

WINGFIELD COMMONS  
TRAFFIC STUDY

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# WINGFIELD COMMONS

## TRAFFIC STUDY

### EXECUTIVE SUMMARY

The proposed Wingfield Commons development is located in the City of Sparks, Nevada. The project site is located directly east of the Golden Eagle Regional Park (GERP) generally south of Vista Boulevard and east of Homerun Drive. The project site is currently undeveloped land except for a few dwelling units that will be removed. The purpose of this study is to address the project's impact upon the adjacent street network. The Vista Boulevard/Homerun Drive/Scorpius Drive, Homerun Drive/Touchdown Drive, and Touchdown Drive/Project Access intersections have been identified for weekday and Saturday AM and PM peak hour capacity analysis for the existing (without GERP event), existing (with GERP event), existing plus project (without GERP event), existing plus project (with GERP event), 2040 base (with GERP event), and 2040 base plus project (with GERP event) scenarios.

The proposed Wingfield Commons development will consist of the construction of 450 single family dwelling units. Project access will be provided from a new proposed access roadway intersecting Touchdown Drive. Wingfield Commons is anticipated to generate 4,248 average daily trips, 333 AM peak hour trips, and 446 PM peak hour trips on a typical weekday and 4,293 average daily trips, 170 AM peak hour trips, and 419 PM peak hour trips on a typical Saturday.

Traffic generated by the Wingfield Commons development will have some impact on the adjacent street network. The following recommendations are made to mitigate project traffic impacts.

It is recommended that any required signing, striping, or traffic control improvements comply with City of Sparks requirements.

It is recommended that the Vista Boulevard/Homerun Drive/Scorpius Drive intersection be improved to include one exclusive left turn lane, one shared left turn-through lane, and one exclusive right turn lane at the south approach.

It is recommended that the existing right turn lane at the west approach of the Vista Boulevard/Homerun Drive/Scorpius Drive intersection be lengthened to provide a minimum of 465 feet of storage/deceleration length with a 180 foot taper in order to serve traffic volumes generated by a major event at the Golden Eagle Regional Park.

It is recommended that the traffic control at the Homerun Drive/Touchdown Drive intersection be modified to include stop sign control at the south and east approaches while the left turn and through movements at the north approach flow free. In addition, it is recommended that an exclusive left turn lane be provided at the north approach.

It is recommended that the Touchdown Drive/Project Access intersection be designed as a three-leg intersection with stop sign control at the east approach and contain an exclusive left turn lane at the north approach.

It is recommended that the project access roadway and the internal residential streets be designed to conform to City of Sparks standards.

It is recommended that connections be made from the proposed subdivision to the existing pedestrian/bicycle network within the Golden Eagle Regional Park.

It is recommended that the project developers provide a traffic circulation plan that discourages or prevents Golden Eagle Regional Park traffic from utilizing the project access road and internal residential streets.

## INTRODUCTION

### STUDY AREA

The proposed Wingfield Commons development is located in the City of Sparks, Nevada. The project site is located directly east of the Golden Eagle Regional Park (GERP) generally south of Vista Boulevard and east of Homerun Drive. Figure 1 shows the approximate location of the site. The purpose of this study is to address the project's impact upon the adjacent street network. The Vista Boulevard/Homerun Drive/Scorpius Drive, Homerun Drive/Touchdown Drive, and Touchdown Drive/Project Access intersections have been identified for weekday and Saturday AM and PM peak hour capacity analysis for the existing (without GERP event), existing (with GERP event), existing plus project (without GERP event), existing plus project (with GERP event), 2040 base (with GERP event), and 2040 base plus project (with GERP event) scenarios.

### EXISTING AND PROPOSED LAND USES

The project site is currently undeveloped land except for a few single family home that will be removed. Adjacent properties generally include the Golden Eagle Regional Park to the west and undeveloped land to the north, south, and east. The proposed Wingfield Commons development will consist of the construction of 450 single family dwelling units. Project access will be provided from a new proposed access road intersecting Touchdown Drive.

### EXISTING AND PROPOSED ROADWAYS AND INTERSECTIONS

Vista Boulevard is a four-lane roadway with two through lanes in each direction in the vicinity of the site. The speed limit is posted for 35 miles per hour. Roadway improvements include curb, gutter, and bike lanes on both sides of the street, a sidewalk on the north side of the street, and a raised center median with openings at major intersections.

Homerun Drive is a two-lane roadway with one through lane in each direction south of Vista Boulevard. The speed limit is posted for 25 miles per hour. Roadway improvements include paved and graded shoulders with white striped edgelines and a yellow striped centerline. Homerun Drive aligns with Scorpius Drive at the Vista Boulevard intersection.

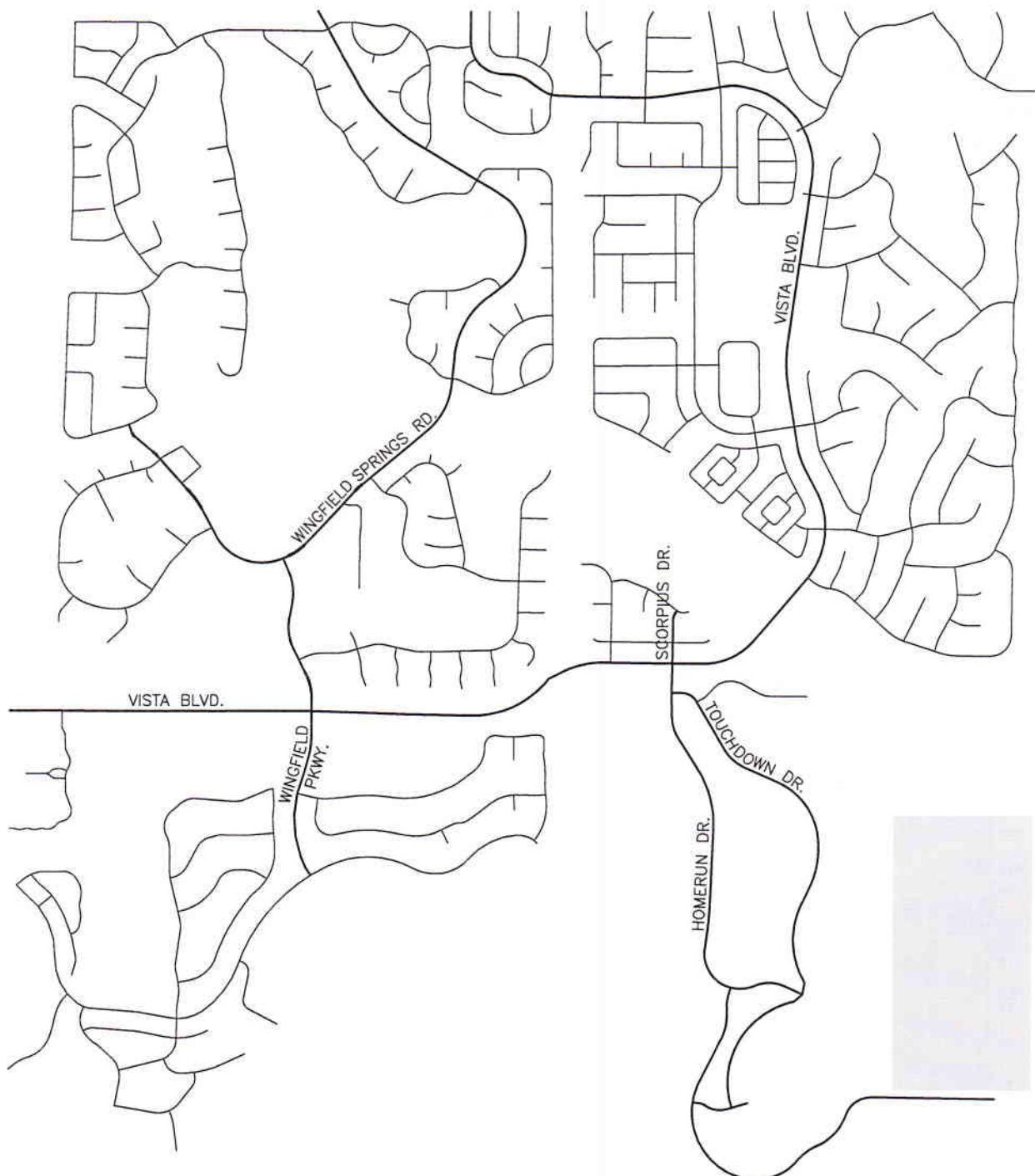
Scorpius Drive is a two-lane roadway with one through lane in each direction north of Vista Boulevard. The speed limit is not posted but assumed to be 25 miles per hour. Roadway improvements include curb, gutter, and sidewalk on both sides of the street. Scorpius Drive aligns with Homerun Drive at the Vista Boulevard intersection.

