 22.8 | 7.2 | 9.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.1 | 11.1 | 22.8 | 7.2 | 9.2 |
| Queue Length 50th (ft) | 19 | 0 | 9 | 115 | 48 |
| Queue Length 95th (ft) | 29 | 6 | 32 | 263 | 225 |
| Internal Link Dist (ft) | 642 | | | 1901 | 1624 |
| Turn Bay Length (ft) | 140 | | 300 | | |
| Base Capacity (vph) | 936 | 818 | 566 | 1814 | 1491 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.07 | 0.02 | 0.05 | 0.48 | 0.35 |

Intersection Summary



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 776 | 406 | 70 | 577 | 446 | 280 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1787 | 1599 | 1787 | 3574 | 3539 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1787 | 1599 | 1787 | 3574 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.81 | 0.81 | 0.83 | 0.83 | 0.87 | 0.87 |
| Adj. Flow (vph) | 958 | 501 | 84 | 695 | 513 | 322 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 237 |
| Lane Group Flow (vph) | 958 | 501 | 84 | 695 | 513 | 85 |
| Confl. Peds. (#/hr) | 1 | | | | | |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% | 2% |
| Turn Type | NA | custom | Prot | NA | NA | Perm |
| Protected Phases | 4 | 4 | 1 | 6 | 2 | |
| Permitted Phases | | 6 | | | | 2 |
| Actuated Green, G (s) | 70.4 | 111.3 | 11.1 | 40.9 | 24.8 | 24.8 |
| Effective Green, g (s) | 70.4 | 111.3 | 11.1 | 40.9 | 24.8 | 24.8 |
| Actuated g/C Ratio | 0.58 | 0.92 | 0.09 | 0.34 | 0.20 | 0.20 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1037 | 1599 | 164 | 1205 | 724 | 324 |
| v/s Ratio Prot | c0.54 | 0.18 | 0.05 | c0.19 | c0.14 | |
| v/s Ratio Perm | | 0.13 | | | | 0.05 |
| v/c Ratio | 0.92 | 0.31 | 0.51 | 0.58 | 0.71 | 0.26 |
| Uniform Delay, d1 | 23.0 | 0.6 | 52.5 | 33.1 | 44.9 | 40.6 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 14.7 | 0.1 | 2.7 | 0.7 | 3.2 | 0.4 |
| Delay (s) | 37.7 | 0.7 | 55.2 | 33.8 | 48.1 | 41.0 |
| Level of Service | D | A | E | C | D | D |
| Approach Delay (s) | 25.0 | | | 36.1 | 45.3 | |
| Approach LOS | C | | | D | D | |

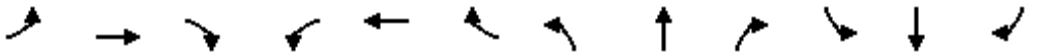
| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 33.3 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 121.3 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 72.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 958 | 501 | 84 | 695 | 513 | 322 |
| v/c Ratio | 0.92 | 0.31 | 0.52 | 0.58 | 0.71 | 0.57 |
| Control Delay | 40.2 | 0.5 | 65.3 | 34.7 | 50.7 | 10.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 40.2 | 0.5 | 65.3 | 34.7 | 50.7 | 10.5 |
| Queue Length 50th (ft) | 636 | 0 | 63 | 233 | 197 | 15 |
| Queue Length 95th (ft) | #960 | 0 | 114 | 262 | 257 | 85 |
| Internal Link Dist (ft) | 1138 | | | 1376 | 2153 | |
| Turn Bay Length (ft) | | | 150 | | | 150 |
| Base Capacity (vph) | 1036 | 1599 | 237 | 1777 | 1143 | 713 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.92 | 0.31 | 0.35 | 0.39 | 0.45 | 0.45 |

Intersection Summary

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



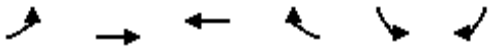
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 3 | 1255 | 188 | 531 | 769 | 6 | 263 | 6 | 1084 | 10 | 7 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | | 1.00 | 0.99 | | 1.00 | |
| Flpb, ped/bikes | 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 | | | 1.00 | 0.85 | | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | 1770 | 3539 | 1564 | 1787 | 3570 | | | 1793 | 1579 | | 1686 | |
| Flt Permitted | 0.35 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.73 | 1.00 | | 0.68 | |
| Satd. Flow (perm) | 651 | 3539 | 1564 | 1787 | 3570 | | | 1366 | 1579 | | 1187 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.97 | 0.97 | 0.97 | 0.94 | 0.94 | 0.94 | 0.69 | 0.69 | 0.69 |
| Adj. Flow (vph) | 3 | 1335 | 200 | 547 | 793 | 6 | 280 | 6 | 1153 | 14 | 10 | 1 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 3 | 1335 | 200 | 547 | 799 | 0 | 0 | 286 | 1153 | 0 | 24 | 0 |
| Confl. Peds. (#/hr) | | | 1 | | | | | | 1 | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 1% | 1% | 1% | 1% | 9% | 9% | 9% |
| Turn Type | Perm | NA | Free | Prot | NA | | Perm | NA | Free | Perm | NA | |
| Protected Phases | | 6 | | 5 | 2 | | | 8 | | | 4 | |
| Permitted Phases | 6 | | Free | | | | 8 | | Free | 4 | | |
| Actuated Green, G (s) | 79.8 | 79.8 | 201.2 | 62.2 | 147.0 | | | 44.2 | 201.2 | | 44.2 | |
| Effective Green, g (s) | 81.8 | 81.8 | 201.2 | 64.2 | 149.0 | | | 46.2 | 201.2 | | 46.2 | |
| Actuated g/C Ratio | 0.41 | 0.41 | 1.00 | 0.32 | 0.74 | | | 0.23 | 1.00 | | 0.23 | |
| Clearance Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 265 | 1439 | 1564 | 570 | 2644 | | | 314 | 1579 | | 273 | |
| v/s Ratio Prot | | c0.38 | | c0.31 | 0.22 | | | | | | | |
| v/s Ratio Perm | 0.00 | | 0.13 | | | | | c0.21 | 0.73 | | 0.02 | |
| v/c Ratio | 0.01 | 0.93 | 0.13 | 0.96 | 0.30 | | | 0.91 | 0.73 | | 0.09 | |
| Uniform Delay, d1 | 35.6 | 56.9 | 0.0 | 67.2 | 8.7 | | | 75.5 | 0.0 | | 60.9 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.0 | 10.6 | 0.2 | 27.5 | 0.1 | | | 29.1 | 3.0 | | 0.1 | |
| Delay (s) | 35.6 | 67.5 | 0.2 | 94.7 | 8.8 | | | 104.6 | 3.0 | | 61.1 | |
| Level of Service | D | E | A | F | A | | | F | A | | E | |
| Approach Delay (s) | | 58.6 | | | 43.7 | | | 23.2 | | | 61.1 | |
| Approach LOS | | E | | | D | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 42.3 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.93 | | |
| Actuated Cycle Length (s) | 201.2 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 95.7% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBT | NBR | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 3 | 1335 | 200 | 547 | 799 | 286 | 1153 | 25 |
| v/c Ratio | 0.01 | 0.93 | 0.13 | 0.96 | 0.30 | 0.91 | 0.73 | 0.09 |
| Control Delay | 37.3 | 69.1 | 0.2 | 95.4 | 9.2 | 108.1 | 3.0 | 62.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.3 | 69.1 | 0.2 | 95.4 | 9.2 | 108.1 | 3.0 | 62.3 |
| Queue Length 50th (ft) | 3 | 924 | 0 | 756 | 184 | 389 | 0 | 26 |
| Queue Length 95th (ft) | 12 | 1030 | 0 | #1014 | 213 | #577 | 0 | 45 |
| Internal Link Dist (ft) | | 1998 | | | 2306 | 2153 | | 237 |
| Turn Bay Length (ft) | 150 | | 200 | 150 | | | | |
| Base Capacity (vph) | 281 | 1523 | 1564 | 591 | 2771 | 335 | 1579 | 292 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.01 | 0.88 | 0.13 | 0.93 | 0.29 | 0.85 | 0.73 | 0.09 |

Intersection Summary

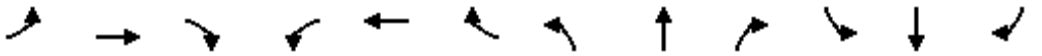
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 31 | 653 | 352 | 130 | 144 | 37 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.90 | 0.90 | 0.87 | 0.87 |
| Hourly flow rate (vph) | 34 | 710 | 391 | 144 | 166 | 43 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 3 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | 1279 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 536 | | | | 1241 | 463 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 536 | | | | 1241 | 463 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 11 | 93 |
| cM capacity (veh/h) | 1037 | | | | 187 | 599 |

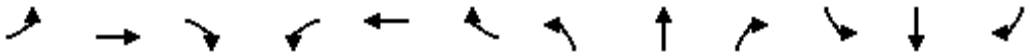
| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 743 | 536 | 208 |
| Volume Left | 34 | 0 | 166 |
| Volume Right | 0 | 144 | 43 |
| cSH | 1037 | 1700 | 228 |
| Volume to Capacity | 0.03 | 0.32 | 0.91 |
| Queue Length 95th (ft) | 3 | 0 | 192 |
| Control Delay (s) | 0.8 | 0.0 | 83.9 |
| Lane LOS | A | | F |
| Approach Delay (s) | 0.8 | 0.0 | 83.9 |
| Approach LOS | | | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 12.2 | | |
| Intersection Capacity Utilization | 74.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |



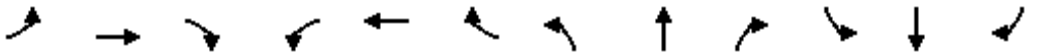
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 129 | 259 | 252 | 154 | 230 | 98 | 75 | 420 | 27 | 63 | 712 | 77 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| 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 | 1.00 |
| 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 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1556 | 1787 | 1881 | 1599 | 1787 | 3574 | 1599 | 1787 | 3574 | 1599 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1770 | 1863 | 1556 | 1787 | 1881 | 1599 | 1787 | 3574 | 1599 | 1787 | 3574 | 1599 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.82 | 0.82 | 0.82 | 0.83 | 0.83 | 0.83 | 0.76 | 0.76 | 0.76 |
| Adj. Flow (vph) | 142 | 285 | 277 | 188 | 280 | 120 | 90 | 506 | 33 | 83 | 937 | 101 |
| RTOR Reduction (vph) | 0 | 0 | 70 | 0 | 0 | 36 | 0 | 0 | 18 | 0 | 0 | 20 |
| Lane Group Flow (vph) | 142 | 285 | 207 | 188 | 280 | 84 | 90 | 506 | 15 | 83 | 937 | 81 |
| Confl. Peds. (#/hr) | | | 3 | | | | | | | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | | | 4 | | | 8 | | | 6 | | | 2 |
| Actuated Green, G (s) | 17.0 | 28.0 | 28.0 | 20.4 | 31.4 | 31.4 | 12.8 | 42.0 | 42.0 | 12.2 | 41.4 | 41.4 |
| Effective Green, g (s) | 19.0 | 30.0 | 29.0 | 22.4 | 33.4 | 32.4 | 14.8 | 44.0 | 43.0 | 14.2 | 43.4 | 42.4 |
| Actuated g/C Ratio | 0.15 | 0.24 | 0.24 | 0.18 | 0.27 | 0.26 | 0.12 | 0.36 | 0.35 | 0.12 | 0.35 | 0.35 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 274 | 456 | 368 | 326 | 512 | 423 | 216 | 1283 | 561 | 207 | 1265 | 553 |
| v/s Ratio Prot | 0.08 | c0.15 | | c0.11 | 0.15 | | c0.05 | 0.14 | | 0.05 | c0.26 | |
| v/s Ratio Perm | | | 0.13 | | | 0.05 | | | 0.01 | | | 0.05 |
| v/c Ratio | 0.52 | 0.62 | 0.56 | 0.58 | 0.55 | 0.20 | 0.42 | 0.39 | 0.03 | 0.40 | 0.74 | 0.15 |
| Uniform Delay, d1 | 47.6 | 41.3 | 41.2 | 45.8 | 38.1 | 35.0 | 49.9 | 29.3 | 26.1 | 50.3 | 34.7 | 27.6 |
| 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 | 1.7 | 2.7 | 2.0 | 2.5 | 1.2 | 0.2 | 1.3 | 0.2 | 0.0 | 1.3 | 2.4 | 0.1 |
| Delay (s) | 49.3 | 44.0 | 43.2 | 48.2 | 39.3 | 35.2 | 51.2 | 29.6 | 26.1 | 51.5 | 37.0 | 27.7 |
| Level of Service | D | D | D | D | D | D | D | C | C | D | D | C |
| Approach Delay (s) | | 44.7 | | | 41.3 | | | 32.5 | | | 37.3 | |
| Approach LOS | | D | | | D | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 38.8 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 122.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 59.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



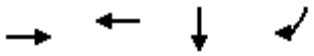
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 142 | 285 | 277 | 188 | 280 | 120 | 90 | 506 | 33 | 83 | 937 | 101 |
| v/c Ratio | 0.52 | 0.63 | 0.64 | 0.58 | 0.55 | 0.26 | 0.42 | 0.40 | 0.06 | 0.40 | 0.75 | 0.18 |
| Control Delay | 60.4 | 51.5 | 37.6 | 58.1 | 45.7 | 26.1 | 63.4 | 32.3 | 12.9 | 64.0 | 40.8 | 23.3 |
| 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 | 60.4 | 51.5 | 37.6 | 58.1 | 45.7 | 26.1 | 63.4 | 32.3 | 12.9 | 64.0 | 40.8 | 23.3 |
| Queue Length 50th (ft) | 105 | 202 | 132 | 137 | 190 | 43 | 67 | 157 | 3 | 62 | 341 | 38 |
| Queue Length 95th (ft) | 221 | 380 | 288 | 246 | 318 | 101 | 141 | 239 | 25 | 121 | 428 | 77 |
| Internal Link Dist (ft) | | 1752 | | | 1815 | | | 882 | | | 1376 | |
| Turn Bay Length (ft) | 150 | | 60 | 240 | | 80 | 250 | | 200 | 250 | | 130 |
| Base Capacity (vph) | 499 | 1305 | 1101 | 473 | 1285 | 1095 | 305 | 2015 | 901 | 290 | 1985 | 888 |
| 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 | 0.28 | 0.22 | 0.25 | 0.40 | 0.22 | 0.11 | 0.30 | 0.25 | 0.04 | 0.29 | 0.47 | 0.11 |