Touchdown Drive is a two-lane roadway with one through lane in each direction southeast of Homerun Drive. The speed limit is posted for 15 miles per hour. Roadway improvements include paved and graded shoulders with white striped edgelines and a yellow striped centerline.

LEGEND

 PROJECT SITE

NTS



WINGFIELD COMMONS  
VICINITY MAP  
FIGURE 1

The Vista Boulevard/Homerun Drive/Scorpius Drive intersection is a signalized four-leg intersection with protected phasing for the eastbound and westbound left turn movements. The north approach contains one shared left turn-through-right turn lane. The south approach contains one left turn lane and one shared through-right turn lane. The east approach contains one left turn lane, one through lane, and one shared through-right turn lane. The west approach contains one left turn lane, two through lanes, and one right turn lane.

The Homerun Drive/Touchdown Drive intersection is an unsignalized three-leg intersections with stop control at the east approach. The intersection contains one shared left turn-through lane at the north approach, one shared through-right turn lane at the south approach, and one shared left turn-right turn lane at the east approach.

The Touchdown Drive/Project Access intersection does not exist but will be constructed as an unsignalized three-leg intersections with stop control at the east approach. At a minimum, the intersection will be analyzed with one shared left turn-through lane at the north approach, one shared through-right turn lane at the south approach, and one shared left turn-right turn lane at the east approach. This new intersection will be located south of an existing access intersection that will be removed.

## TRIP GENERATION

In order to assess the magnitude of traffic impacts of the proposed project on the key intersections, trip generation rates and peak hours had to be determined. Trip generation was calculated based on rates obtained from the *10th Edition of ITE Trip Generation* (2017) for Land Use 210: Single Family Detached Housing. Trips generated by the project were calculated for the weekday peak hours occurring between 7:00 and 9:00 AM and 4:00 and 6:00 PM, which correspond to the peak hours of adjacent street traffic, and the Saturday peak hour of generator which is assumed to correspond to the afternoon peak hour of the Golden Eagle Regional Park. *ITE Trip Generation* does not contain rates for a Saturday AM peak hour. Existing counts on Vista Boulevard indicate that Saturday AM peak hour traffic volumes are approximately 51% of weekday AM peak hour traffic volumes. The AM peak hour trip generation for Saturday was therefore assumed to be 51% of the weekday AM peak hour trip generation. Table 1 shows a summary of the average daily traffic (ADT) volumes and peak hour volumes generated by the project for a weekday and Saturday. The trip generation worksheets are included in the Appendix.

TABLE I  
TRIP GENERATION

LAND USE	ADT	AM PEAK HOUR			PM PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Single Family Detached Housing (450 D.U.)							
Weekday	4,248	83	250	333	281	165	446
Saturday	4,293	42	128	170	226	193	419

## TRIP DISTRIBUTION AND ASSIGNMENT

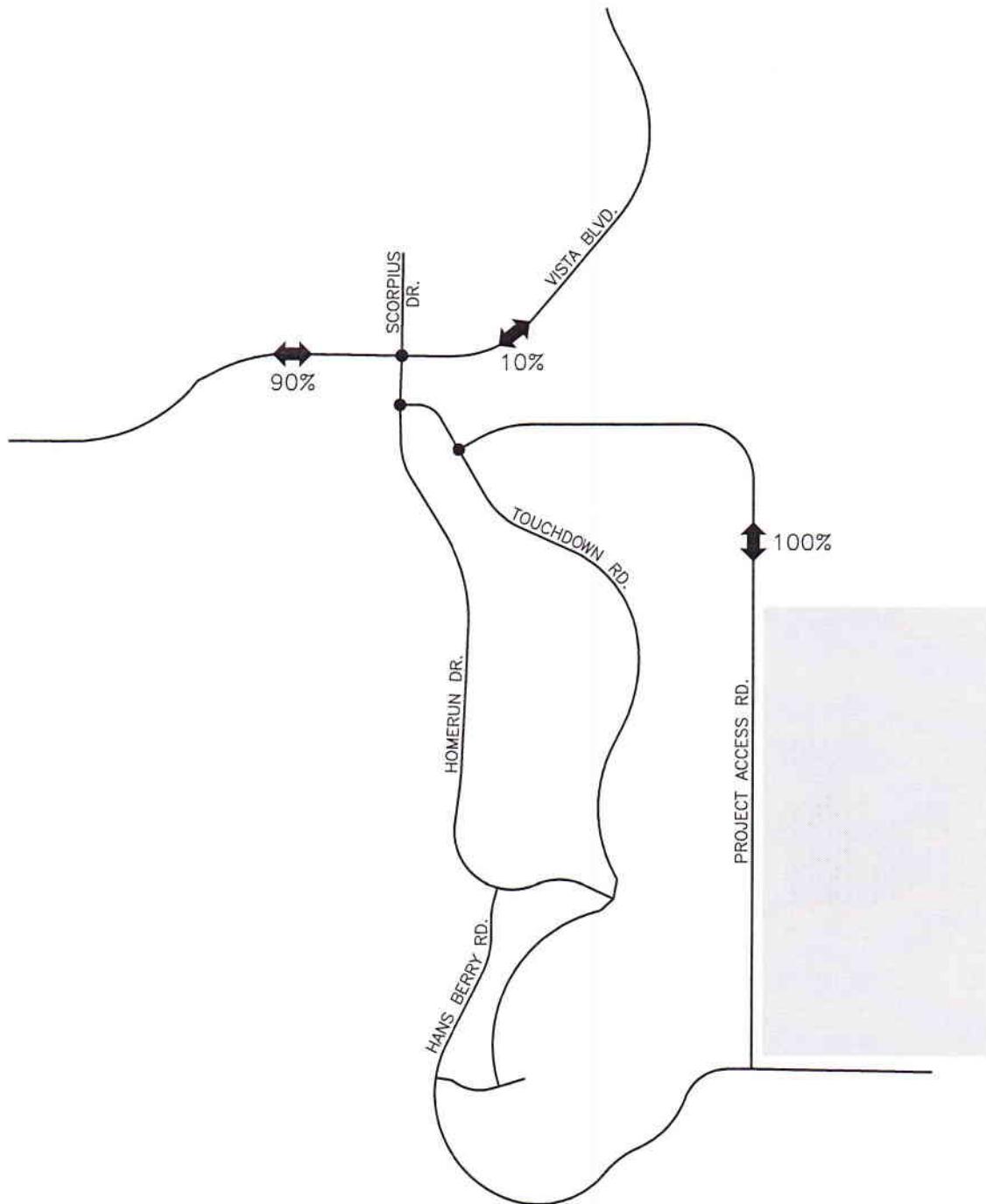
The distribution of the project trips to the key intersections was based on existing peak hour traffic patterns and the locations of attractions and productions in the area. The anticipated trip distribution is shown on Figure 2. The peak hour project trips shown in Table 1 were subsequently assigned to the key intersections based on the trip distribution. Figure 3 shows the project trip assignment at the key intersections during the weekday and Saturday AM and PM peak hours.