Intersection Summary



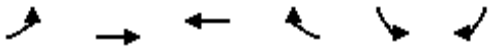
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 31 | 212 | 1 | 2 | 190 | 231 | 0 | 0 | 0 | 322 | 5 | 18 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Frt | | 1.00 | | | 0.93 | | | | | | 1.00 | 0.85 |
| Flt Protected | | 0.99 | | | 1.00 | | | | | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1850 | | | 1725 | | | | | | 1793 | 1599 |
| Flt Permitted | | 0.92 | | | 1.00 | | | | | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1709 | | | 1723 | | | | | | 1793 | 1599 |
| Peak-hour factor, PHF | 0.75 | 0.75 | 0.75 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.85 | 0.85 | 0.85 |
| Adj. Flow (vph) | 41 | 283 | 1 | 2 | 207 | 251 | 0 | 0 | 0 | 379 | 6 | 21 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Lane Group Flow (vph) | 0 | 325 | 0 | 0 | 391 | 0 | 0 | 0 | 0 | 0 | 385 | 8 |
| Confl. Peds. (#/hr) | | | | | | | | | | 5 | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 1% |
| Turn Type | Perm | NA | | Perm | NA | | | | | Split | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | 2 | 2 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 2 |
| Actuated Green, G (s) | | 15.2 | | | 15.2 | | | | | | 14.9 | 14.9 |
| Effective Green, g (s) | | 15.2 | | | 15.2 | | | | | | 14.9 | 14.9 |
| Actuated g/C Ratio | | 0.38 | | | 0.38 | | | | | | 0.37 | 0.37 |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 648 | | | 653 | | | | | | 666 | 594 |
| v/s Ratio Prot | | | | | | | | | | | c0.21 | |
| v/s Ratio Perm | | 0.19 | | | c0.23 | | | | | | | 0.00 |
| v/c Ratio | | 0.50 | | | 0.60 | | | | | | 0.58 | 0.01 |
| Uniform Delay, d1 | | 9.5 | | | 10.0 | | | | | | 10.1 | 8.0 |
| Progression Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 0.6 | | | 1.5 | | | | | | 1.2 | 0.0 |
| Delay (s) | | 10.2 | | | 11.5 | | | | | | 11.3 | 8.0 |
| Level of Service | | B | | | B | | | | | | B | A |
| Approach Delay (s) | | 10.2 | | | 11.5 | | | 0.0 | | | 11.1 | |
| Approach LOS | | B | | | B | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 11.0 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.59 | | |
| Actuated Cycle Length (s) | 40.1 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 60.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBT | WBT | SBT | SBR |
|---|---|---|---|---|
| Lane Group Flow (vph) | 325 | 460 | 385 | 21 |
| v/c Ratio | 0.51 | 0.65 | 0.59 | 0.04 |
| Control Delay | 13.8 | 13.4 | 15.8 | 5.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 13.8 | 13.4 | 15.8 | 5.5 |
| Queue Length 50th (ft) | 49 | 53 | 60 | 0 |
| Queue Length 95th (ft) | 111 | 172 | 167 | 10 |
| Internal Link Dist (ft) | 2460 | 1199 | 1378 | |
| Turn Bay Length (ft) | | | | 200 |
| Base Capacity (vph) | 1355 | 1387 | 1353 | 1211 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.24 | 0.33 | 0.28 | 0.02 |

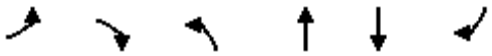
Intersection Summary



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 19 | 45 | 33 | 76 | 45 | 12 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.57 | 0.57 | 0.76 | 0.76 | 0.79 | 0.79 |
| Hourly flow rate (vph) | 33 | 79 | 43 | 100 | 57 | 15 |
| Pedestrians | | | 2 | | | |
| Lane Width (ft) | | | 12.0 | | | |
| Walking Speed (ft/s) | | | 4.0 | | | |
| Percent Blockage | | | 0 | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 143 | | | | 241 | 93 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 143 | | | | 241 | 93 |
| tC, single (s) | 4.2 | | | | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.6 | 3.4 |
| p0 queue free % | 98 | | | | 92 | 98 |
| cM capacity (veh/h) | 1403 | | | | 718 | 950 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 112 | 143 | 72 |
| Volume Left | 33 | 0 | 57 |
| Volume Right | 0 | 100 | 15 |
| cSH | 1403 | 1700 | 757 |
| Volume to Capacity | 0.02 | 0.08 | 0.10 |
| Queue Length 95th (ft) | 2 | 0 | 8 |
| Control Delay (s) | 2.4 | 0.0 | 10.3 |
| Lane LOS | A | | B |
| Approach Delay (s) | 2.4 | 0.0 | 10.3 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.1 | | |
| Intersection Capacity Utilization | 20.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 105 | 50 | 4 | 417 | 1097 | 21 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1787 | 1599 | 1752 | 1845 | 1876 | |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1787 | 1599 | 1752 | 1845 | 1876 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 108 | 52 | 5 | 479 | 1261 | 24 |
| RTOR Reduction (vph) | 0 | 46 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 108 | 6 | 5 | 479 | 1284 | 0 |
| Heavy Vehicles (%) | 1% | 1% | 3% | 3% | 1% | 1% |
| Turn Type | NA | Perm | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 8.7 | 8.7 | 1.2 | 66.9 | 60.7 | |
| Effective Green, g (s) | 10.7 | 9.7 | 3.2 | 68.9 | 62.7 | |
| Actuated g/C Ratio | 0.12 | 0.11 | 0.04 | 0.80 | 0.73 | |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 223 | 181 | 65 | 1485 | 1374 | |
| v/s Ratio Prot | c0.06 | | 0.00 | c0.26 | c0.68 | |
| v/s Ratio Perm | | 0.00 | | | | |
| v/c Ratio | 0.48 | 0.03 | 0.08 | 0.32 | 0.93 | |
| Uniform Delay, d1 | 34.9 | 33.8 | 39.8 | 2.2 | 9.7 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.7 | 0.1 | 0.5 | 0.1 | 11.9 | |
| Delay (s) | 36.5 | 33.8 | 40.3 | 2.3 | 21.6 | |
| Level of Service | D | C | D | A | C | |
| Approach Delay (s) | 35.7 | | | 2.7 | 21.6 | |
| Approach LOS | D | | | A | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 18.0 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 85.6 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 71.5% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

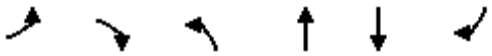
| Lane Group | EBL | EBR | NBL | NBT | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 108 | 52 | 5 | 479 | 1285 |
| v/c Ratio | 0.40 | 0.19 | 0.03 | 0.32 | 0.87 |
| Control Delay | 35.5 | 11.2 | 34.8 | 3.5 | 18.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 35.5 | 11.2 | 34.8 | 3.5 | 18.5 |
| Queue Length 50th (ft) | 48 | 0 | 2 | 54 | 340 |
| Queue Length 95th (ft) | 102 | 31 | 13 | 106 | #1036 |
| Internal Link Dist (ft) | 642 | | | 1901 | 1685 |
| Turn Bay Length (ft) | 140 | | 300 | | |
| Base Capacity (vph) | 514 | 477 | 263 | 1652 | 1477 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.21 | 0.11 | 0.02 | 0.29 | 0.87 |

Intersection Summary

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

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 441 | 125 | 217 | 589 | 630 | 428 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1752 | 1568 | 1752 | 3505 | 3438 | 1538 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1752 | 1568 | 1752 | 3505 | 3438 | 1538 |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.92 | 0.92 | 0.87 | 0.87 |
| Adj. Flow (vph) | 525 | 149 | 236 | 640 | 724 | 492 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 242 |
| Lane Group Flow (vph) | 525 | 149 | 236 | 640 | 724 | 250 |
| Confl. Peds. (#/hr) | 1 | | | | | |
| Heavy Vehicles (%) | 3% | 3% | 3% | 3% | 5% | 5% |
| Turn Type | NA | custom | Prot | NA | NA | Perm |
| Protected Phases | 4 | 4 | 1 | 6 | 2 | |
| Permitted Phases | | 6 | | | | 2 |
| Actuated Green, G (s) | 55.5 | 117.5 | 21.5 | 62.0 | 35.5 | 35.5 |
| Effective Green, g (s) | 55.5 | 117.5 | 21.5 | 62.0 | 35.5 | 35.5 |
| Actuated g/C Ratio | 0.44 | 0.92 | 0.17 | 0.49 | 0.28 | 0.28 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 763 | 1568 | 295 | 1704 | 957 | 428 |
| v/s Ratio Prot | c0.30 | 0.04 | c0.13 | 0.18 | c0.21 | |
| v/s Ratio Perm | | 0.05 | | | | 0.16 |
| v/c Ratio | 0.69 | 0.10 | 0.80 | 0.38 | 0.76 | 0.58 |
| Uniform Delay, d1 | 29.0 | 0.4 | 50.9 | 20.6 | 42.0 | 39.6 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 5.0 | 0.0 | 14.3 | 0.1 | 3.5 | 2.0 |
| Delay (s) | 34.0 | 0.5 | 65.3 | 20.7 | 45.5 | 41.7 |
| Level of Service | C | A | E | C | D | D |
| Approach Delay (s) | 26.6 | | | 32.7 | 44.0 | |
| Approach LOS | C | | | C | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 36.2 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.73 | | |
| Actuated Cycle Length (s) | 127.5 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 66.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

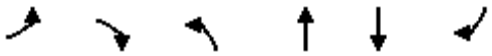


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 525 | 149 | 236 | 640 | 724 | 492 |
| v/c Ratio | 0.69 | 0.10 | 0.80 | 0.38 | 0.76 | 0.74 |
| Control Delay | 37.2 | 0.1 | 71.8 | 20.8 | 48.1 | 20.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.2 | 0.1 | 71.8 | 20.8 | 48.1 | 20.1 |
| Queue Length 50th (ft) | 358 | 0 | 191 | 168 | 290 | 119 |
| Queue Length 95th (ft) | 502 | 0 | 300 | 211 | 361 | 238 |
| Internal Link Dist (ft) | 1099 | | | 1376 | 2153 | |
| Turn Bay Length (ft) | | | 150 | | | 150 |
| Base Capacity (vph) | 762 | 1568 | 374 | 2080 | 1170 | 744 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.69 | 0.10 | 0.63 | 0.31 | 0.62 | 0.66 |

Intersection Summary

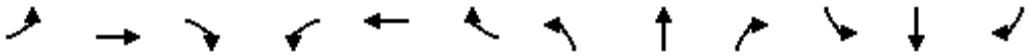
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 441 | 125 | 217 | 592 | 634 | 428 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1752 | 1568 | 1752 | 3505 | 3438 | 1538 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1752 | 1568 | 1752 | 3505 | 3438 | 1538 |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.92 | 0.92 | 0.87 | 0.87 |
| Adj. Flow (vph) | 525 | 149 | 236 | 643 | 729 | 492 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 240 |
| Lane Group Flow (vph) | 525 | 149 | 236 | 643 | 729 | 252 |
| Confl. Peds. (#/hr) | 1 | | | | | |
| Heavy Vehicles (%) | 3% | 3% | 3% | 3% | 5% | 5% |
| Turn Type | NA | custom | Prot | NA | NA | Perm |
| Protected Phases | 4 | 4 | 1 | 6 | 2 | |
| Permitted Phases | | 6 | | | | 2 |
| Actuated Green, G (s) | 55.5 | 117.9 | 21.6 | 62.4 | 35.8 | 35.8 |
| Effective Green, g (s) | 55.5 | 117.9 | 21.6 | 62.4 | 35.8 | 35.8 |
| Actuated g/C Ratio | 0.43 | 0.92 | 0.17 | 0.49 | 0.28 | 0.28 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 760 | 1568 | 296 | 1710 | 962 | 430 |
| v/s Ratio Prot | c0.30 | 0.04 | c0.13 | 0.18 | c0.21 | |
| v/s Ratio Perm | | 0.05 | | | | 0.16 |
| v/c Ratio | 0.69 | 0.10 | 0.80 | 0.38 | 0.76 | 0.59 |
| Uniform Delay, d1 | 29.3 | 0.4 | 51.0 | 20.5 | 42.1 | 39.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 5.1 | 0.0 | 13.8 | 0.1 | 3.5 | 2.0 |
| Delay (s) | 34.4 | 0.5 | 64.9 | 20.7 | 45.5 | 41.7 |
| Level of Service | C | A | E | C | D | D |
| Approach Delay (s) | 26.9 | | | 32.5 | 44.0 | |
| Approach LOS | C | | | C | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 36.2 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.73 | | |
| Actuated Cycle Length (s) | 127.9 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 66.5% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 525 | 149 | 236 | 643 | 729 | 492 |
| v/c Ratio | 0.69 | 0.10 | 0.80 | 0.38 | 0.76 | 0.73 |
| Control Delay | 37.5 | 0.1 | 72.0 | 20.7 | 48.0 | 20.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.5 | 0.1 | 72.0 | 20.7 | 48.0 | 20.2 |
| Queue Length 50th (ft) | 359 | 0 | 192 | 170 | 293 | 120 |
| Queue Length 95th (ft) | 502 | 0 | 300 | 212 | 363 | 240 |
| Internal Link Dist (ft) | 1099 | | | 1376 | 2153 | |
| Turn Bay Length (ft) | | | 150 | | | 150 |
| Base Capacity (vph) | 759 | 1568 | 373 | 2072 | 1165 | 741 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.69 | 0.10 | 0.63 | 0.31 | 0.63 | 0.66 |

Intersection Summary



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 1 | 733 | 211 | 841 | 833 | 0 | 259 | 4 | 770 | 15 | 10 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | | 1.00 | 0.99 | | 1.00 | |
| Flpb, ped/bikes | 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 | | | 1.00 | 0.85 | | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | 1736 | 3471 | 1533 | 1719 | 3438 | | | 1725 | 1517 | | 1766 | |
| Flt Permitted | 0.32 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.69 | 1.00 | | 0.48 | |
| Satd. Flow (perm) | 586 | 3471 | 1533 | 1719 | 3438 | | | 1250 | 1517 | | 871 | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.94 | 0.94 | 0.94 | 0.83 | 0.83 | 0.83 | 0.55 | 0.55 | 0.55 |
| Adj. Flow (vph) | 1 | 833 | 240 | 895 | 886 | 0 | 312 | 5 | 928 | 27 | 18 | 2 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 1 | 833 | 240 | 895 | 886 | 0 | 0 | 317 | 928 | 0 | 46 | 0 |
| Confl. Peds. (#/hr) | | | 2 | | | 3 | | | 5 | 5 | | |
| Heavy Vehicles (%) | 4% | 4% | 4% | 5% | 5% | 5% | 5% | 5% | 5% | 4% | 4% | 4% |
| Turn Type | Perm | NA | Free | Prot | NA | | Perm | NA | Free | Perm | NA | |
| Protected Phases | | 6 | | 5 | 2 | | | 8 | | | 4 | |
| Permitted Phases | 6 | | Free | | | | 8 | | Free | 4 | | |
| Actuated Green, G (s) | 47.0 | 47.0 | 210.0 | 101.0 | 153.0 | | | 47.0 | 210.0 | | 47.0 | |
| Effective Green, g (s) | 49.0 | 49.0 | 210.0 | 103.0 | 155.0 | | | 49.0 | 210.0 | | 49.0 | |
| Actuated g/C Ratio | 0.23 | 0.23 | 1.00 | 0.49 | 0.74 | | | 0.23 | 1.00 | | 0.23 | |
| Clearance Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 137 | 810 | 1533 | 843 | 2538 | | | 292 | 1517 | | 203 | |
| v/s Ratio Prot | | c0.24 | | c0.52 | 0.26 | | | | | | | |
| v/s Ratio Perm | 0.00 | | 0.16 | | | | | c0.25 | 0.61 | | 0.05 | |
| v/c Ratio | 0.01 | 1.03 | 0.16 | 1.06 | 0.35 | | | 1.09 | 0.61 | | 0.23 | |
| Uniform Delay, d1 | 61.8 | 80.5 | 0.0 | 53.5 | 9.7 | | | 80.5 | 0.0 | | 65.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.0 | 39.1 | 0.2 | 48.7 | 0.1 | | | 77.4 | 1.8 | | 0.6 | |
| Delay (s) | 61.8 | 119.6 | 0.2 | 102.2 | 9.8 | | | 157.9 | 1.8 | | 65.8 | |
| Level of Service | E | F | A | F | A | | | F | A | | E | |
| Approach Delay (s) | | 92.9 | | | 56.2 | | | 41.6 | | | 65.8 | |
| Approach LOS | | F | | | E | | | D | | | E | |