## EXISTING AND PROJECTED TRAFFIC VOLUMES

Figure 4A shows the existing peak hour volumes at the key intersections for the weekday AM, weekday PM, Saturday AM, and Saturday PM peak hour scenarios. The existing volumes were obtained from counts taken in February of 2018. The counts were adjusted to 100% of the annual average based on the requirement of City of Sparks staff. A major sporting event was not being held at the Golden Eagle Regional Park when the counts were conducted. Figure 4B shows the existing peak hour volumes (with GERP event) at the key intersections. The weekday AM and PM peak hour volumes were obtained by supplementing the existing volumes shown on Figure 4A with peak ingress and egress traffic volumes generated by a major event at the Golden Eagle Regional Park. The major event traffic volumes were obtained from City of Sparks Parks and Recreation staff. The Saturday AM and PM peak hour traffic volumes were obtained from counts conducted on April 28, 2018 and May 19, 2018 during GERP events identified by City of Sparks staff that included simultaneous baseball/softball/soccer games with high field utilization.

Figure 5A shows the existing plus project volumes at the key intersections for the weekday and Saturday AM and PM peak hours. The existing plus project volumes were obtained by adding the trip assignment volumes shown on Figure 3 to the existing volumes shown on Figure 4A. Again, these volumes do not include a major event at the Golden Eagle Regional Park. Figure 5B shows the existing plus project peak hour volumes (with GERP event) for the weekday and Saturday AM and PM peak hours. The existing plus project volumes (with GERP event) were obtained by adding the trip assignment volumes shown on Figure 3 to the existing traffic volumes (with GERP event) shown on Figure 4B. These volumes include a major event at the Golden Eagle Regional Park.

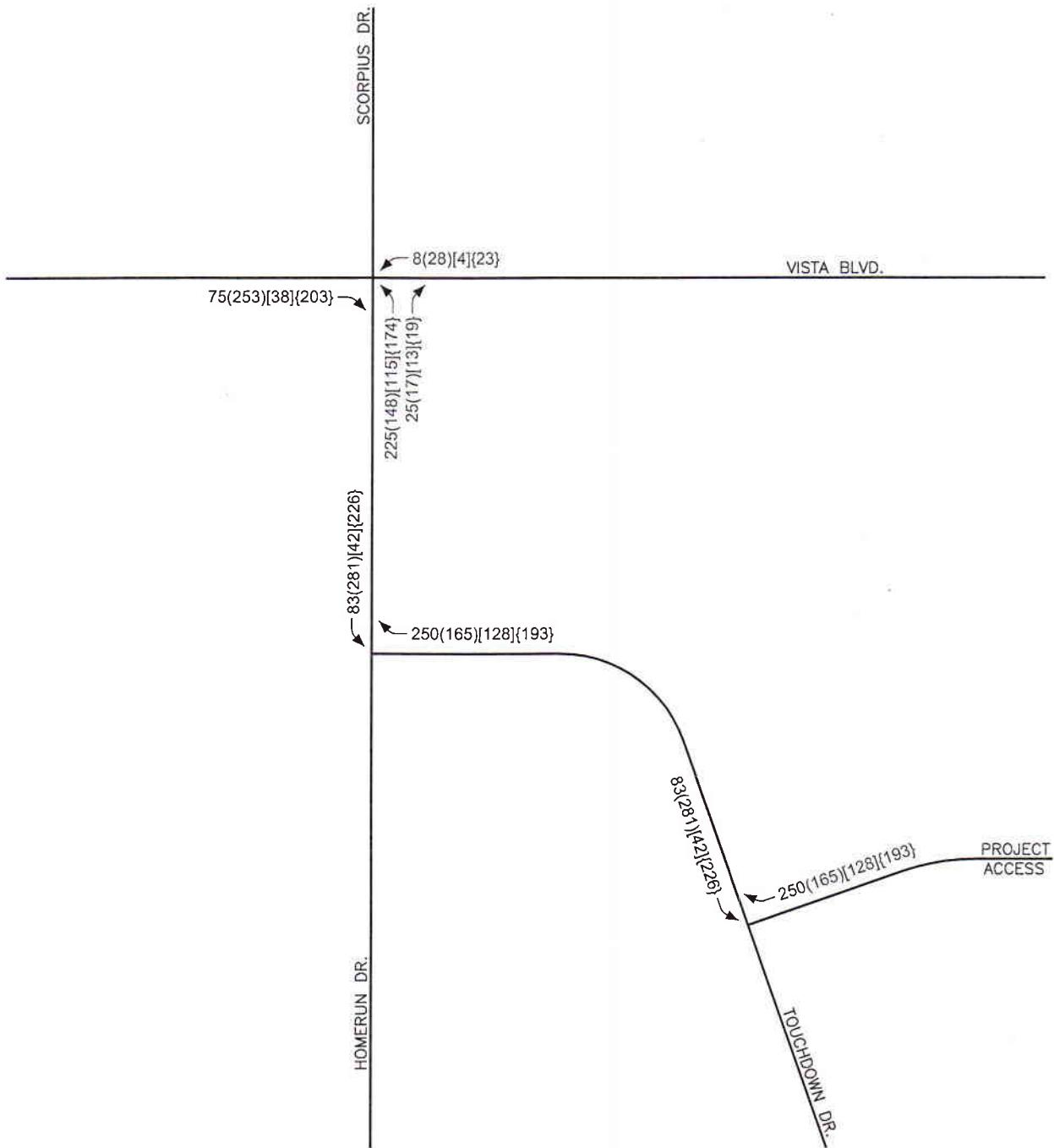
Figure 6 shows the 2040 base traffic volumes (with GERP event) for the weekday and Saturday AM and PM peak hours. The 2040 base traffic volumes were obtained by applying a 0.5% average annual growth rate to the existing Vista Boulevard traffic volumes. A 0.2% average annual growth rate was calculated based on 2015 and 2040 average daily traffic volumes obtained from the Regional Transportation Commission's traffic forecasting model. However, the 0.5% average annual growth rate was used in order to ensure conservative results. The 2040 base traffic volumes include a major event at the Golden Eagle Regional Park. Figure 7 shows the 2040 base plus project traffic volumes (with GERP event) for the weekday and Saturday AM and PM peak hours. The 2040 base plus project traffic volumes were obtained by adding the trip assignment volumes shown on Figure 3 to the 2040 base traffic volumes shown on Figure 6. The 2040 base plus project volumes include a major event at the Golden Eagle Regional Park.



WINGFIELD COMMONS  
TRIP DISTRIBUTION  
FIGURE 2

LEGEND

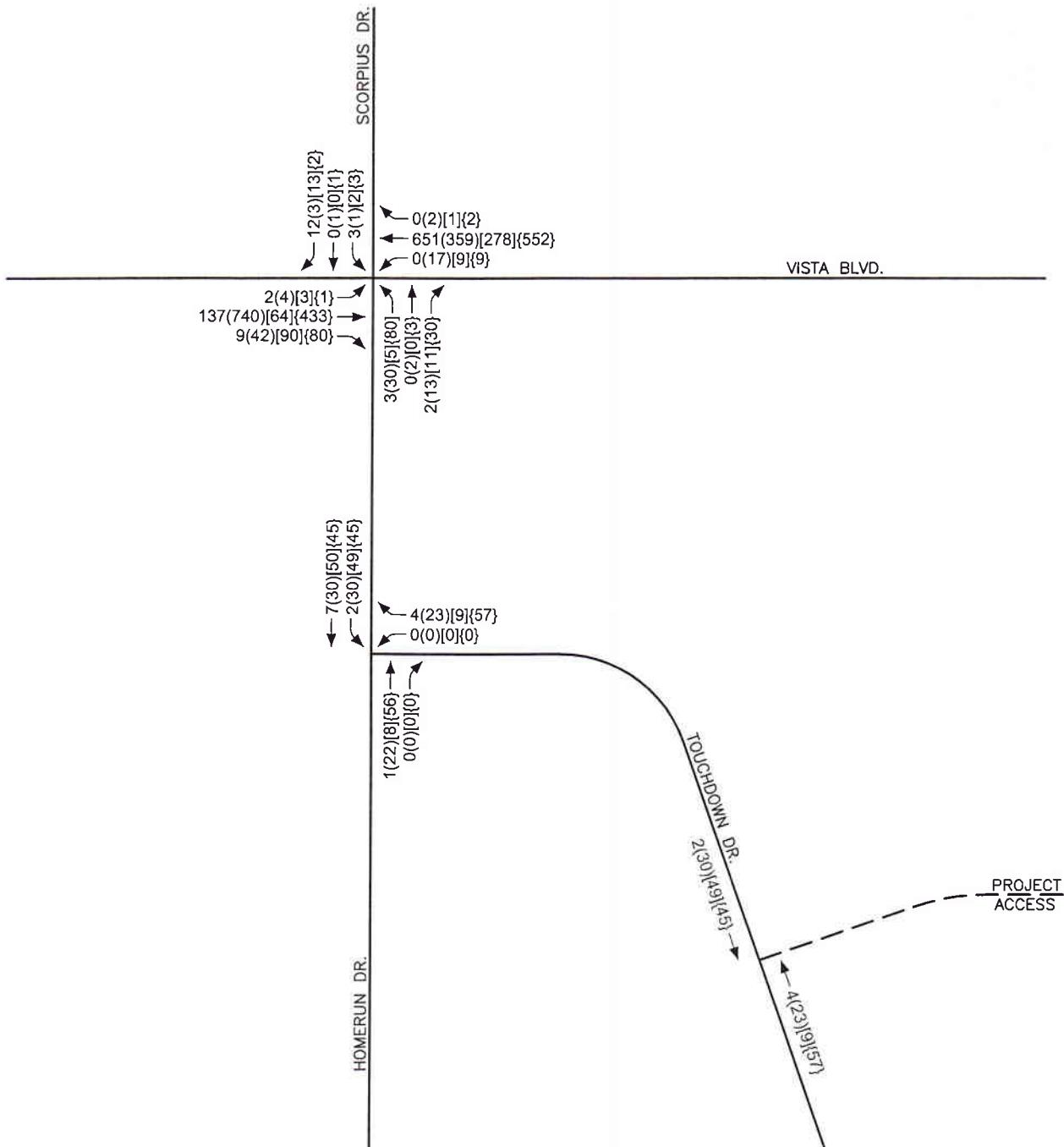
- WEEKDAY AM PEAK HOUR
- (-) WEEKDAY PM PEAK HOUR
- [ - ] SATURDAY AM PEAK HOUR
- { - } SATURDAY PM PEAK HOUR



WINGFIELD COMMONS  
TRIP ASSIGNMENT  
FIGURE 3

LEGEND

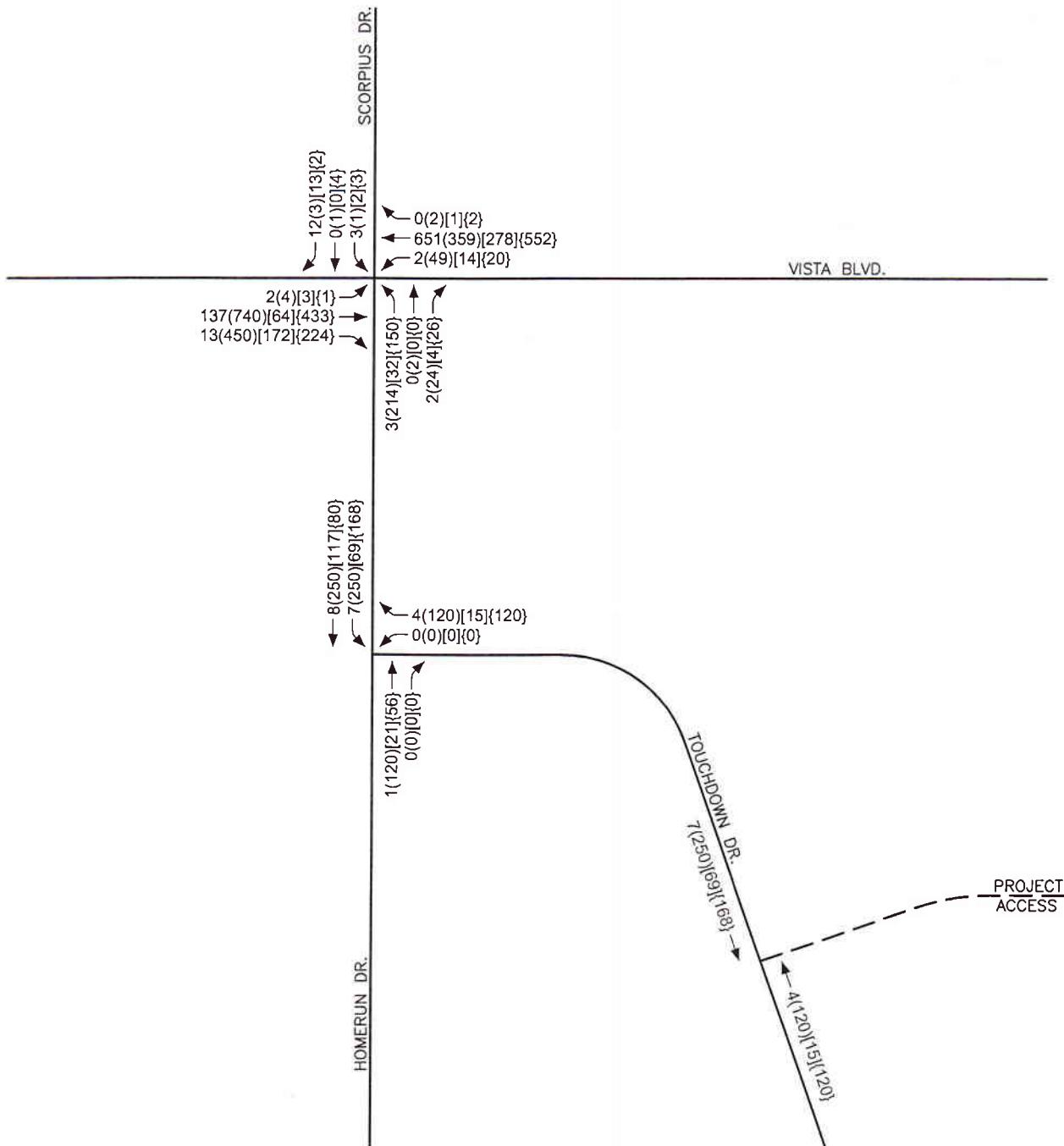
- WEEKDAY AM PEAK HOUR
- (-) WEEKDAY PM PEAK HOUR
- [--] SATURDAY AM PEAK HOUR
- {--} SATURDAY PM PEAK HOUR