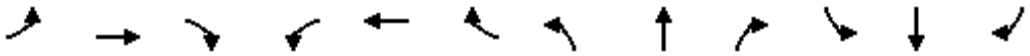
| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 61.4 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 1.06 | | |
| Actuated Cycle Length (s) | 210.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 98.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBT | NBR | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1 | 833 | 240 | 895 | 886 | 317 | 928 | 47 |
| v/c Ratio | 0.01 | 1.03 | 0.16 | 1.06 | 0.35 | 1.09 | 0.61 | 0.23 |
| Control Delay | 62.0 | 115.2 | 0.2 | 98.6 | 10.1 | 148.2 | 1.8 | 67.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.0 | 115.2 | 0.2 | 98.6 | 10.1 | 148.2 | 1.8 | 67.5 |
| Queue Length 50th (ft) | 1 | ~644 | 0 | ~1355 | 213 | ~490 | 0 | 52 |
| Queue Length 95th (ft) | 8 | #754 | 0 | #1624 | 245 | #624 | 0 | 58 |
| Internal Link Dist (ft) | | 1998 | | | 2306 | 2153 | | 237 |
| Turn Bay Length (ft) | 150 | | 200 | 150 | | | | |
| Base Capacity (vph) | 137 | 810 | 1533 | 843 | 2538 | 292 | 1517 | 204 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.01 | 1.03 | 0.16 | 1.06 | 0.35 | 1.09 | 0.61 | 0.23 |

Intersection Summary

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

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



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 1 | 733 | 210 | 838 | 833 | 0 | 258 | 4 | 768 | 15 | 10 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | | 1.00 | 0.99 | | 1.00 | |
| Flpb, ped/bikes | 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 | | | 1.00 | 0.85 | | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | 1736 | 3471 | 1533 | 1719 | 3438 | | | 1725 | 1517 | | 1766 | |
| Flt Permitted | 0.32 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.69 | 1.00 | | 0.48 | |
| Satd. Flow (perm) | 586 | 3471 | 1533 | 1719 | 3438 | | | 1250 | 1517 | | 874 | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.94 | 0.94 | 0.94 | 0.83 | 0.83 | 0.83 | 0.55 | 0.55 | 0.55 |
| Adj. Flow (vph) | 1 | 833 | 239 | 891 | 886 | 0 | 311 | 5 | 925 | 27 | 18 | 2 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 1 | 833 | 239 | 891 | 886 | 0 | 0 | 316 | 925 | 0 | 46 | 0 |
| Confl. Peds. (#/hr) | | | 2 | | | 3 | | | 5 | 5 | | |
| Heavy Vehicles (%) | 4% | 4% | 4% | 5% | 5% | 5% | 5% | 5% | 5% | 4% | 4% | 4% |
| Turn Type | Perm | NA | Free | Prot | NA | | Perm | NA | Free | Perm | NA | |
| Protected Phases | | 6 | | 5 | 2 | | | 8 | | | 4 | |
| Permitted Phases | 6 | | Free | | | | 8 | | Free | 4 | | |
| Actuated Green, G (s) | 47.0 | 47.0 | 210.0 | 101.0 | 153.0 | | | 47.0 | 210.0 | | 47.0 | |
| Effective Green, g (s) | 49.0 | 49.0 | 210.0 | 103.0 | 155.0 | | | 49.0 | 210.0 | | 49.0 | |
| Actuated g/C Ratio | 0.23 | 0.23 | 1.00 | 0.49 | 0.74 | | | 0.23 | 1.00 | | 0.23 | |
| Clearance Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 137 | 810 | 1533 | 843 | 2538 | | | 292 | 1517 | | 204 | |
| v/s Ratio Prot | | c0.24 | | c0.52 | 0.26 | | | | | | | |
| v/s Ratio Perm | 0.00 | | 0.16 | | | | | c0.25 | 0.61 | | 0.05 | |
| v/c Ratio | 0.01 | 1.03 | 0.16 | 1.06 | 0.35 | | | 1.08 | 0.61 | | 0.23 | |
| Uniform Delay, d1 | 61.8 | 80.5 | 0.0 | 53.5 | 9.7 | | | 80.5 | 0.0 | | 65.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.0 | 39.1 | 0.2 | 47.2 | 0.1 | | | 76.3 | 1.8 | | 0.6 | |
| Delay (s) | 61.8 | 119.6 | 0.2 | 100.7 | 9.8 | | | 156.8 | 1.8 | | 65.7 | |
| Level of Service | E | F | A | F | A | | | F | A | | E | |
| Approach Delay (s) | | 92.9 | | | 55.3 | | | 41.3 | | | 65.7 | |
| Approach LOS | | F | | | E | | | D | | | E | |

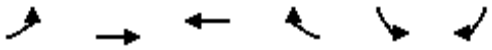
| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 61.0 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 1.06 | | |
| Actuated Cycle Length (s) | 210.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 97.9% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBT | NBR | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1 | 833 | 239 | 891 | 886 | 316 | 925 | 47 |
| v/c Ratio | 0.01 | 1.03 | 0.16 | 1.06 | 0.35 | 1.08 | 0.61 | 0.23 |
| Control Delay | 62.0 | 115.2 | 0.2 | 97.2 | 10.1 | 147.4 | 1.8 | 67.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.0 | 115.2 | 0.2 | 97.2 | 10.1 | 147.4 | 1.8 | 67.5 |
| Queue Length 50th (ft) | 1 | ~644 | 0 | ~1343 | 213 | ~487 | 0 | 52 |
| Queue Length 95th (ft) | 8 | #754 | 0 | #1612 | 245 | #622 | 0 | 58 |
| Internal Link Dist (ft) | | 1998 | | | 2306 | 2153 | | 237 |
| Turn Bay Length (ft) | 150 | | 200 | 150 | | | | |
| Base Capacity (vph) | 137 | 810 | 1533 | 843 | 2538 | 292 | 1517 | 204 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.01 | 1.03 | 0.16 | 1.06 | 0.35 | 1.08 | 0.61 | 0.23 |

Intersection Summary

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

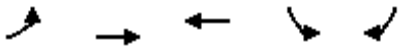
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 39 | 437 | 760 | 217 | 126 | 31 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.97 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 1612 | 1696 | 1722 | | 1770 | 1583 |
| Flt Permitted | 0.08 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | 138 | 1696 | 1722 | | 1770 | 1583 |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.89 | 0.89 | 0.86 | 0.86 |
| Adj. Flow (vph) | 46 | 520 | 854 | 244 | 147 | 36 |
| RTOR Reduction (vph) | 0 | 0 | 7 | 0 | 0 | 28 |
| Lane Group Flow (vph) | 46 | 520 | 1091 | 0 | 147 | 8 |
| Heavy Vehicles (%) | 12% | 12% | 7% | 7% | 2% | 2% |
| Turn Type | pm+pt | NA | NA | | NA | Perm |
| Protected Phases | 7 | 4 | 8 | | 2 | |
| Permitted Phases | 4 | | | | | 2 |
| Actuated Green, G (s) | 86.2 | 86.2 | 74.6 | | 14.2 | 14.2 |
| Effective Green, g (s) | 86.2 | 86.2 | 74.6 | | 14.2 | 14.2 |
| Actuated g/C Ratio | 0.78 | 0.78 | 0.68 | | 0.13 | 0.13 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 196 | 1324 | 1164 | | 228 | 204 |
| v/s Ratio Prot | 0.01 | c0.31 | c0.63 | | c0.08 | |
| v/s Ratio Perm | 0.17 | | | | | 0.01 |
| v/c Ratio | 0.23 | 0.39 | 0.94 | | 0.64 | 0.04 |
| Uniform Delay, d1 | 18.5 | 3.8 | 15.8 | | 45.7 | 42.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.6 | 0.2 | 13.8 | | 6.1 | 0.1 |
| Delay (s) | 19.1 | 4.0 | 29.6 | | 51.8 | 42.2 |
| Level of Service | B | A | C | | D | D |
| Approach Delay (s) | | 5.2 | 29.6 | | 49.9 | |
| Approach LOS | | A | C | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 24.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.87 | | |
| Actuated Cycle Length (s) | 110.4 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 68.5% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

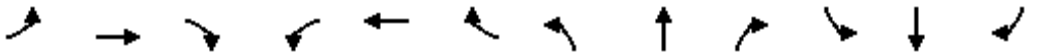
c Critical Lane Group



| Lane Group | EBL | EBT | WBT | SBL | SBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 46 | 520 | 1098 | 147 | 36 |
| v/c Ratio | 0.22 | 0.39 | 0.93 | 0.64 | 0.15 |
| Control Delay | 5.7 | 5.3 | 32.2 | 59.0 | 17.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 5.7 | 5.3 | 32.2 | 59.0 | 17.8 |
| Queue Length 50th (ft) | 6 | 96 | 646 | 101 | 3 |
| Queue Length 95th (ft) | 16 | 162 | #1128 | 163 | 30 |
| Internal Link Dist (ft) | | 1199 | 1752 | 1564 | |
| Turn Bay Length (ft) | 100 | | | | 65 |
| Base Capacity (vph) | 243 | 1392 | 1182 | 343 | 332 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.19 | 0.37 | 0.93 | 0.43 | 0.11 |

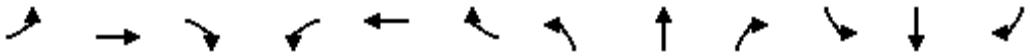
Intersection Summary

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



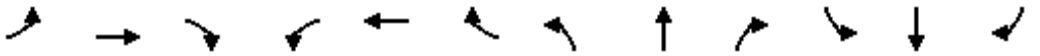
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 96 | 392 | 117 | 37 | 493 | 80 | 267 | 630 | 87 | 161 | 374 | 220 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 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 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1736 | 1827 | 1337 | 1787 | 1881 | 1599 | 1736 | 3471 | 1553 | 1703 | 3406 | 1524 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1736 | 1827 | 1337 | 1787 | 1881 | 1599 | 1736 | 3471 | 1553 | 1703 | 3406 | 1524 |
| Peak-hour factor, PHF | 0.64 | 0.64 | 0.64 | 0.84 | 0.84 | 0.84 | 0.76 | 0.76 | 0.76 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 150 | 612 | 183 | 44 | 587 | 95 | 351 | 829 | 114 | 177 | 411 | 242 |
| RTOR Reduction (vph) | 0 | 0 | 17 | 0 | 0 | 12 | 0 | 0 | 41 | 0 | 0 | 118 |
| Lane Group Flow (vph) | 150 | 612 | 166 | 44 | 587 | 83 | 351 | 829 | 73 | 177 | 411 | 124 |
| Confl. Peds. (#/hr) | | | 52 | | | | | | | | | |
| Heavy Vehicles (%) | 4% | 4% | 4% | 1% | 1% | 1% | 4% | 4% | 4% | 6% | 6% | 6% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | | | 4 | | | 8 | | | 6 | | | 2 |
| Actuated Green, G (s) | 19.8 | 75.2 | 75.2 | 7.1 | 62.5 | 62.5 | 41.1 | 48.9 | 48.9 | 23.0 | 30.8 | 30.8 |
| Effective Green, g (s) | 21.8 | 77.2 | 76.2 | 9.1 | 64.5 | 63.5 | 43.1 | 50.9 | 49.9 | 25.0 | 32.8 | 31.8 |
| Actuated g/C Ratio | 0.13 | 0.44 | 0.44 | 0.05 | 0.37 | 0.36 | 0.25 | 0.29 | 0.29 | 0.14 | 0.19 | 0.18 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 217 | 810 | 585 | 93 | 696 | 583 | 430 | 1014 | 445 | 244 | 641 | 278 |
| v/s Ratio Prot | c0.09 | 0.33 | | 0.02 | c0.31 | | c0.20 | c0.24 | | 0.10 | 0.12 | |
| v/s Ratio Perm | | | 0.12 | | | 0.05 | | | 0.05 | | | 0.08 |
| v/c Ratio | 0.69 | 0.76 | 0.28 | 0.47 | 0.84 | 0.14 | 0.82 | 0.82 | 0.16 | 0.73 | 0.64 | 0.45 |
| Uniform Delay, d1 | 73.0 | 40.6 | 31.5 | 80.2 | 50.2 | 37.1 | 61.8 | 57.3 | 46.5 | 71.3 | 65.3 | 63.4 |
| 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 | 9.1 | 4.0 | 0.3 | 3.8 | 9.2 | 0.1 | 11.4 | 5.2 | 0.2 | 10.2 | 2.2 | 1.1 |
| Delay (s) | 82.1 | 44.6 | 31.7 | 84.0 | 59.4 | 37.2 | 73.2 | 62.5 | 46.7 | 81.5 | 67.5 | 64.5 |
| Level of Service | F | D | C | F | E | D | E | E | D | F | E | E |
| Approach Delay (s) | | 48.1 | | | 58.0 | | | 64.0 | | | 69.6 | |
| Approach LOS | | D | | | E | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 60.1 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 174.2 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 70.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 150 | 612 | 183 | 44 | 587 | 95 | 351 | 829 | 114 | 177 | 411 | 242 |
| v/c Ratio | 0.68 | 0.75 | 0.31 | 0.39 | 0.86 | 0.16 | 0.81 | 0.81 | 0.23 | 0.72 | 0.64 | 0.61 |
| Control Delay | 95.1 | 49.8 | 30.1 | 99.3 | 66.6 | 33.3 | 80.0 | 66.3 | 28.3 | 93.0 | 73.6 | 36.3 |
| 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 | 95.1 | 49.8 | 30.1 | 99.3 | 66.6 | 33.3 | 80.0 | 66.3 | 28.3 | 93.0 | 73.6 | 36.3 |
| Queue Length 50th (ft) | 175 | 631 | 121 | 52 | 655 | 62 | 402 | 491 | 51 | 206 | 242 | 108 |
| Queue Length 95th (ft) | 201 | 525 | 128 | 104 | 820 | 109 | 477 | 521 | 90 | 339 | 352 | 241 |
| Internal Link Dist (ft) | | 1752 | | | 1465 | | | 949 | | | 1376 | |
| Turn Bay Length (ft) | 150 | | 60 | 240 | | 80 | 250 | | 200 | 250 | | 130 |
| Base Capacity (vph) | 273 | 1039 | 743 | 130 | 910 | 774 | 578 | 1302 | 609 | 309 | 765 | 446 |
| 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 | 0.55 | 0.59 | 0.25 | 0.34 | 0.65 | 0.12 | 0.61 | 0.64 | 0.19 | 0.57 | 0.54 | 0.54 |