**WINGFIELD COMMONS**  
**EXISTING TRAFFIC VOLUMES**  
**FIGURE 4A**

LEGEND

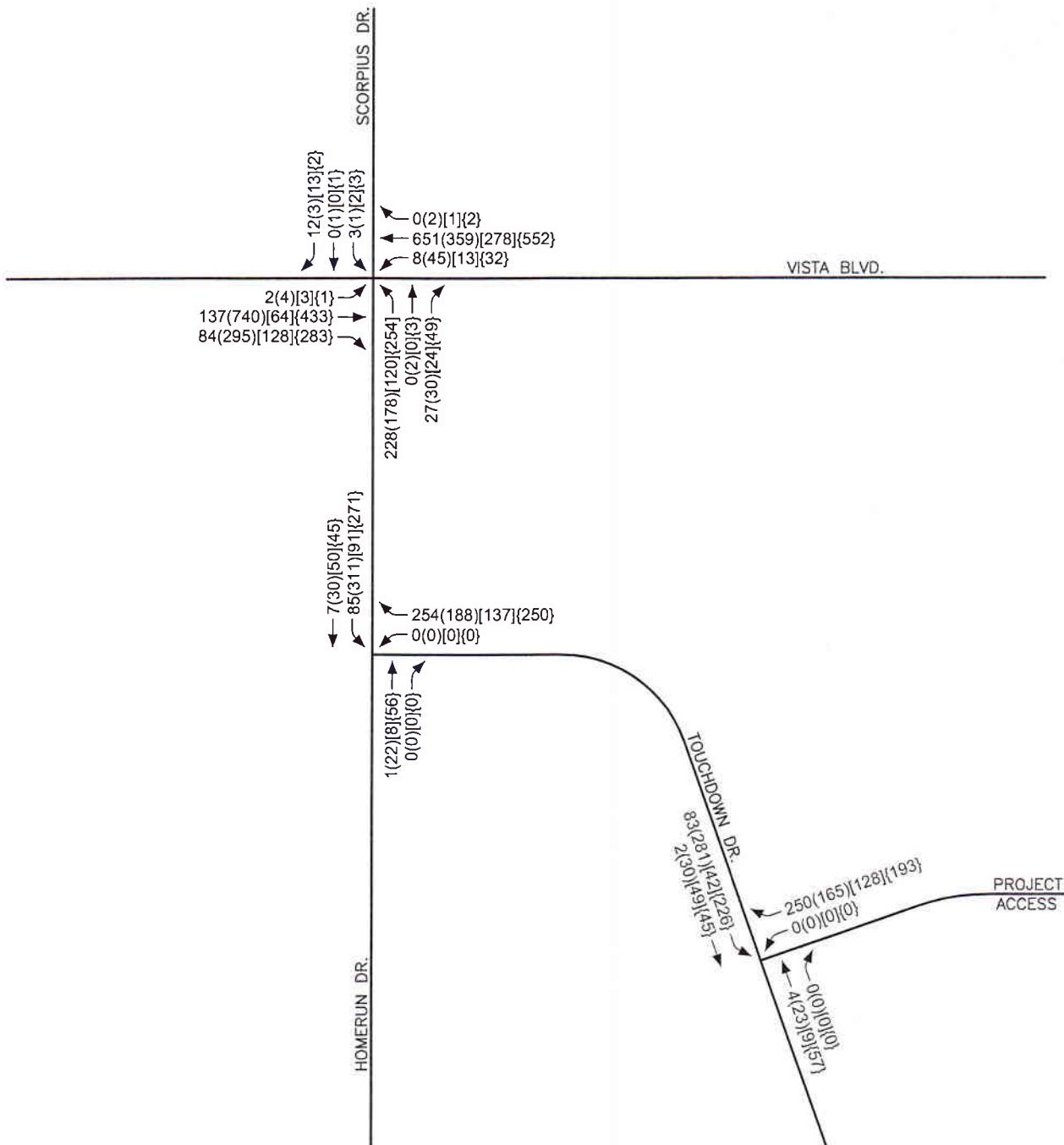
- WEEKDAY AM PEAK HOUR
- (-) WEEKDAY PM PEAK HOUR
- {-} SATURDAY AM PEAK HOUR
- {-} SATURDAY PM PEAK HOUR



WINGFIELD COMMONS  
EXISTING TRAFFIC VOLUMES (W/EVENT)  
FIGURE 4B

LEGEND

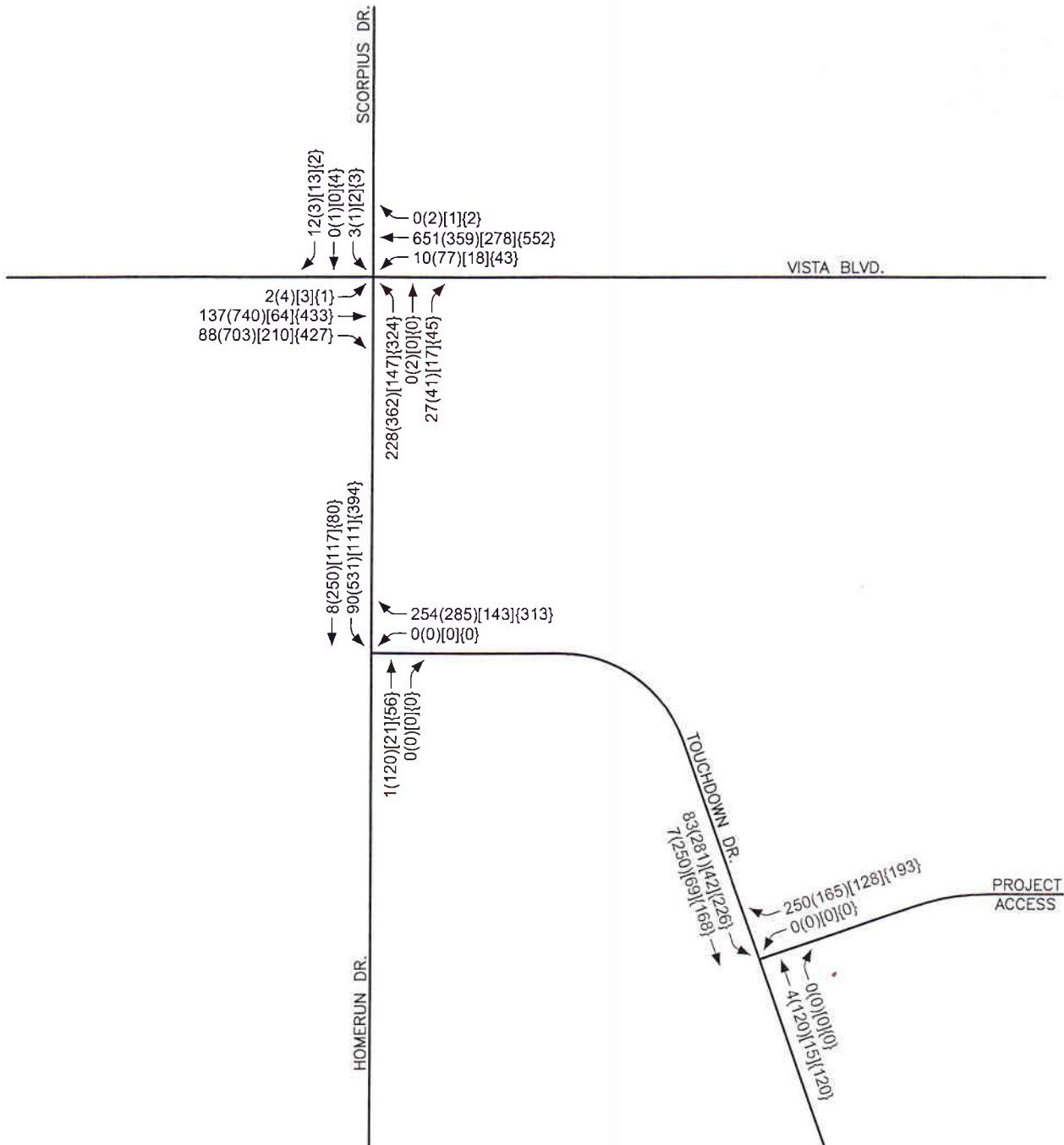
- WEEKDAY AM PEAK HOUR
- (-) WEEKDAY PM PEAK HOUR
- [ - ] SATURDAY AM PEAK HOUR
- { - } SATURDAY PM PEAK HOUR



WINGFIELD COMMONS  
EXISTING PLUS PROJECT TRAFFIC VOLUMES  
FIGURE 5A

LEGEND

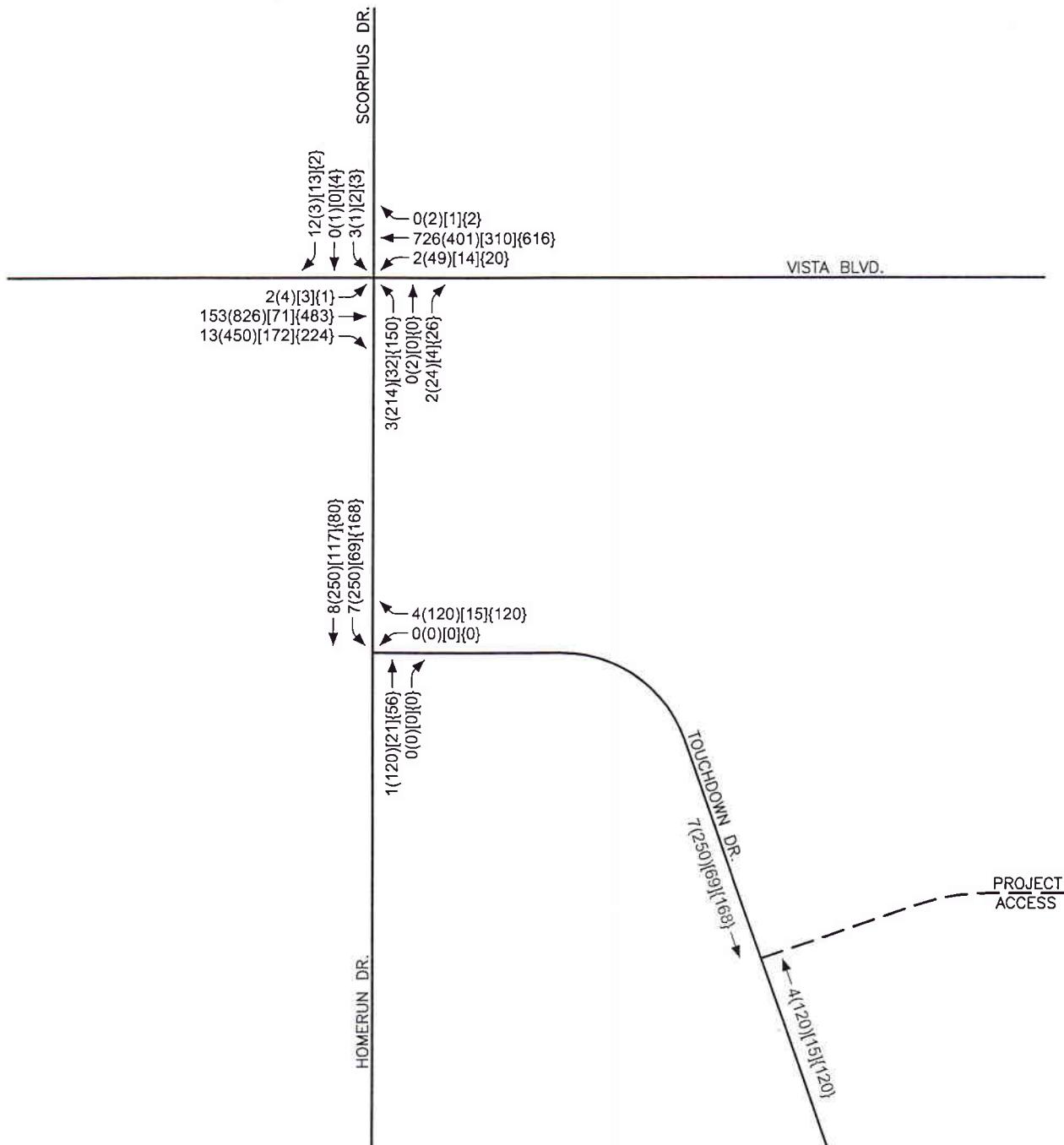
- WEEKDAY AM PEAK HOUR
- (-) WEEKDAY PM PEAK HOUR
- [--] SATURDAY AM PEAK HOUR
- {--} SATURDAY PM PEAK HOUR