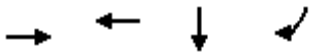
Intersection Summary



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 25 | 277 | 4 | 11 | 546 | 189 | 0 | 0 | 0 | 247 | 22 | 32 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Frt | | 1.00 | | | 0.97 | | | | | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | | | 1.00 | | | | | | 0.96 | 1.00 |
| Satd. Flow (prot) | | 1782 | | | 1730 | | | | | | 1781 | 1583 |
| Flt Permitted | | 0.91 | | | 0.99 | | | | | | 0.96 | 1.00 |
| Satd. Flow (perm) | | 1625 | | | 1720 | | | | | | 1781 | 1583 |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.85 | 0.85 | 0.85 | 0.92 | 0.92 | 0.92 | 0.72 | 0.72 | 0.72 |
| Adj. Flow (vph) | 30 | 334 | 5 | 13 | 642 | 222 | 0 | 0 | 0 | 343 | 31 | 44 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| Lane Group Flow (vph) | 0 | 368 | 0 | 0 | 860 | 0 | 0 | 0 | 0 | 0 | 374 | 12 |
| Heavy Vehicles (%) | 6% | 6% | 6% | 6% | 6% | 6% | 2% | 2% | 2% | 2% | 2% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | | | | Split | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | 2 | 2 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 2 |
| Actuated Green, G (s) | | 34.5 | | | 34.5 | | | | | | 17.4 | 17.4 |
| Effective Green, g (s) | | 34.5 | | | 34.5 | | | | | | 17.4 | 17.4 |
| Actuated g/C Ratio | | 0.56 | | | 0.56 | | | | | | 0.28 | 0.28 |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 906 | | | 959 | | | | | | 501 | 445 |
| v/s Ratio Prot | | | | | | | | | | | c0.21 | |
| v/s Ratio Perm | | 0.23 | | | c0.50 | | | | | | | 0.01 |
| v/c Ratio | | 0.41 | | | 0.90 | | | | | | 0.75 | 0.03 |
| Uniform Delay, d1 | | 7.8 | | | 12.1 | | | | | | 20.2 | 16.1 |
| Progression Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 0.3 | | | 10.9 | | | | | | 6.0 | 0.0 |
| Delay (s) | | 8.1 | | | 23.0 | | | | | | 26.2 | 16.1 |
| Level of Service | | A | | | C | | | | | | C | B |
| Approach Delay (s) | | 8.1 | | | 23.0 | | | 0.0 | | | 25.2 | |
| Approach LOS | | A | | | C | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 20.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 61.9 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 66.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

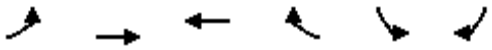
c Critical Lane Group



| Lane Group | EBT | WBT | SBT | SBR |
|---|---|---|---|---|
| Lane Group Flow (vph) | 369 | 877 | 374 | 44 |
| v/c Ratio | 0.41 | 0.90 | 0.75 | 0.09 |
| Control Delay | 10.0 | 27.3 | 32.4 | 6.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 10.0 | 27.3 | 32.4 | 6.9 |
| Queue Length 50th (ft) | 77 | 275 | 141 | 0 |
| Queue Length 95th (ft) | 123 | #502 | 171 | 14 |
| Internal Link Dist (ft) | 2460 | 1199 | 1412 | |
| Turn Bay Length (ft) | | | | 200 |
| Base Capacity (vph) | 1053 | 1129 | 622 | 581 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.35 | 0.78 | 0.60 | 0.08 |

Intersection Summary

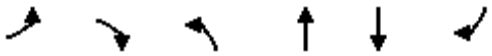
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 4 | 49 | 280 | 25 | 183 | 29 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.79 | 0.79 | 0.88 | 0.88 | 0.78 | 0.78 |
| Hourly flow rate (vph) | 5 | 62 | 318 | 28 | 235 | 37 |
| Pedestrians | | | 1 | | 1 | |
| Lane Width (ft) | | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | | | 4.0 | | 4.0 | |
| Percent Blockage | | | 0 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 348 | | | | 407 | 333 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 348 | | | | 407 | 333 |
| tC, single (s) | 4.3 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.4 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 61 | 95 |
| cM capacity (veh/h) | 1103 | | | | 599 | 710 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 67 | 347 | 272 |
| Volume Left | 5 | 0 | 235 |
| Volume Right | 0 | 28 | 37 |
| cSH | 1103 | 1700 | 612 |
| Volume to Capacity | 0.00 | 0.20 | 0.44 |
| Queue Length 95th (ft) | 0 | 0 | 57 |
| Control Delay (s) | 0.7 | 0.0 | 15.5 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.7 | 0.0 | 15.5 |
| Approach LOS | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 6.2 | |
| Intersection Capacity Utilization | | 34.8% | ICU Level of Service A |
| Analysis Period (min) | | 15 | |



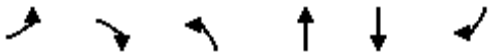
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 35 | 11 | 30 | 949 | 441 | 87 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1583 | 1417 | 1736 | 1827 | 1769 | |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1583 | 1417 | 1736 | 1827 | 1769 | |
| Peak-hour factor, PHF | 0.51 | 0.51 | 0.89 | 0.89 | 0.92 | 0.92 |
| Adj. Flow (vph) | 69 | 22 | 34 | 1066 | 479 | 95 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 5 | 0 |
| Lane Group Flow (vph) | 69 | 3 | 34 | 1066 | 569 | 0 |
| Heavy Vehicles (%) | 14% | 14% | 4% | 4% | 5% | 5% |
| Turn Type | NA | Perm | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 7.0 | 7.0 | 2.8 | 52.6 | 44.8 | |
| Effective Green, g (s) | 9.0 | 8.0 | 4.8 | 54.6 | 46.8 | |
| Actuated g/C Ratio | 0.13 | 0.11 | 0.07 | 0.78 | 0.67 | |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 205 | 163 | 120 | 1433 | 1190 | |
| v/s Ratio Prot | c0.04 | | 0.02 | c0.58 | 0.32 | |
| v/s Ratio Perm | | 0.00 | | | | |
| v/c Ratio | 0.34 | 0.02 | 0.28 | 0.74 | 0.48 | |
| Uniform Delay, d1 | 27.6 | 27.3 | 30.8 | 3.9 | 5.5 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.0 | 0.0 | 1.3 | 2.1 | 0.3 | |
| Delay (s) | 28.6 | 27.3 | 32.1 | 6.0 | 5.8 | |
| Level of Service | C | C | C | A | A | |
| Approach Delay (s) | 28.3 | | | 6.8 | 5.8 | |
| Approach LOS | C | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 7.6 | HCM Level of Service | A |
| HCM Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 69.6 | Sum of lost time (s) | 6.0 |
| Intersection Capacity Utilization | 60.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

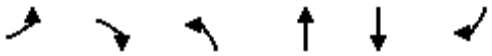
| Lane Group | EBL | EBR | NBL | NBT | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 69 | 22 | 34 | 1066 | 574 |
| v/c Ratio | 0.25 | 0.09 | 0.13 | 0.73 | 0.44 |
| Control Delay | 31.3 | 14.7 | 32.1 | 8.7 | 7.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.3 | 14.7 | 32.1 | 8.7 | 7.9 |
| Queue Length 50th (ft) | 26 | 0 | 13 | 189 | 60 |
| Queue Length 95th (ft) | 41 | 7 | 46 | 410 | 252 |
| Internal Link Dist (ft) | 642 | | | 1901 | 1624 |
| Turn Bay Length (ft) | 140 | | 300 | | |
| Base Capacity (vph) | 620 | 544 | 355 | 1744 | 1460 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.11 | 0.04 | 0.10 | 0.61 | 0.39 |

Intersection Summary



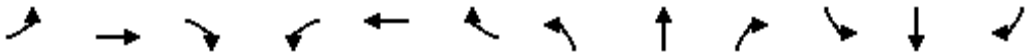
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 441 | 125 | 217 | 589 | 679 | 428 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1752 | 1568 | 1752 | 3505 | 3438 | 1538 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1752 | 1568 | 1752 | 3505 | 3438 | 1538 |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.92 | 0.92 | 0.87 | 0.87 |
| Adj. Flow (vph) | 525 | 149 | 236 | 640 | 780 | 492 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 223 |
| Lane Group Flow (vph) | 525 | 149 | 236 | 640 | 780 | 269 |
| Confl. Peds. (#/hr) | 1 | | | | | |
| Heavy Vehicles (%) | 3% | 3% | 3% | 3% | 5% | 5% |
| Turn Type | NA | custom | Prot | NA | NA | Perm |
| Protected Phases | 4 | 4 | 1 | 6 | 2 | |
| Permitted Phases | | 6 | | | | 2 |
| Actuated Green, G (s) | 54.5 | 118.5 | 21.6 | 64.0 | 37.4 | 37.4 |
| Effective Green, g (s) | 54.5 | 118.5 | 21.6 | 64.0 | 37.4 | 37.4 |
| Actuated g/C Ratio | 0.42 | 0.92 | 0.17 | 0.50 | 0.29 | 0.29 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 743 | 1568 | 294 | 1746 | 1001 | 448 |
| v/s Ratio Prot | c0.30 | 0.04 | c0.13 | 0.18 | c0.23 | |
| v/s Ratio Perm | | 0.05 | | | | 0.18 |
| v/c Ratio | 0.71 | 0.10 | 0.80 | 0.37 | 0.78 | 0.60 |
| Uniform Delay, d1 | 30.4 | 0.4 | 51.4 | 19.8 | 41.8 | 39.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 5.6 | 0.0 | 14.6 | 0.1 | 3.9 | 2.3 |
| Delay (s) | 36.0 | 0.5 | 66.0 | 19.9 | 45.7 | 41.4 |
| Level of Service | D | A | E | B | D | D |
| Approach Delay (s) | 28.2 | | | 32.3 | 44.0 | |
| Approach LOS | C | | | C | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 36.6 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 128.5 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 67.7% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 525 | 149 | 236 | 640 | 780 | 492 |
| v/c Ratio | 0.71 | 0.10 | 0.80 | 0.37 | 0.78 | 0.74 |
| Control Delay | 39.2 | 0.1 | 72.4 | 20.0 | 48.2 | 21.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 39.2 | 0.1 | 72.4 | 20.0 | 48.2 | 21.5 |
| Queue Length 50th (ft) | 371 | 0 | 194 | 165 | 316 | 137 |
| Queue Length 95th (ft) | 509 | 0 | 300 | 207 | 390 | 258 |
| Internal Link Dist (ft) | 1099 | | | 1376 | 2153 | |
| Turn Bay Length (ft) | | | 150 | | | 150 |
| Base Capacity (vph) | 742 | 1568 | 371 | 2090 | 1187 | 736 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.71 | 0.10 | 0.64 | 0.31 | 0.66 | 0.67 |

Intersection Summary



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 1 | 733 | 220 | 877 | 833 | 0 | 258 | 4 | 768 | 15 | 10 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | | 1.00 | 0.99 | | 1.00 | |
| Flpb, ped/bikes | 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 | | | 1.00 | 0.85 | | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | 1736 | 3471 | 1533 | 1719 | 3438 | | | 1725 | 1517 | | 1766 | |
| Flt Permitted | 0.32 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.69 | 1.00 | | 0.45 | |
| Satd. Flow (perm) | 586 | 3471 | 1533 | 1719 | 3438 | | | 1248 | 1517 | | 826 | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.94 | 0.94 | 0.94 | 0.83 | 0.83 | 0.83 | 0.55 | 0.55 | 0.55 |
| Adj. Flow (vph) | 1 | 833 | 250 | 933 | 886 | 0 | 311 | 5 | 925 | 27 | 18 | 2 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 1 | 833 | 250 | 933 | 886 | 0 | 0 | 316 | 925 | 0 | 46 | 0 |
| Confl. Peds. (#/hr) | | | 2 | | | 3 | | | 5 | 5 | | |
| Heavy Vehicles (%) | 4% | 4% | 4% | 5% | 5% | 5% | 5% | 5% | 5% | 4% | 4% | 4% |
| Turn Type | Perm | NA | Free | Prot | NA | | Perm | NA | Free | Perm | NA | |
| Protected Phases | | 6 | | 5 | 2 | | | 8 | | | 4 | |
| Permitted Phases | 6 | | Free | | | | 8 | | Free | 4 | | |
| Actuated Green, G (s) | 47.0 | 47.0 | 210.0 | 103.0 | 155.0 | | | 45.0 | 210.0 | | 45.0 | |
| Effective Green, g (s) | 49.0 | 49.0 | 210.0 | 105.0 | 157.0 | | | 47.0 | 210.0 | | 47.0 | |
| Actuated g/C Ratio | 0.23 | 0.23 | 1.00 | 0.50 | 0.75 | | | 0.22 | 1.00 | | 0.22 | |
| Clearance Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 137 | 810 | 1533 | 860 | 2570 | | | 279 | 1517 | | 185 | |
| v/s Ratio Prot | | c0.24 | | c0.54 | 0.26 | | | | | | | |
| v/s Ratio Perm | 0.00 | | 0.16 | | | | | c0.25 | 0.61 | | 0.06 | |
| v/c Ratio | 0.01 | 1.03 | 0.16 | 1.08 | 0.34 | | | 1.13 | 0.61 | | 0.25 | |
| Uniform Delay, d1 | 61.8 | 80.5 | 0.0 | 52.5 | 9.0 | | | 81.5 | 0.0 | | 67.0 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.0 | 39.1 | 0.2 | 56.3 | 0.1 | | | 94.5 | 1.8 | | 0.7 | |
| Delay (s) | 61.8 | 119.6 | 0.2 | 108.8 | 9.1 | | | 176.0 | 1.8 | | 67.7 | |
| Level of Service | E | F | A | F | A | | | F | A | | E | |
| Approach Delay (s) | | 92.0 | | | 60.3 | | | 46.2 | | | 67.7 | |
| Approach LOS | | F | | | E | | | D | | | E | |

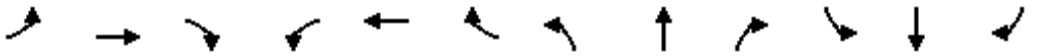
| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 64.4 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 1.08 | | |
| Actuated Cycle Length (s) | 210.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 100.0% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBT | NBR | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1 | 833 | 250 | 933 | 886 | 316 | 925 | 47 |
| v/c Ratio | 0.01 | 1.03 | 0.16 | 1.08 | 0.34 | 1.13 | 0.61 | 0.25 |
| Control Delay | 62.0 | 115.2 | 0.2 | 104.7 | 9.4 | 161.7 | 1.8 | 70.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 62.0 | 115.2 | 0.2 | 104.7 | 9.4 | 161.7 | 1.8 | 70.0 |
| Queue Length 50th (ft) | 1 | ~644 | 0 | ~1440 | 205 | ~504 | 0 | 53 |
| Queue Length 95th (ft) | 8 | #754 | 0 | #1709 | 235 | #639 | 0 | 59 |
| Internal Link Dist (ft) | | 1998 | | | 2306 | 2153 | | 237 |
| Turn Bay Length (ft) | 150 | | 200 | 150 | | | | |
| Base Capacity (vph) | 137 | 810 | 1533 | 860 | 2570 | 280 | 1517 | 185 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.01 | 1.03 | 0.16 | 1.08 | 0.34 | 1.13 | 0.61 | 0.25 |

Intersection Summary

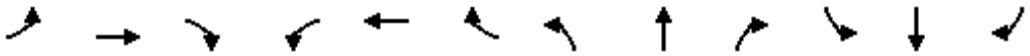
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