**WINGFIELD COMMONS**  
**EXISTING PLUS PROJECT TRAFFIC VOLUMES (W/EVENT)**  
**FIGURE 5B**

LEGEND

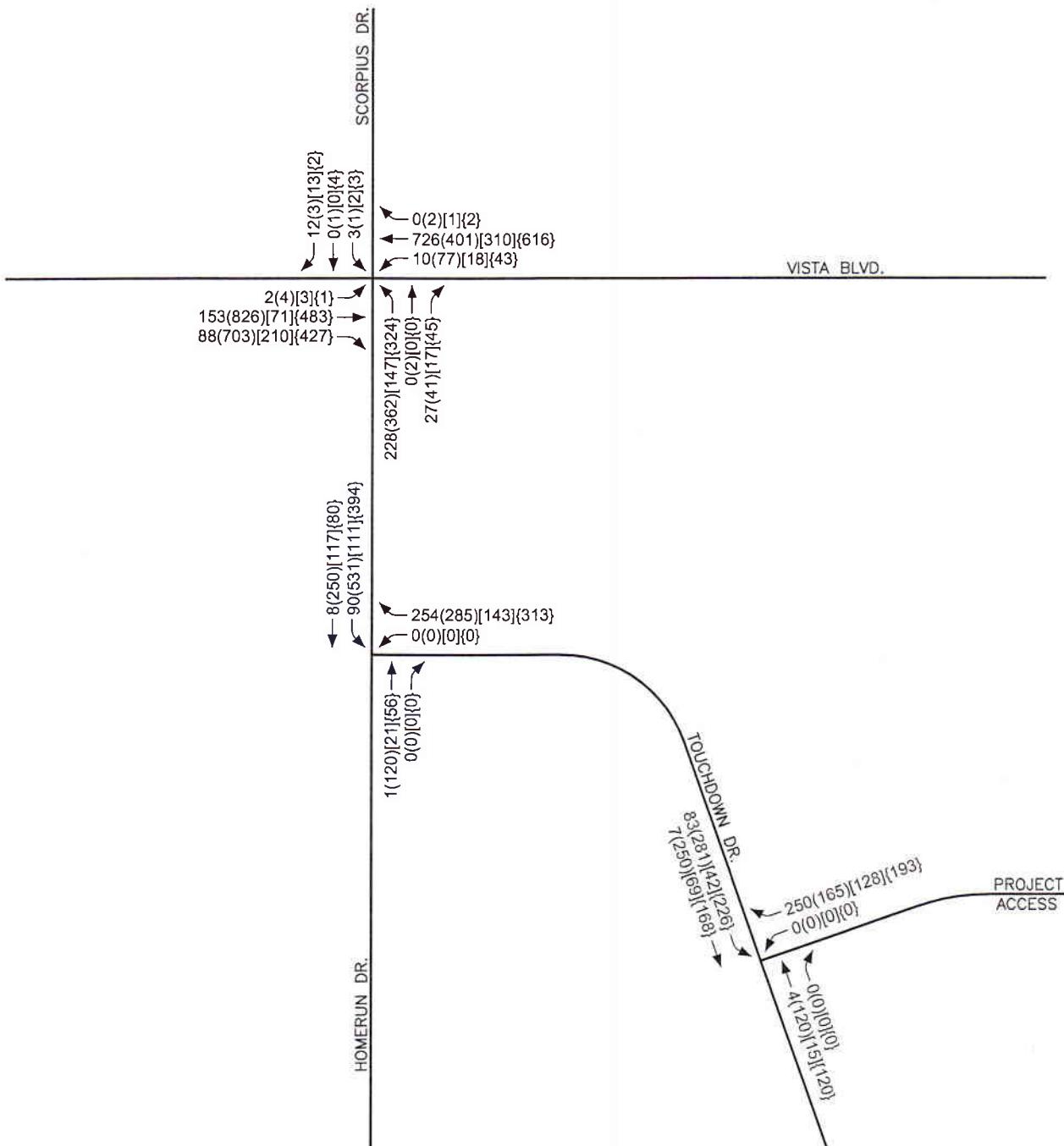
- WEEKDAY AM PEAK HOUR
- (-) WEEKDAY PM PEAK HOUR
- [ - ] SATURDAY AM PEAK HOUR
- { - } SATURDAY PM PEAK HOUR



WINGFIELD COMMONS  
2040 BASE TRAFFIC VOLUMES (W/EVENT)  
FIGURE 6

LEGEND

- WEEKDAY AM PEAK HOUR
- (-) WEEKDAY PM PEAK HOUR
- [ ] SATURDAY AM PEAK HOUR
- { } SATURDAY PM PEAK HOUR



WINGFIELD COMMONS  
2040 BASE PLUS PROJECT TRAFFIC VOLUMES (W/EVENT)  
FIGURE 7

## INTERSECTION CAPACITY ANALYSIS

The key intersections were analyzed for capacity based on procedures presented in the *Highway Capacity Manual (6th Edition)*, prepared by the Transportation Research Board, for unsignalized and signalized intersections using the latest version of the Synchro computer software.

The result of capacity analysis is a level of service (LOS) rating for signalized intersections or minor movements at a two-way stop controlled intersection. Level of service is a qualitative measure of traffic operating conditions where a letter grade "A" through "F", corresponding to progressively worsening traffic operation, is assigned to the intersection or minor movement.

The *Highway Capacity Manual* defines level of service for stop controlled intersections in terms of computed or measured control delay for each minor movement. Level of service is not defined for the intersection as a whole. The level of service criteria for unsignalized intersections is shown in Table 2.

TABLE 2 LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS	
LEVEL OF SERVICE	DELAY RANGE (SEC/VEH)
A	$\leq 10$
B	$>10 \text{ and } \leq 15$
C	$>15 \text{ and } \leq 25$
D	$>25 \text{ and } \leq 35$
E	$>35 \text{ and } \leq 50$
F	$>50$

Level of service for signalized intersections is stated in terms of the average control delay per vehicle for a peak 15 minute analysis period. The level of service criteria for signalized intersections is shown in Table 3.

TABLE 3 LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS	
LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (SEC)
A	$\leq 10$
B	$>10 \text{ and } \leq 20$
C	$>20 \text{ and } \leq 35$
D	$>35 \text{ and } \leq 55$
E	$>55 \text{ and } \leq 80$
F	$>80$

Table 4A shows a summary of the level of service and delay results at the key intersections for the existing and existing plus project scenarios with no GERP event. The intersection capacity worksheets are included in the Appendix.

TABLE 4A INTERSECTION LEVEL OF SERVICE AND DELAY RESULTS EXISTING AND EXISTING PLUS PROJECT SCENARIOS (NO GERP EVENT)								
INTERSECTION	EXISTING				EXISTING PLUS PROJECT			
	WEEK AM	WEEK PM	SAT. AM	SAT. PM	WEEK AM	WEEK PM	SAT. AM	SAT. PM
Vista/Homerun/Scorpius Signalized w/Existing Lanes	A8.6	B10.1	A8.8	B10.1	B14.4	B13.3	B11.5	B15.1
Homerun/Touchdown Stop at East Leg WB Left-Right SB Left	A8.3 A7.2	A8.5 A7.3	A8.4 A7.3	A8.8 A7.4	A9.5 A7.4	A9.3 A7.9	A8.9 A7.4	B10.0 A7.9
Touchdown/Project Access Stop at East Leg WB Left-Right SB Left	N/A N/A	N/A N/A	N/A N/A	N/A N/A	A9.5 A7.4	A9.8 A7.9	A8.9 A7.3	A9.6 A7.8

Table 4B shows a summary of the level of service and delay results at the key intersections for the existing and existing plus project scenarios with a GERP event. The intersection capacity worksheets are included in the Appendix.

TABLE 4B INTERSECTION LEVEL OF SERVICE AND DELAY RESULTS EXISTING AND EXISTING PLUS PROJECT SCENARIOS (WITH GERP EVENT)								
INTERSECTION	EXISTING				EXISTING PLUS PROJECT			
	WEEK AM	WEEK PM	SAT. AM	SAT. PM	WEEK AM	WEEK PM	SAT. AM	SAT. PM
Vista/Homerun/Scorpius Signalized w/Existing Lanes	A9.5	B15.0	B10.2	B12.2	B14.4	D41.3	B13.4	B18.4
Homerun/Touchdown Stop at East Leg WB Left-Right SB Left	A8.3 A7.2	A9.6 A8.1	A8.5 A7.4	A9.1 A7.7	A9.5 A7.4	B11.0 A9.2	A9.0 A7.5	B10.5 A8.3
Touchdown/Project Access Stop at East Leg WB Left-Right SB Left	N/A N/A	N/A N/A	N/A N/A	N/A N/A	A9.5 A7.4	A9.9 A8.2	A8.9 A7.3	B10.1 A8.0

Table 4C shows a summary of the level of service and delay results at the key intersections for the 2040 base and 2040 base plus project scenarios with a GERP event. The intersection capacity worksheets are included in the Appendix.