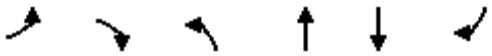
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 96 | 392 | 117 | 37 | 493 | 80 | 267 | 630 | 87 | 161 | 423 | 220 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 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 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1736 | 1827 | 1337 | 1787 | 1881 | 1599 | 1736 | 3471 | 1553 | 1703 | 3406 | 1524 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1736 | 1827 | 1337 | 1787 | 1881 | 1599 | 1736 | 3471 | 1553 | 1703 | 3406 | 1524 |
| Peak-hour factor, PHF | 0.64 | 0.64 | 0.64 | 0.84 | 0.84 | 0.84 | 0.76 | 0.76 | 0.76 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 150 | 612 | 183 | 44 | 587 | 95 | 351 | 829 | 114 | 177 | 465 | 242 |
| RTOR Reduction (vph) | 0 | 0 | 17 | 0 | 0 | 12 | 0 | 0 | 41 | 0 | 0 | 104 |
| Lane Group Flow (vph) | 150 | 612 | 166 | 44 | 587 | 83 | 351 | 829 | 73 | 177 | 465 | 138 |
| Confl. Peds. (#/hr) | | | 52 | | | | | | | | | |
| Heavy Vehicles (%) | 4% | 4% | 4% | 1% | 1% | 1% | 4% | 4% | 4% | 6% | 6% | 6% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | | | 4 | | | 8 | | | 6 | | | 2 |
| Actuated Green, G (s) | 19.8 | 75.2 | 75.2 | 7.1 | 62.5 | 62.5 | 41.0 | 49.0 | 49.0 | 23.0 | 31.0 | 31.0 |
| Effective Green, g (s) | 21.8 | 77.2 | 76.2 | 9.1 | 64.5 | 63.5 | 43.0 | 51.0 | 50.0 | 25.0 | 33.0 | 32.0 |
| Actuated g/C Ratio | 0.13 | 0.44 | 0.44 | 0.05 | 0.37 | 0.36 | 0.25 | 0.29 | 0.29 | 0.14 | 0.19 | 0.18 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 217 | 809 | 585 | 93 | 696 | 583 | 428 | 1016 | 445 | 244 | 645 | 280 |
| v/s Ratio Prot | c0.09 | 0.33 | | 0.02 | c0.31 | | c0.20 | c0.24 | | 0.10 | 0.14 | |
| v/s Ratio Perm | | | 0.12 | | | 0.05 | | | 0.05 | | | 0.09 |
| v/c Ratio | 0.69 | 0.76 | 0.28 | 0.47 | 0.84 | 0.14 | 0.82 | 0.82 | 0.16 | 0.73 | 0.72 | 0.49 |
| Uniform Delay, d1 | 73.0 | 40.7 | 31.5 | 80.3 | 50.3 | 37.1 | 62.0 | 57.3 | 46.5 | 71.4 | 66.3 | 63.9 |
| 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 | 9.1 | 4.1 | 0.3 | 3.8 | 9.2 | 0.1 | 11.9 | 5.1 | 0.2 | 10.2 | 4.0 | 1.4 |
| Delay (s) | 82.2 | 44.7 | 31.8 | 84.0 | 59.4 | 37.3 | 73.9 | 62.4 | 46.7 | 81.6 | 70.3 | 65.3 |
| Level of Service | F | D | C | F | E | D | E | E | D | F | E | E |
| Approach Delay (s) | | 48.2 | | | 58.0 | | | 64.2 | | | 71.2 | |
| Approach LOS | | D | | | E | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 60.7 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 174.3 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 71.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 150 | 612 | 183 | 44 | 587 | 95 | 351 | 829 | 114 | 177 | 465 | 242 |
| v/c Ratio | 0.69 | 0.75 | 0.31 | 0.39 | 0.86 | 0.16 | 0.81 | 0.81 | 0.23 | 0.72 | 0.72 | 0.63 |
| Control Delay | 95.2 | 49.9 | 30.2 | 99.4 | 66.7 | 33.3 | 80.4 | 66.2 | 28.3 | 93.2 | 76.4 | 41.5 |
| 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 | 95.2 | 49.9 | 30.2 | 99.4 | 66.7 | 33.3 | 80.4 | 66.2 | 28.3 | 93.2 | 76.4 | 41.5 |
| Queue Length 50th (ft) | 175 | 631 | 121 | 52 | 655 | 62 | 402 | 491 | 51 | 206 | 278 | 129 |
| Queue Length 95th (ft) | 201 | 525 | 128 | 104 | 820 | 109 | 480 | 521 | 90 | 339 | 398 | 265 |
| Internal Link Dist (ft) | | 1752 | | | 1465 | | | 949 | | | 1376 | |
| Turn Bay Length (ft) | 150 | | 60 | 240 | | 80 | 250 | | 200 | 250 | | 130 |
| Base Capacity (vph) | 273 | 1038 | 743 | 130 | 910 | 774 | 567 | 1302 | 609 | 309 | 783 | 440 |
| 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 | 0.55 | 0.59 | 0.25 | 0.34 | 0.65 | 0.12 | 0.62 | 0.64 | 0.19 | 0.57 | 0.59 | 0.55 |

Intersection Summary



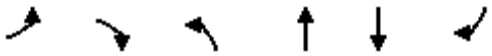
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 35 | 11 | 30 | 949 | 490 | 87 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1583 | 1417 | 1736 | 1827 | 1773 | |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1583 | 1417 | 1736 | 1827 | 1773 | |
| Peak-hour factor, PHF | 0.51 | 0.51 | 0.89 | 0.89 | 0.92 | 0.92 |
| Adj. Flow (vph) | 69 | 22 | 34 | 1066 | 533 | 95 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 5 | 0 |
| Lane Group Flow (vph) | 69 | 3 | 34 | 1066 | 623 | 0 |
| Heavy Vehicles (%) | 14% | 14% | 4% | 4% | 5% | 5% |
| Turn Type | NA | Perm | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 7.0 | 7.0 | 2.8 | 52.6 | 44.8 | |
| Effective Green, g (s) | 9.0 | 8.0 | 4.8 | 54.6 | 46.8 | |
| Actuated g/C Ratio | 0.13 | 0.11 | 0.07 | 0.78 | 0.67 | |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 205 | 163 | 120 | 1433 | 1192 | |
| v/s Ratio Prot | c0.04 | | 0.02 | c0.58 | 0.35 | |
| v/s Ratio Perm | | 0.00 | | | | |
| v/c Ratio | 0.34 | 0.02 | 0.28 | 0.74 | 0.52 | |
| Uniform Delay, d1 | 27.6 | 27.3 | 30.8 | 3.9 | 5.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.0 | 0.0 | 1.3 | 2.1 | 0.4 | |
| Delay (s) | 28.6 | 27.3 | 32.1 | 6.0 | 6.2 | |
| Level of Service | C | C | C | A | A | |
| Approach Delay (s) | 28.3 | | | 6.8 | 6.2 | |
| Approach LOS | C | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 7.7 | HCM Level of Service | A |
| HCM Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 69.6 | Sum of lost time (s) | 6.0 |
| Intersection Capacity Utilization | 60.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBR | NBL | NBT | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 69 | 22 | 34 | 1066 | 628 |
| v/c Ratio | 0.25 | 0.09 | 0.13 | 0.73 | 0.48 |
| Control Delay | 31.3 | 14.7 | 32.1 | 8.7 | 8.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.3 | 14.7 | 32.1 | 8.7 | 8.5 |
| Queue Length 50th (ft) | 26 | 0 | 13 | 189 | 69 |
| Queue Length 95th (ft) | 41 | 7 | 46 | 410 | 289 |
| Internal Link Dist (ft) | 642 | | | 1901 | 1624 |
| Turn Bay Length (ft) | 140 | | 300 | | |
| Base Capacity (vph) | 620 | 544 | 355 | 1744 | 1462 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.11 | 0.04 | 0.10 | 0.61 | 0.43 |

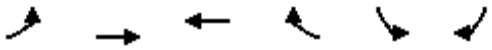
Intersection Summary



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 5 | 5 | 49 | 979 | 452 | 49 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 0.77 | 0.77 | 0.91 | 0.91 |
| Hourly flow rate (vph) | 5 | 5 | 64 | 1271 | 497 | 54 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1922 | 524 | 551 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1922 | 524 | 551 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 93 | 99 | 94 | | | |
| cM capacity (veh/h) | 70 | 557 | 1019 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 10 | 1335 | 551 |
| Volume Left | 5 | 64 | 0 |
| Volume Right | 5 | 0 | 54 |
| cSH | 124 | 1019 | 1700 |
| Volume to Capacity | 0.08 | 0.06 | 0.32 |
| Queue Length 95th (ft) | 6 | 5 | 0 |
| Control Delay (s) | 36.5 | 2.5 | 0.0 |
| Lane LOS | E | A | |
| Approach Delay (s) | 36.5 | 2.5 | 0.0 |
| Approach LOS | E | | |

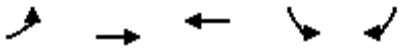
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.9 | | |
| Intersection Capacity Utilization | 103.3% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 39 | 441 | 766 | 217 | 126 | 31 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.97 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 1612 | 1696 | 1723 | | 1770 | 1583 |
| Flt Permitted | 0.08 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | 132 | 1696 | 1723 | | 1770 | 1583 |
| Peak-hour factor, PHF | 0.84 | 0.84 | 0.89 | 0.89 | 0.86 | 0.86 |
| Adj. Flow (vph) | 46 | 525 | 861 | 244 | 147 | 36 |
| RTOR Reduction (vph) | 0 | 0 | 7 | 0 | 0 | 28 |
| Lane Group Flow (vph) | 46 | 525 | 1098 | 0 | 147 | 8 |
| Heavy Vehicles (%) | 12% | 12% | 7% | 7% | 2% | 2% |
| Turn Type | pm+pt | NA | NA | | NA | Perm |
| Protected Phases | 7 | 4 | 8 | | 2 | |
| Permitted Phases | 4 | | | | | 2 |
| Actuated Green, G (s) | 86.2 | 86.2 | 74.6 | | 14.2 | 14.2 |
| Effective Green, g (s) | 86.2 | 86.2 | 74.6 | | 14.2 | 14.2 |
| Actuated g/C Ratio | 0.78 | 0.78 | 0.68 | | 0.13 | 0.13 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 192 | 1324 | 1164 | | 228 | 204 |
| v/s Ratio Prot | 0.01 | c0.31 | c0.64 | | c0.08 | |
| v/s Ratio Perm | 0.17 | | | | | 0.01 |
| v/c Ratio | 0.24 | 0.40 | 0.94 | | 0.64 | 0.04 |
| Uniform Delay, d1 | 19.0 | 3.8 | 16.0 | | 45.7 | 42.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.6 | 0.2 | 14.7 | | 6.1 | 0.1 |
| Delay (s) | 19.7 | 4.0 | 30.7 | | 51.8 | 42.2 |
| Level of Service | B | A | C | | D | D |
| Approach Delay (s) | | 5.3 | 30.7 | | 49.9 | |
| Approach LOS | | A | C | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 24.8 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.87 | | |
| Actuated Cycle Length (s) | 110.4 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 68.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

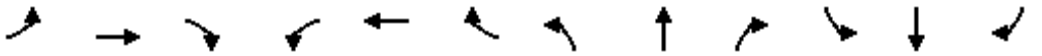
c Critical Lane Group



| Lane Group | EBL | EBT | WBT | SBL | SBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 46 | 525 | 1105 | 147 | 36 |
| v/c Ratio | 0.22 | 0.40 | 0.93 | 0.64 | 0.15 |
| Control Delay | 5.8 | 5.3 | 33.1 | 59.0 | 17.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 5.8 | 5.3 | 33.1 | 59.0 | 17.8 |
| Queue Length 50th (ft) | 6 | 97 | 658 | 101 | 3 |
| Queue Length 95th (ft) | 16 | 164 | #1140 | 163 | 30 |
| Internal Link Dist (ft) | | 1199 | 1752 | 1564 | |
| Turn Bay Length (ft) | 100 | | | | 65 |
| Base Capacity (vph) | 239 | 1392 | 1182 | 343 | 332 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.19 | 0.38 | 0.93 | 0.43 | 0.11 |

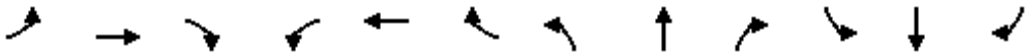
Intersection Summary

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



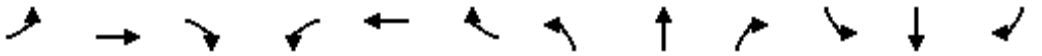
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 99 | 392 | 118 | 37 | 493 | 80 | 269 | 630 | 87 | 161 | 374 | 224 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 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 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1736 | 1827 | 1336 | 1787 | 1881 | 1599 | 1736 | 3471 | 1553 | 1703 | 3406 | 1524 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1736 | 1827 | 1336 | 1787 | 1881 | 1599 | 1736 | 3471 | 1553 | 1703 | 3406 | 1524 |
| Peak-hour factor, PHF | 0.64 | 0.64 | 0.64 | 0.84 | 0.84 | 0.84 | 0.76 | 0.76 | 0.76 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 155 | 612 | 184 | 44 | 587 | 95 | 354 | 829 | 114 | 177 | 411 | 246 |
| RTOR Reduction (vph) | 0 | 0 | 17 | 0 | 0 | 12 | 0 | 0 | 41 | 0 | 0 | 120 |
| Lane Group Flow (vph) | 155 | 612 | 167 | 44 | 587 | 83 | 354 | 829 | 73 | 177 | 411 | 126 |
| Confl. Peds. (#/hr) | | | 52 | | | | | | | | | |
| Heavy Vehicles (%) | 4% | 4% | 4% | 1% | 1% | 1% | 4% | 4% | 4% | 6% | 6% | 6% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | | | 4 | | | 8 | | | 6 | | | 2 |
| Actuated Green, G (s) | 20.2 | 75.8 | 75.8 | 7.1 | 62.7 | 62.7 | 41.4 | 49.1 | 49.1 | 23.0 | 30.7 | 30.7 |
| Effective Green, g (s) | 22.2 | 77.8 | 76.8 | 9.1 | 64.7 | 63.7 | 43.4 | 51.1 | 50.1 | 25.0 | 32.7 | 31.7 |
| Actuated g/C Ratio | 0.13 | 0.44 | 0.44 | 0.05 | 0.37 | 0.36 | 0.25 | 0.29 | 0.29 | 0.14 | 0.19 | 0.18 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 220 | 812 | 586 | 93 | 695 | 582 | 431 | 1014 | 445 | 243 | 636 | 276 |
| v/s Ratio Prot | c0.09 | 0.33 | | 0.02 | c0.31 | | c0.20 | c0.24 | | 0.10 | 0.12 | |
| v/s Ratio Perm | | | 0.12 | | | 0.05 | | | 0.05 | | | 0.08 |
| v/c Ratio | 0.70 | 0.75 | 0.28 | 0.47 | 0.84 | 0.14 | 0.82 | 0.82 | 0.16 | 0.73 | 0.65 | 0.46 |
| Uniform Delay, d1 | 73.3 | 40.6 | 31.5 | 80.6 | 50.5 | 37.3 | 62.1 | 57.6 | 46.8 | 71.8 | 65.8 | 64.0 |
| 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 | 9.8 | 4.0 | 0.3 | 3.8 | 9.2 | 0.1 | 11.9 | 5.2 | 0.2 | 10.4 | 2.3 | 1.2 |
| Delay (s) | 83.1 | 44.6 | 31.7 | 84.4 | 59.8 | 37.4 | 74.0 | 62.8 | 47.0 | 82.2 | 68.1 | 65.2 |
| Level of Service | F | D | C | F | E | D | E | E | D | F | E | E |
| Approach Delay (s) | | 48.4 | | | 58.4 | | | 64.5 | | | 70.2 | |
| Approach LOS | | D | | | E | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 60.5 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 175.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 71.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 155 | 612 | 184 | 44 | 587 | 95 | 354 | 829 | 114 | 177 | 411 | 246 |
| v/c Ratio | 0.70 | 0.75 | 0.31 | 0.39 | 0.86 | 0.16 | 0.82 | 0.81 | 0.23 | 0.72 | 0.64 | 0.62 |
| Control Delay | 95.4 | 49.6 | 30.1 | 99.7 | 67.0 | 33.4 | 80.6 | 66.6 | 28.4 | 93.6 | 74.2 | 36.8 |
| 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 | 95.4 | 49.6 | 30.1 | 99.7 | 67.0 | 33.4 | 80.6 | 66.6 | 28.4 | 93.6 | 74.2 | 36.8 |
| Queue Length 50th (ft) | 182 | 633 | 122 | 52 | 661 | 62 | 409 | 496 | 52 | 207 | 244 | 112 |
| Queue Length 95th (ft) | 209 | 525 | 129 | 104 | 820 | 109 | 480 | 521 | 90 | 339 | 352 | 246 |
| Internal Link Dist (ft) | | 1752 | | | 1465 | | | 949 | | | 1376 | |
| Turn Bay Length (ft) | 150 | | 60 | 240 | | 80 | 250 | | 200 | 250 | | 130 |
| Base Capacity (vph) | 272 | 1033 | 739 | 129 | 905 | 770 | 575 | 1295 | 606 | 307 | 760 | 445 |
| 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 | 0.59 | 0.25 | 0.34 | 0.65 | 0.12 | 0.62 | 0.64 | 0.19 | 0.58 | 0.54 | 0.55 |

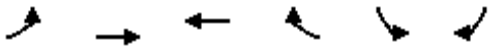
Intersection Summary



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 25 | 281 | 4 | 11 | 552 | 189 | 0 | 0 | 0 | 247 | 22 | 32 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Frt | | 1.00 | | | 0.97 | | | | | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | | | 1.00 | | | | | | 0.96 | 1.00 |
| Satd. Flow (prot) | | 1782 | | | 1730 | | | | | | 1781 | 1583 |
| Flt Permitted | | 0.91 | | | 0.99 | | | | | | 0.96 | 1.00 |
| Satd. Flow (perm) | | 1626 | | | 1721 | | | | | | 1781 | 1583 |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.85 | 0.85 | 0.85 | 0.92 | 0.92 | 0.92 | 0.72 | 0.72 | 0.72 |
| Adj. Flow (vph) | 30 | 339 | 5 | 13 | 649 | 222 | 0 | 0 | 0 | 343 | 31 | 44 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| Lane Group Flow (vph) | 0 | 373 | 0 | 0 | 867 | 0 | 0 | 0 | 0 | 0 | 374 | 12 |
| Heavy Vehicles (%) | 6% | 6% | 6% | 6% | 6% | 6% | 2% | 2% | 2% | 2% | 2% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | | | | Split | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | 2 | 2 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 2 |
| Actuated Green, G (s) | | 34.9 | | | 34.9 | | | | | | 17.4 | 17.4 |
| Effective Green, g (s) | | 34.9 | | | 34.9 | | | | | | 17.4 | 17.4 |
| Actuated g/C Ratio | | 0.56 | | | 0.56 | | | | | | 0.28 | 0.28 |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 911 | | | 964 | | | | | | 497 | 442 |
| v/s Ratio Prot | | | | | | | | | | | c0.21 | |
| v/s Ratio Perm | | 0.23 | | | c0.50 | | | | | | | 0.01 |
| v/c Ratio | | 0.41 | | | 0.90 | | | | | | 0.75 | 0.03 |
| Uniform Delay, d1 | | 7.8 | | | 12.1 | | | | | | 20.5 | 16.3 |
| Progression Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 0.3 | | | 11.0 | | | | | | 6.4 | 0.0 |
| Delay (s) | | 8.1 | | | 23.2 | | | | | | 26.8 | 16.3 |
| Level of Service | | A | | | C | | | | | | C | B |
| Approach Delay (s) | | 8.1 | | | 23.2 | | | 0.0 | | | 25.7 | |
| Approach LOS | | A | | | C | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 20.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 62.3 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 66.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

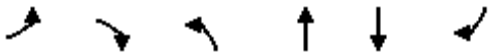
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 4 | 53 | 286 | 25 | 183 | 29 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.79 | 0.79 | 0.88 | 0.88 | 0.78 | 0.78 |
| Hourly flow rate (vph) | 5 | 67 | 325 | 28 | 235 | 37 |
| Pedestrians | | | 1 | | 1 | |
| Lane Width (ft) | | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | | | 4.0 | | 4.0 | |
| Percent Blockage | | | 0 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 354 | | | | 418 | 340 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 354 | | | | 418 | 340 |
| tC, single (s) | 4.3 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.4 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 60 | 95 |
| cM capacity (veh/h) | 1096 | | | | 589 | 704 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 72 | 353 | 272 |
| Volume Left | 5 | 0 | 235 |
| Volume Right | 0 | 28 | 37 |
| cSH | 1096 | 1700 | 603 |
| Volume to Capacity | 0.00 | 0.21 | 0.45 |
| Queue Length 95th (ft) | 0 | 0 | 58 |
| Control Delay (s) | 0.6 | 0.0 | 15.8 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.6 | 0.0 | 15.8 |
| Approach LOS | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 6.2 | |
| Intersection Capacity Utilization | | 35.1% | ICU Level of Service A |
| Analysis Period (min) | | 15 | |



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 35 | 11 | 30 | 951 | 442 | 87 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1583 | 1417 | 1736 | 1827 | 1769 | |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1583 | 1417 | 1736 | 1827 | 1769 | |
| Peak-hour factor, PHF | 0.51 | 0.51 | 0.89 | 0.89 | 0.92 | 0.92 |
| Adj. Flow (vph) | 69 | 22 | 34 | 1069 | 480 | 95 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 5 | 0 |
| Lane Group Flow (vph) | 69 | 3 | 34 | 1069 | 570 | 0 |
| Heavy Vehicles (%) | 14% | 14% | 4% | 4% | 5% | 5% |
| Turn Type | NA | Perm | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 7.0 | 7.0 | 2.8 | 52.9 | 45.1 | |
| Effective Green, g (s) | 9.0 | 8.0 | 4.8 | 54.9 | 47.1 | |
| Actuated g/C Ratio | 0.13 | 0.11 | 0.07 | 0.79 | 0.67 | |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 204 | 162 | 119 | 1435 | 1192 | |
| v/s Ratio Prot | c0.04 | | 0.02 | c0.59 | 0.32 | |
| v/s Ratio Perm | | 0.00 | | | | |
| v/c Ratio | 0.34 | 0.02 | 0.29 | 0.74 | 0.48 | |
| Uniform Delay, d1 | 27.7 | 27.5 | 30.9 | 3.9 | 5.5 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.0 | 0.0 | 1.3 | 2.1 | 0.3 | |
| Delay (s) | 28.7 | 27.5 | 32.2 | 6.0 | 5.8 | |
| Level of Service | C | C | C | A | A | |
| Approach Delay (s) | 28.4 | | | 6.8 | 5.8 | |
| Approach LOS | C | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 7.6 | HCM Level of Service | A |
| HCM Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 69.9 | Sum of lost time (s) | 6.0 |
| Intersection Capacity Utilization | 60.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

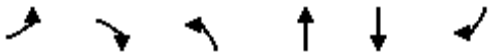
c Critical Lane Group

| Lane Group | EBL | EBR | NBL | NBT | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 69 | 22 | 34 | 1069 | 575 |
| v/c Ratio | 0.25 | 0.09 | 0.13 | 0.73 | 0.44 |
| Control Delay | 31.4 | 14.6 | 32.2 | 8.7 | 7.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.4 | 14.6 | 32.2 | 8.7 | 7.9 |
| Queue Length 50th (ft) | 26 | 0 | 13 | 191 | 60 |
| Queue Length 95th (ft) | 41 | 7 | 46 | 411 | 253 |
| Internal Link Dist (ft) | 642 | | | 1901 | 1624 |
| Turn Bay Length (ft) | 140 | | 300 | | |
| Base Capacity (vph) | 617 | 542 | 353 | 1741 | 1455 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.11 | 0.04 | 0.10 | 0.61 | 0.40 |

Intersection Summary

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 834 | 436 | 75 | 715 | 493 | 301 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1787 | 1599 | 1787 | 3574 | 3539 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1787 | 1599 | 1787 | 3574 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.81 | 0.81 | 0.83 | 0.83 | 0.87 | 0.87 |
| Adj. Flow (vph) | 1030 | 538 | 90 | 861 | 567 | 346 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 210 |
| Lane Group Flow (vph) | 1030 | 538 | 90 | 861 | 567 | 136 |
| Confl. Peds. (#/hr) | 1 | | | | | |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% | 2% |
| Turn Type | NA | custom | Prot | NA | NA | Perm |
| Protected Phases | 4 | 4 | 1 | 6 | 2 | |
| Permitted Phases | | 6 | | | | 2 |
| Actuated Green, G (s) | 89.0 | 128.8 | 9.6 | 39.8 | 25.2 | 25.2 |
| Effective Green, g (s) | 89.0 | 128.8 | 9.6 | 39.8 | 25.2 | 25.2 |
| Actuated g/C Ratio | 0.64 | 0.93 | 0.07 | 0.29 | 0.18 | 0.18 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1146 | 1599 | 124 | 1025 | 643 | 287 |
| v/s Ratio Prot | c0.58 | 0.22 | 0.05 | c0.24 | 0.16 | |
| v/s Ratio Perm | | 0.12 | | | | 0.09 |
| v/c Ratio | 0.90 | 0.34 | 0.73 | 0.84 | 0.88 | 0.47 |
| Uniform Delay, d1 | 21.1 | 0.5 | 63.3 | 46.5 | 55.3 | 50.9 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 11.2 | 0.1 | 18.9 | 6.2 | 13.5 | 1.2 |
| Delay (s) | 32.3 | 0.6 | 82.2 | 52.7 | 68.8 | 52.1 |
| Level of Service | C | A | F | D | E | D |
| Approach Delay (s) | 21.4 | | | 55.5 | 62.5 | |
| Approach LOS | C | | | E | E | |

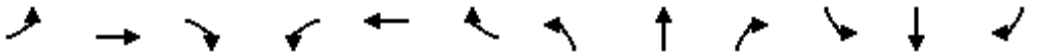
| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 41.8 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.88 | | |
| Actuated Cycle Length (s) | 138.8 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 76.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1030 | 538 | 90 | 861 | 567 | 346 |
| v/c Ratio | 0.90 | 0.34 | 0.73 | 0.84 | 0.88 | 0.69 |
| Control Delay | 33.6 | 0.6 | 94.8 | 55.1 | 71.5 | 22.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.6 | 0.6 | 94.8 | 55.1 | 71.5 | 22.3 |
| Queue Length 50th (ft) | 760 | 0 | 82 | 385 | 266 | 72 |
| Queue Length 95th (ft) | 799 | 0 | #144 | 420 | #328 | 171 |
| Internal Link Dist (ft) | 1138 | | | 1376 | 2153 | |
| Turn Bay Length (ft) | | | 150 | | | 150 |
| Base Capacity (vph) | 1146 | 1599 | 129 | 1056 | 663 | 505 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.90 | 0.34 | 0.70 | 0.82 | 0.86 | 0.69 |

Intersection Summary

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



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 3 | 1349 | 205 | 582 | 827 | 6 | 302 | 6 | 1241 | 11 | 8 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | | 1.00 | 0.99 | | 1.00 | |
| Flpb, ped/bikes | 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 | | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | 1770 | 3539 | 1564 | 1787 | 3571 | | | 1793 | 1579 | | 1688 | |
| Flt Permitted | 0.33 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.72 | 1.00 | | 0.56 | |
| Satd. Flow (perm) | 614 | 3539 | 1564 | 1787 | 3571 | | | 1348 | 1579 | | 980 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.97 | 0.97 | 0.97 | 0.94 | 0.94 | 0.94 | 0.69 | 0.69 | 0.69 |
| Adj. Flow (vph) | 3 | 1435 | 218 | 600 | 853 | 6 | 321 | 6 | 1320 | 16 | 12 | 1 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 3 | 1435 | 218 | 600 | 859 | 0 | 0 | 327 | 1320 | 0 | 28 | 0 |
| Confl. Peds. (#/hr) | | | 1 | | | | | | 1 | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 1% | 1% | 1% | 1% | 9% | 9% | 9% |
| Turn Type | Perm | NA | Free | Prot | NA | | Perm | NA | Free | Perm | NA | |
| Protected Phases | | 6 | | 5 | 2 | | | 8 | | | 4 | |
| Permitted Phases | 6 | | Free | | | | 8 | | Free | 4 | | |
| Actuated Green, G (s) | 83.0 | 83.0 | 210.0 | 66.0 | 154.0 | | | 46.0 | 210.0 | | 46.0 | |
| Effective Green, g (s) | 85.0 | 85.0 | 210.0 | 68.0 | 156.0 | | | 48.0 | 210.0 | | 48.0 | |
| Actuated g/C Ratio | 0.40 | 0.40 | 1.00 | 0.32 | 0.74 | | | 0.23 | 1.00 | | 0.23 | |
| Clearance Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 249 | 1432 | 1564 | 579 | 2653 | | | 308 | 1579 | | 224 | |
| v/s Ratio Prot | | c0.41 | | c0.34 | 0.24 | | | | | | | |
| v/s Ratio Perm | 0.00 | | 0.14 | | | | | c0.24 | 0.84 | | 0.03 | |
| v/c Ratio | 0.01 | 1.00 | 0.14 | 1.04 | 0.32 | | | 1.06 | 0.84 | | 0.13 | |
| Uniform Delay, d1 | 37.4 | 62.5 | 0.0 | 71.0 | 9.1 | | | 81.0 | 0.0 | | 64.3 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.0 | 24.3 | 0.2 | 47.1 | 0.1 | | | 68.5 | 5.4 | | 0.3 | |
| Delay (s) | 37.4 | 86.8 | 0.2 | 118.1 | 9.2 | | | 149.5 | 5.4 | | 64.6 | |
| Level of Service | D | F | A | F | A | | | F | A | | E | |
| Approach Delay (s) | | 75.3 | | | 54.0 | | | 34.0 | | | 64.6 | |
| Approach LOS | | E | | | D | | | C | | | E | |

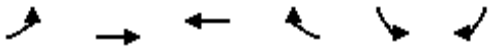
| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 54.6 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 1.03 | | |
| Actuated Cycle Length (s) | 210.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 103.2% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | NBT | NBR | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 3 | 1435 | 218 | 600 | 859 | 327 | 1320 | 29 |
| v/c Ratio | 0.01 | 1.00 | 0.14 | 1.04 | 0.32 | 1.06 | 0.84 | 0.13 |
| Control Delay | 37.7 | 85.2 | 0.2 | 113.5 | 9.5 | 141.5 | 5.4 | 64.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.7 | 85.2 | 0.2 | 113.5 | 9.5 | 141.5 | 5.4 | 64.7 |
| Queue Length 50th (ft) | 3 | ~1053 | 0 | ~889 | 197 | ~495 | 0 | 31 |
| Queue Length 95th (ft) | 12 | #1216 | 0 | #1147 | 227 | #718 | 0 | 51 |
| Internal Link Dist (ft) | | 1998 | | | 2306 | 2153 | | 237 |
| Turn Bay Length (ft) | 150 | | 200 | 150 | | | | |
| Base Capacity (vph) | 249 | 1432 | 1564 | 579 | 2653 | 308 | 1579 | 225 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.01 | 1.00 | 0.14 | 1.04 | 0.32 | 1.06 | 0.84 | 0.13 |