INTERSECTION	TABLE 4C INTERSECTION LEVEL OF SERVICE AND DELAY RESULTS 2040 BASE AND 2040 BASE PLUS PROJECT SCENARIOS (WITH GERP EVENT)							
	WEEK AM	WEEK PM	SAT. AM	SAT. PM	WEEK AM	WEEK PM	SAT. AM	SAT. PM
Vista/Homerun/Scorpius Signalized w/Existing Lanes	A9.9	B15.2	A9.9	B12.5	B14.9	D41.1	B13.1	B18.9
Homerun/Touchdown Stop at East Leg WB Left-Right SB Left	A8.3 A7.2	A9.6 A8.1	A8.5 A7.4	A9.1 A7.7	A9.5 A7.4	B11.0 A9.2	A9.0 A7.5	B10.5 A8.3
Touchdown/Project Access Stop at East Leg WB Left-Right SB Left	N/A N/A	N/A N/A	N/A N/A	N/A N/A	A9.5 A7.4	A9.9 A8.2	A8.9 A7.3	B10.1 A8.0

#### Vista Boulevard/Homerun Drive/Scorpius Drive Intersection

The Vista Boulevard/Homerun Drive/Scorpius Drive intersection was analyzed for capacity as a signalized four-leg intersection for all scenarios. The intersection currently operates at LOS B or better during the weekday and Saturday AM and PM peak hours with no GERP event. For the existing plus project traffic volumes (no GERP event) the intersection operates at LOS B during the weekday and Saturday AM and PM peak hours. With a GERP event, the intersection currently operates at LOS B or better during the weekday and Saturday AM and PM peak hours. For the existing plus project traffic volumes (with GERP event) the intersection operates at LOS B during the weekday AM and Saturday AM and PM peak hours and LOS D during the weekday PM peak hour. For the 2040 base traffic volumes (with GERP Event) the intersection operates at LOS B or better during the weekday and Saturday AM and PM peak hours. For the 2040 base plus project traffic volumes (with GERP event) the intersection operates at LOS B during the weekday AM and Saturday AM and PM peak hours and LOS D during the weekday PM peak hour. The intersection was analyzed with the existing approach lanes and signal phasing for all scenarios. The existing intersection meets policy LOS D or better operation for all scenarios.

### Homerun Drive/Touchdown Drive Intersection

The Homerun Drive/Touchdown Drive intersection was analyzed as an unsignalized three-leg intersection with stop control at the east approach for all scenarios. The intersection minor movements currently operate at LOS A during the weekday and Saturday AM and PM peak hours with no GERP event. For the existing plus project traffic volumes (no GERP event) the intersection minor movements operate at LOS B or better during the weekday and Saturday AM and PM peak hours. With a GERP event, the intersection minor movements currently operate at LOS A during the weekday and Saturday AM and PM peak hours. For the existing plus project traffic volumes (with GERP event) the intersection minor movements operate at LOS B or better during the weekday and Saturday AM and PM peak hours. For the 2040 base traffic volumes (with GERP Event) the intersection minor movements operate at LOS A during the weekday and Saturday AM and PM peak hours. For the 2040 base plus project traffic volumes (with GERP event) the intersection minor movements operate at LOS B or better during the weekday and Saturday AM and PM peak hours. The intersection was analyzed with the existing approach lanes and traffic control for all scenarios. In summary, the existing intersection minor movements operate at acceptable LOS B or better for all scenarios and peak hours.

### Touchdown Drive/Project Access Intersection

The Touchdown Drive/Project Access intersection was analyzed as an unsignalized three-leg intersection with stop control at the east approach for the “with project” scenarios. For the existing plus project traffic volumes (no GERP event) the intersection minor movements operate at LOS A during the weekday and Saturday AM and PM peak hours. For the existing plus project traffic volumes (with GERP event) the minor movements operate at LOS B or better during the weekday and Saturday AM and PM peak hours. For the 2040 base plus project traffic volumes (with GERP event) the intersection minor movements operate at LOS B or better during the weekday and Saturday AM and PM peak hours. The intersection was analyzed with single lanes at all approaches. However, it is recommended that an exclusive left turn lane be provided at the north approach. The left turn lane should be designed to maximize storage length. The proposed intersection minor movements operate at acceptable LOS B or better for all scenarios and peak hours.

## QUEUEING ANALYSIS

As previously discussed, the existing Vista Boulevard/Homerun Drive/Scorpius Drive intersection, the existing Homerun Drive/Touchdown Drive intersection, and the proposed Touchdown Drive/Project Access intersection are anticipated to operate at acceptable levels of service for all study scenarios and peak hours. However, the spacing of the Vista Boulevard/Homerun Drive and Homerun Drive/Touchdown Drive intersections could potentially result in queuing and storage conflicts on Homerun Drive. Approximately 210 feet of storage length is currently available from the stop bar at the south approach of the Vista Boulevard/Homerun Drive intersection to the north side of the Homerun Drive/Touchdown Drive intersection.

Queue lengths were subsequently reviewed at the south approach of the signalized Vista Boulevard/Homerun Drive intersection. The capacity analysis results show 95th percentile queue lengths of less than 125 feet for the weekday and Saturday AM peak hours for the existing plus project (with and without GERP event) and 2040 base plus project (with GERP event) scenarios. These queue lengths can easily be accommodated within the  $\pm$ 210 feet available storage area on Homerun Drive with no impacts anticipated at the Homerun Drive/Touchdown Drive intersection. However, 95th percentile queue lengths of approximately 225 feet for the weekday PM peak hour and 200 feet for the Saturday PM peak hour are anticipated for the existing plus project (with GERP event) and the 2040 base plus project (with GERP event) scenarios. These weekday and Saturday PM peak hour queue lengths could exceed the  $\pm$ 210 feet available storage length on Homerun Drive resulting in potential impacts at the Homerun Drive/Touchdown Drive intersection. If the queue length extends south past Touchdown Drive then the southbound left turn movement at the Homerun Drive/Touchdown Drive intersection could potentially be blocked which in turn could result in the left turn queue extending northward onto Vista Boulevard.

In order to prevent potential blockage of the Homerun Drive/Touchdown Drive intersection it is recommended that the Vista Boulevard/Homerun Drive intersection be improved to include an additional left turn lane at the south approach and the Homerun Drive/Touchdown Drive intersection be modified to include stop sign control at both the east and south approaches. "Do Not Block Intersection" pavement markings and appropriate signage are also suggested to inform motorists of the modified intersection operation. The south approach of the Homerun Drive/Touchdown Drive intersection is projected to serve the lowest volume of the three approaches based on the project buildout traffic volumes. In addition, it is recommended that the Homerun Drive/Touchdown Drive intersection be improved to include an exclusive left turn lane at the north approach. This left turn lane should be designed to maximize storage length.

Queuing was also reviewed for the existing right turn lane at the west approach of the Vista Boulevard/Homerun Drive intersection. The