Intersection Summary

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

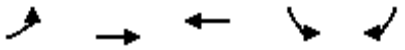
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 33 | 912 | 408 | 140 | 155 | 40 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.97 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 1787 | 1881 | 1816 | | 1770 | 1583 |
| Flt Permitted | 0.26 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | 491 | 1881 | 1816 | | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.90 | 0.90 | 0.87 | 0.87 |
| Adj. Flow (vph) | 36 | 991 | 453 | 156 | 178 | 46 |
| RTOR Reduction (vph) | 0 | 0 | 13 | 0 | 0 | 37 |
| Lane Group Flow (vph) | 36 | 991 | 596 | 0 | 178 | 9 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% | 2% |
| Turn Type | pm+pt | NA | NA | | NA | Perm |
| Protected Phases | 7 | 4 | 8 | | 2 | |
| Permitted Phases | 4 | | | | | 2 |
| Actuated Green, G (s) | 38.9 | 38.9 | 31.6 | | 11.2 | 11.2 |
| Effective Green, g (s) | 38.9 | 38.9 | 31.6 | | 11.2 | 11.2 |
| Actuated g/C Ratio | 0.65 | 0.65 | 0.53 | | 0.19 | 0.19 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 367 | 1217 | 955 | | 330 | 295 |
| v/s Ratio Prot | 0.00 | c0.53 | 0.33 | | c0.10 | |
| v/s Ratio Perm | 0.06 | | | | | 0.01 |
| v/c Ratio | 0.10 | 0.81 | 0.62 | | 0.54 | 0.03 |
| Uniform Delay, d1 | 5.7 | 7.9 | 10.1 | | 22.1 | 20.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.1 | 4.3 | 1.3 | | 1.7 | 0.0 |
| Delay (s) | 5.8 | 12.2 | 11.3 | | 23.8 | 20.0 |
| Level of Service | A | B | B | | C | C |
| Approach Delay (s) | | 12.0 | 11.3 | | 23.0 | |
| Approach LOS | | B | B | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 13.1 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 60.1 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 64.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

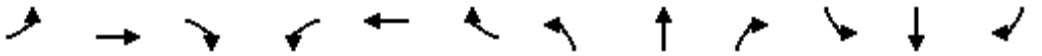
c Critical Lane Group



| Lane Group | EBL | EBT | WBT | SBL | SBR |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 36 | 991 | 609 | 178 | 46 |
| v/c Ratio | 0.08 | 0.84 | 0.60 | 0.51 | 0.13 |
| Control Delay | 5.1 | 18.1 | 14.4 | 27.2 | 8.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 5.1 | 18.1 | 14.4 | 27.2 | 8.0 |
| Queue Length 50th (ft) | 4 | 222 | 91 | 59 | 0 |
| Queue Length 95th (ft) | 14 | #571 | #361 | 107 | 21 |
| Internal Link Dist (ft) | | 1199 | 1752 | 1508 | |
| Turn Bay Length (ft) | 100 | | | | 50 |
| Base Capacity (vph) | 539 | 1311 | 1016 | 664 | 623 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.07 | 0.76 | 0.60 | 0.27 | 0.07 |

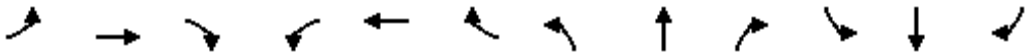
Intersection Summary

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



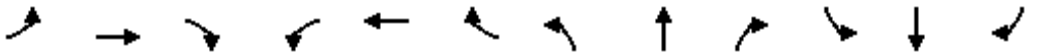
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 234 | 278 | 387 | 166 | 247 | 105 | 98 | 452 | 29 | 68 | 765 | 97 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| 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 | 1.00 |
| 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 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1554 | 1787 | 1881 | 1599 | 1787 | 3574 | 1599 | 1787 | 3574 | 1599 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1770 | 1863 | 1554 | 1787 | 1881 | 1599 | 1787 | 3574 | 1599 | 1787 | 3574 | 1599 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.82 | 0.82 | 0.82 | 0.83 | 0.83 | 0.83 | 0.76 | 0.76 | 0.76 |
| Adj. Flow (vph) | 257 | 305 | 425 | 202 | 301 | 128 | 118 | 545 | 35 | 89 | 1007 | 128 |
| RTOR Reduction (vph) | 0 | 0 | 85 | 0 | 0 | 32 | 0 | 0 | 18 | 0 | 0 | 25 |
| Lane Group Flow (vph) | 257 | 305 | 340 | 202 | 301 | 96 | 118 | 545 | 17 | 89 | 1007 | 103 |
| Confl. Peds. (#/hr) | | | 3 | | | | | | | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | | | 4 | | | 8 | | | 6 | | | 2 |
| Actuated Green, G (s) | 29.9 | 42.6 | 42.6 | 24.5 | 37.2 | 37.2 | 16.3 | 56.5 | 56.5 | 13.2 | 53.4 | 53.4 |
| Effective Green, g (s) | 31.9 | 44.6 | 43.6 | 26.5 | 39.2 | 38.2 | 18.3 | 58.5 | 57.5 | 15.2 | 55.4 | 54.4 |
| Actuated g/C Ratio | 0.20 | 0.28 | 0.28 | 0.17 | 0.25 | 0.24 | 0.12 | 0.37 | 0.37 | 0.10 | 0.35 | 0.35 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 360 | 530 | 432 | 302 | 470 | 390 | 209 | 1333 | 586 | 173 | 1263 | 555 |
| v/s Ratio Prot | c0.15 | 0.16 | | 0.11 | 0.16 | | c0.07 | 0.15 | | 0.05 | c0.28 | |
| v/s Ratio Perm | | | c0.22 | | | 0.06 | | | 0.01 | | | 0.06 |
| v/c Ratio | 0.71 | 0.58 | 0.79 | 0.67 | 0.64 | 0.25 | 0.56 | 0.41 | 0.03 | 0.51 | 0.80 | 0.18 |
| Uniform Delay, d1 | 58.2 | 48.0 | 52.3 | 61.0 | 52.5 | 47.7 | 65.5 | 36.4 | 31.8 | 67.3 | 45.6 | 35.7 |
| 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 | 6.6 | 1.5 | 9.1 | 5.5 | 3.0 | 0.3 | 3.5 | 0.2 | 0.0 | 2.6 | 3.6 | 0.2 |
| Delay (s) | 64.8 | 49.5 | 61.4 | 66.6 | 55.5 | 48.1 | 69.0 | 36.6 | 31.8 | 69.9 | 49.2 | 35.9 |
| Level of Service | E | D | E | E | E | D | E | D | C | E | D | D |
| Approach Delay (s) | | 58.6 | | | 57.5 | | | 41.8 | | | 49.3 | |
| Approach LOS | | E | | | E | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 51.9 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 156.8 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 65.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



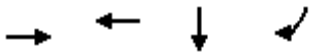
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 257 | 305 | 425 | 202 | 301 | 128 | 118 | 545 | 35 | 89 | 1007 | 128 |
| v/c Ratio | 0.72 | 0.58 | 0.83 | 0.67 | 0.64 | 0.31 | 0.56 | 0.41 | 0.06 | 0.51 | 0.80 | 0.22 |
| Control Delay | 75.5 | 55.7 | 54.7 | 79.0 | 62.8 | 37.5 | 85.2 | 40.1 | 15.3 | 88.6 | 54.6 | 29.9 |
| 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 | 75.5 | 55.7 | 54.7 | 79.0 | 62.8 | 37.5 | 85.2 | 40.1 | 15.3 | 88.6 | 54.6 | 29.9 |
| Queue Length 50th (ft) | 252 | 273 | 313 | 199 | 282 | 72 | 118 | 221 | 4 | 89 | 496 | 64 |
| Queue Length 95th (ft) | 449 | 457 | 551 | 331 | 424 | 141 | 219 | 323 | 30 | 160 | 605 | 118 |
| Internal Link Dist (ft) | | 1752 | | | 1815 | | | 882 | | | 1376 | |
| Turn Bay Length (ft) | 150 | | 60 | 240 | | 80 | 250 | | 200 | 250 | | 130 |
| Base Capacity (vph) | 529 | 848 | 760 | 437 | 754 | 655 | 279 | 1869 | 839 | 218 | 1747 | 791 |
| 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 | 0.49 | 0.36 | 0.56 | 0.46 | 0.40 | 0.20 | 0.42 | 0.29 | 0.04 | 0.41 | 0.58 | 0.16 |

Intersection Summary



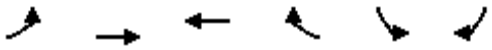
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 33 | 438 | 1 | 2 | 234 | 248 | 0 | 0 | 0 | 346 | 5 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Frt | | 1.00 | | | 0.93 | | | | | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | | | 1.00 | | | | | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1856 | | | 1733 | | | | | | 1793 | 1599 |
| Flt Permitted | | 0.94 | | | 1.00 | | | | | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1752 | | | 1731 | | | | | | 1793 | 1599 |
| Peak-hour factor, PHF | 0.75 | 0.75 | 0.75 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.85 | 0.85 | 0.85 |
| Adj. Flow (vph) | 44 | 584 | 1 | 2 | 254 | 270 | 0 | 0 | 0 | 407 | 6 | 22 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Lane Group Flow (vph) | 0 | 629 | 0 | 0 | 469 | 0 | 0 | 0 | 0 | 0 | 413 | 7 |
| Confl. Peds. (#/hr) | | | | | | | | | | 5 | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 1% |
| Turn Type | Perm | NA | | Perm | NA | | | | | Split | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | 2 | 2 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 2 |
| Actuated Green, G (s) | | 24.4 | | | 24.4 | | | | | | 17.6 | 17.6 |
| Effective Green, g (s) | | 24.4 | | | 24.4 | | | | | | 17.6 | 17.6 |
| Actuated g/C Ratio | | 0.47 | | | 0.47 | | | | | | 0.34 | 0.34 |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | | | | 5.0 | 5.0 |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | | | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 822 | | | 812 | | | | | | 607 | 541 |
| v/s Ratio Prot | | | | | | | | | | | c0.23 | |
| v/s Ratio Perm | | c0.36 | | | 0.27 | | | | | | | 0.00 |
| v/c Ratio | | 0.77 | | | 0.58 | | | | | | 0.68 | 0.01 |
| Uniform Delay, d1 | | 11.4 | | | 10.0 | | | | | | 14.8 | 11.4 |
| Progression Factor | | 1.00 | | | 1.00 | | | | | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 4.3 | | | 1.0 | | | | | | 3.1 | 0.0 |
| Delay (s) | | 15.7 | | | 11.0 | | | | | | 17.9 | 11.4 |
| Level of Service | | B | | | B | | | | | | B | B |
| Approach Delay (s) | | 15.7 | | | 11.0 | | | 0.0 | | | 17.6 | |
| Approach LOS | | B | | | B | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 14.7 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.73 | | |
| Actuated Cycle Length (s) | 52.0 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 75.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBT | WBT | SBT | SBR |
|---|---|---|---|---|
| Lane Group Flow (vph) | 629 | 526 | 413 | 22 |
| v/c Ratio | 0.78 | 0.61 | 0.69 | 0.04 |
| Control Delay | 20.2 | 12.2 | 23.5 | 7.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 20.2 | 12.2 | 23.5 | 7.2 |
| Queue Length 50th (ft) | 146 | 83 | 106 | 0 |
| Queue Length 95th (ft) | 232 | 202 | 218 | 12 |
| Internal Link Dist (ft) | 2460 | 1199 | 1378 | |
| Turn Bay Length (ft) | | | | 200 |
| Base Capacity (vph) | 1232 | 1249 | 922 | 833 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.51 | 0.42 | 0.45 | 0.03 |

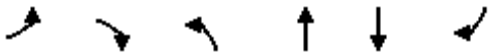
Intersection Summary



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 20 | 258 | 65 | 82 | 48 | 13 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.57 | 0.57 | 0.76 | 0.76 | 0.79 | 0.79 |
| Hourly flow rate (vph) | 35 | 453 | 86 | 108 | 61 | 16 |
| Pedestrians | | | 2 | | | |
| Lane Width (ft) | | | 12.0 | | | |
| Walking Speed (ft/s) | | | 4.0 | | | |
| Percent Blockage | | | 0 | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 193 | | | | 664 | 139 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 193 | | | | 664 | 139 |
| tC, single (s) | 4.2 | | | | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.6 | 3.4 |
| p0 queue free % | 97 | | | | 85 | 98 |
| cM capacity (veh/h) | 1345 | | | | 406 | 895 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 488 | 193 | 77 |
| Volume Left | 35 | 0 | 61 |
| Volume Right | 0 | 108 | 16 |
| cSH | 1345 | 1700 | 460 |
| Volume to Capacity | 0.03 | 0.11 | 0.17 |
| Queue Length 95th (ft) | 2 | 0 | 15 |
| Control Delay (s) | 0.8 | 0.0 | 14.4 |
| Lane LOS | A | | B |
| Approach Delay (s) | 0.8 | 0.0 | 14.4 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 2.0 | |
| Intersection Capacity Utilization | | 36.6% | ICU Level of Service A |
| Analysis Period (min) | | 15 | |



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 113 | 54 | 4 | 465 | 1295 | 23 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1787 | 1599 | 1752 | 1845 | 1877 | |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1787 | 1599 | 1752 | 1845 | 1877 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 116 | 56 | 5 | 534 | 1489 | 26 |
| RTOR Reduction (vph) | 0 | 50 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 116 | 6 | 5 | 534 | 1515 | 0 |
| Heavy Vehicles (%) | 1% | 1% | 3% | 3% | 1% | 1% |
| Turn Type | NA | Perm | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 13.2 | 13.2 | 1.3 | 103.6 | 97.3 | |
| Effective Green, g (s) | 15.2 | 14.2 | 3.3 | 105.6 | 99.3 | |
| Actuated g/C Ratio | 0.12 | 0.11 | 0.03 | 0.83 | 0.78 | |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 214 | 179 | 46 | 1537 | 1470 | |
| v/s Ratio Prot | c0.06 | | 0.00 | c0.29 | c0.81 | |
| v/s Ratio Perm | | 0.00 | | | | |
| v/c Ratio | 0.54 | 0.04 | 0.11 | 0.35 | 1.03 | |
| Uniform Delay, d1 | 52.5 | 50.2 | 60.3 | 2.5 | 13.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.8 | 0.1 | 1.0 | 0.1 | 31.6 | |
| Delay (s) | 55.3 | 50.3 | 61.4 | 2.6 | 45.4 | |
| Level of Service | E | D | E | A | D | |
| Approach Delay (s) | 53.7 | | | 3.2 | 45.4 | |
| Approach LOS | D | | | A | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 35.8 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.95 | | |
| Actuated Cycle Length (s) | 126.8 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 82.5% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

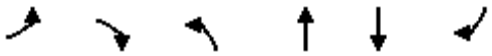
| Lane Group | EBL | EBR | NBL | NBT | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 116 | 56 | 5 | 534 | 1515 |
| v/c Ratio | 0.52 | 0.24 | 0.04 | 0.35 | 1.00 |
| Control Delay | 59.0 | 15.1 | 57.0 | 3.6 | 36.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 59.0 | 15.1 | 57.0 | 3.6 | 36.2 |
| Queue Length 50th (ft) | 85 | 0 | 4 | 78 | 822 |
| Queue Length 95th (ft) | 156 | 41 | 18 | 143 | #1718 |
| Internal Link Dist (ft) | 642 | | | 1901 | 1685 |
| Turn Bay Length (ft) | 140 | | 300 | | |
| Base Capacity (vph) | 336 | 333 | 172 | 1672 | 1519 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.35 | 0.17 | 0.03 | 0.32 | 1.00 |

Intersection Summary

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

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 834 | 436 | 75 | 764 | 493 | 301 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1787 | 1599 | 1787 | 3574 | 3539 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1787 | 1599 | 1787 | 3574 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.81 | 0.81 | 0.83 | 0.83 | 0.87 | 0.87 |
| Adj. Flow (vph) | 1030 | 538 | 90 | 920 | 567 | 346 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 210 |
| Lane Group Flow (vph) | 1030 | 538 | 90 | 920 | 567 | 136 |
| Confl. Peds. (#/hr) | 1 | | | | | |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% | 2% |
| Turn Type | NA | custom | Prot | NA | NA | Perm |
| Protected Phases | 4 | 4 | 1 | 6 | 2 | |
| Permitted Phases | | 6 | | | | 2 |
| Actuated Green, G (s) | 89.0 | 128.8 | 9.6 | 39.8 | 25.2 | 25.2 |
| Effective Green, g (s) | 89.0 | 128.8 | 9.6 | 39.8 | 25.2 | 25.2 |
| Actuated g/C Ratio | 0.64 | 0.93 | 0.07 | 0.29 | 0.18 | 0.18 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1146 | 1599 | 124 | 1025 | 643 | 287 |
| v/s Ratio Prot | c0.58 | 0.22 | 0.05 | c0.26 | 0.16 | |
| v/s Ratio Perm | | 0.12 | | | | 0.09 |
| v/c Ratio | 0.90 | 0.34 | 0.73 | 0.90 | 0.88 | 0.47 |
| Uniform Delay, d1 | 21.1 | 0.5 | 63.3 | 47.5 | 55.3 | 50.9 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 11.2 | 0.1 | 18.9 | 10.4 | 13.5 | 1.2 |
| Delay (s) | 32.3 | 0.6 | 82.2 | 57.9 | 68.8 | 52.1 |
| Level of Service | C | A | F | E | E | D |
| Approach Delay (s) | 21.4 | | | 60.1 | 62.5 | |
| Approach LOS | C | | | E | E | |

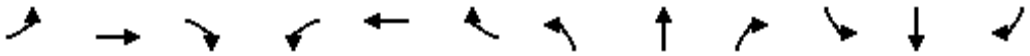
| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 43.3 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.90 | | |
| Actuated Cycle Length (s) | 138.8 | Sum of lost time (s) | 10.0 |
| Intersection Capacity Utilization | 76.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 1030 | 538 | 90 | 920 | 567 | 346 |
| v/c Ratio | 0.90 | 0.34 | 0.73 | 0.90 | 0.88 | 0.69 |
| Control Delay | 33.6 | 0.6 | 94.8 | 59.8 | 71.5 | 22.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.6 | 0.6 | 94.8 | 59.8 | 71.5 | 22.3 |
| Queue Length 50th (ft) | 760 | 0 | 82 | 421 | 266 | 72 |
| Queue Length 95th (ft) | 799 | 0 | #144 | 455 | #328 | 171 |
| Internal Link Dist (ft) | 1138 | | | 1376 | 2153 | |
| Turn Bay Length (ft) | | | 150 | | | 150 |
| Base Capacity (vph) | 1146 | 1599 | 129 | 1056 | 663 | 505 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.90 | 0.34 | 0.70 | 0.87 | 0.86 | 0.69 |

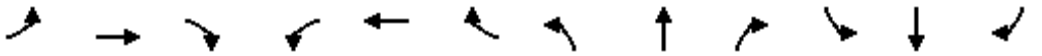
Intersection Summary

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



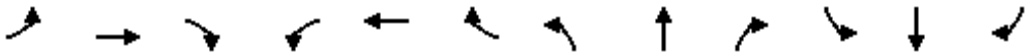
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 3 | 1349 | 205 | 582 | 827 | 6 | 312 | 6 | 1280 | 11 | 8 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | | | 1.00 | 0.99 | | 1.00 | |
| Flpb, ped/bikes | 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 | | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.95 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | 1770 | 3539 | 1564 | 1787 | 3571 | | | 1793 | 1579 | | 1688 | |
| Flt Permitted | 0.33 | 1.00 | 1.00 | 0.95 | 1.00 | | | 0.72 | 1.00 | | 0.57 | |
| Satd. Flow (perm) | 614 | 3539 | 1564 | 1787 | 3571 | | | 1348 | 1579 | | 991 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.97 | 0.97 | 0.97 | 0.94 | 0.94 | 0.94 | 0.69 | 0.69 | 0.69 |
| Adj. Flow (vph) | 3 | 1435 | 218 | 600 | 853 | 6 | 332 | 6 | 1362 | 16 | 12 | 1 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 3 | 1435 | 218 | 600 | 859 | 0 | 0 | 338 | 1362 | 0 | 28 | 0 |
| Confl. Peds. (#/hr) | | | 1 | | | | | | 1 | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 1% | 1% | 1% | 1% | 9% | 9% | 9% |
| Turn Type | Perm | NA | Free | Prot | NA | | Perm | NA | Free | Perm | NA | |
| Protected Phases | | 6 | | 5 | 2 | | | 8 | | | 4 | |
| Permitted Phases | 6 | | Free | | | | 8 | | Free | 4 | | |
| Actuated Green, G (s) | 81.0 | 81.0 | 210.0 | 66.0 | 152.0 | | | 48.0 | 210.0 | | 48.0 | |
| Effective Green, g (s) | 83.0 | 83.0 | 210.0 | 68.0 | 154.0 | | | 50.0 | 210.0 | | 50.0 | |
| Actuated g/C Ratio | 0.40 | 0.40 | 1.00 | 0.32 | 0.73 | | | 0.24 | 1.00 | | 0.24 | |
| Clearance Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 243 | 1399 | 1564 | 579 | 2619 | | | 321 | 1579 | | 236 | |
| v/s Ratio Prot | | c0.41 | | c0.34 | 0.24 | | | | | | | |
| v/s Ratio Perm | 0.00 | | 0.14 | | | | | c0.25 | 0.86 | | 0.03 | |
| v/c Ratio | 0.01 | 1.03 | 0.14 | 1.04 | 0.33 | | | 1.05 | 0.86 | | 0.12 | |
| Uniform Delay, d1 | 38.6 | 63.5 | 0.0 | 71.0 | 9.8 | | | 80.0 | 0.0 | | 62.7 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.0 | 30.8 | 0.2 | 47.1 | 0.1 | | | 64.8 | 6.5 | | 0.2 | |
| Delay (s) | 38.6 | 94.3 | 0.2 | 118.1 | 9.9 | | | 144.8 | 6.5 | | 63.0 | |
| Level of Service | D | F | A | F | A | | | F | A | | E | |
| Approach Delay (s) | | 81.8 | | | 54.4 | | | 34.0 | | | 63.0 | |
| Approach LOS | | F | | | D | | | C | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 56.7 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 1.04 | | |
| Actuated Cycle Length (s) | 210.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 103.8% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



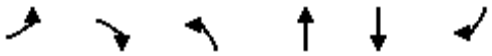
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 234 | 278 | 387 | 166 | 247 | 105 | 98 | 500 | 29 | 68 | 765 | 97 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| 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 | 1.00 |
| 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 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1554 | 1787 | 1881 | 1599 | 1787 | 3574 | 1599 | 1787 | 3574 | 1599 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1770 | 1863 | 1554 | 1787 | 1881 | 1599 | 1787 | 3574 | 1599 | 1787 | 3574 | 1599 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.82 | 0.82 | 0.82 | 0.83 | 0.83 | 0.83 | 0.76 | 0.76 | 0.76 |
| Adj. Flow (vph) | 257 | 305 | 425 | 202 | 301 | 128 | 118 | 602 | 35 | 89 | 1007 | 128 |
| RTOR Reduction (vph) | 0 | 0 | 85 | 0 | 0 | 32 | 0 | 0 | 17 | 0 | 0 | 25 |
| Lane Group Flow (vph) | 257 | 305 | 340 | 202 | 301 | 96 | 118 | 602 | 18 | 89 | 1007 | 103 |
| Confl. Peds. (#/hr) | | | 3 | | | | | | | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 1 | 6 | | 5 | 2 | |
| Permitted Phases | | | 4 | | | 8 | | | 6 | | | 2 |
| Actuated Green, G (s) | 29.9 | 42.6 | 42.6 | 24.5 | 37.2 | 37.2 | 16.3 | 56.5 | 56.5 | 13.2 | 53.4 | 53.4 |
| Effective Green, g (s) | 31.9 | 44.6 | 43.6 | 26.5 | 39.2 | 38.2 | 18.3 | 58.5 | 57.5 | 15.2 | 55.4 | 54.4 |
| Actuated g/C Ratio | 0.20 | 0.28 | 0.28 | 0.17 | 0.25 | 0.24 | 0.12 | 0.37 | 0.37 | 0.10 | 0.35 | 0.35 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 360 | 530 | 432 | 302 | 470 | 390 | 209 | 1333 | 586 | 173 | 1263 | 555 |
| v/s Ratio Prot | c0.15 | 0.16 | | 0.11 | 0.16 | | c0.07 | 0.17 | | 0.05 | c0.28 | |
| v/s Ratio Perm | | | c0.22 | | | 0.06 | | | 0.01 | | | 0.06 |
| v/c Ratio | 0.71 | 0.58 | 0.79 | 0.67 | 0.64 | 0.25 | 0.56 | 0.45 | 0.03 | 0.51 | 0.80 | 0.18 |
| Uniform Delay, d1 | 58.2 | 48.0 | 52.3 | 61.0 | 52.5 | 47.7 | 65.5 | 37.1 | 31.8 | 67.3 | 45.6 | 35.7 |
| 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 | 6.6 | 1.5 | 9.1 | 5.5 | 3.0 | 0.3 | 3.5 | 0.2 | 0.0 | 2.6 | 3.6 | 0.2 |
| Delay (s) | 64.8 | 49.5 | 61.4 | 66.6 | 55.5 | 48.1 | 69.0 | 37.3 | 31.8 | 69.9 | 49.2 | 35.9 |
| Level of Service | E | D | E | E | E | D | E | D | C | E | D | D |
| Approach Delay (s) | | 58.6 | | | 57.5 | | | 42.0 | | | 49.3 | |
| Approach LOS | | E | | | E | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 51.8 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 156.8 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 65.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group Flow (vph) | 257 | 305 | 425 | 202 | 301 | 128 | 118 | 602 | 35 | 89 | 1007 | 128 |
| v/c Ratio | 0.72 | 0.58 | 0.83 | 0.67 | 0.64 | 0.31 | 0.56 | 0.46 | 0.06 | 0.51 | 0.80 | 0.22 |
| Control Delay | 75.5 | 55.7 | 54.7 | 79.0 | 62.8 | 37.5 | 85.2 | 41.0 | 16.7 | 88.6 | 54.6 | 29.9 |
| 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 | 75.5 | 55.7 | 54.7 | 79.0 | 62.8 | 37.5 | 85.2 | 41.0 | 16.7 | 88.6 | 54.6 | 29.9 |
| Queue Length 50th (ft) | 252 | 273 | 313 | 199 | 282 | 72 | 118 | 248 | 5 | 89 | 496 | 64 |
| Queue Length 95th (ft) | 449 | 457 | 551 | 331 | 424 | 141 | 219 | 360 | 32 | 160 | 605 | 118 |
| Internal Link Dist (ft) | | 1752 | | | 1815 | | | 882 | | | 1376 | |
| Turn Bay Length (ft) | 150 | | 60 | 240 | | 80 | 250 | | 200 | 250 | | 130 |
| Base Capacity (vph) | 529 | 848 | 760 | 437 | 754 | 655 | 279 | 1869 | 838 | 218 | 1747 | 791 |
| 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 | 0.49 | 0.36 | 0.56 | 0.46 | 0.40 | 0.20 | 0.42 | 0.32 | 0.04 | 0.41 | 0.58 | 0.16 |

Intersection Summary



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 113 | 54 | 4 | 514 | 1295 | 23 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1787 | 1599 | 1752 | 1845 | 1877 | |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1787 | 1599 | 1752 | 1845 | 1877 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 116 | 56 | 5 | 591 | 1489 | 26 |
| RTOR Reduction (vph) | 0 | 50 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 116 | 6 | 5 | 591 | 1515 | 0 |
| Heavy Vehicles (%) | 1% | 1% | 3% | 3% | 1% | 1% |
| Turn Type | NA | Perm | Prot | NA | NA | |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 13.2 | 13.2 | 1.3 | 103.6 | 97.3 | |
| Effective Green, g (s) | 15.2 | 14.2 | 3.3 | 105.6 | 99.3 | |
| Actuated g/C Ratio | 0.12 | 0.11 | 0.03 | 0.83 | 0.78 | |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 214 | 179 | 46 | 1537 | 1470 | |
| v/s Ratio Prot | c0.06 | | 0.00 | c0.32 | c0.81 | |
| v/s Ratio Perm | | 0.00 | | | | |
| v/c Ratio | 0.54 | 0.04 | 0.11 | 0.38 | 1.03 | |
| Uniform Delay, d1 | 52.5 | 50.2 | 60.3 | 2.6 | 13.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.8 | 0.1 | 1.0 | 0.2 | 31.6 | |
| Delay (s) | 55.3 | 50.3 | 61.4 | 2.8 | 45.4 | |
| Level of Service | E | D | E | A | D | |
| Approach Delay (s) | 53.7 | | | 3.3 | 45.4 | |
| Approach LOS | D | | | A | D | |

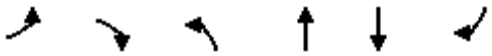
| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 35.0 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.95 | | |
| Actuated Cycle Length (s) | 126.8 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 82.5% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBR | NBL | NBT | SBT |
|---|---|---|---|---|---|
| Lane Group Flow (vph) | 116 | 56 | 5 | 591 | 1515 |
| v/c Ratio | 0.52 | 0.24 | 0.04 | 0.39 | 1.00 |
| Control Delay | 59.0 | 15.1 | 57.0 | 3.8 | 36.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 59.0 | 15.1 | 57.0 | 3.8 | 36.2 |
| Queue Length 50th (ft) | 85 | 0 | 4 | 90 | 822 |
| Queue Length 95th (ft) | 156 | 41 | 18 | 163 | #1718 |
| Internal Link Dist (ft) | 642 | | | 1901 | 1685 |
| Turn Bay Length (ft) | 140 | | 300 | | |
| Base Capacity (vph) | 336 | 333 | 172 | 1672 | 1519 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.35 | 0.17 | 0.03 | 0.35 | 1.00 |

Intersection Summary

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



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 49 | 49 | 0 | 469 | 1349 | 0 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 0.77 | 0.77 | 0.91 | 0.91 |
| Hourly flow rate (vph) | 49 | 49 | 0 | 609 | 1482 | 0 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 2092 | 1482 | 1482 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2092 | 1482 | 1482 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 16 | 68 | 100 | | | |
| cM capacity (veh/h) | 58 | 155 | 454 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 98 | 609 | 1482 |
| Volume Left | 49 | 0 | 0 |
| Volume Right | 49 | 0 | 0 |
| cSH | 85 | 454 | 1700 |
| Volume to Capacity | 1.15 | 0.00 | 0.87 |
| Queue Length 95th (ft) | 173 | 0 | 0 |
| Control Delay (s) | 234.5 | 0.0 | 0.0 |
| Lane LOS | F | | |
| Approach Delay (s) | 234.5 | 0.0 | 0.0 |
| Approach LOS | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 10.5 | | |
| Intersection Capacity Utilization | 91.9% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |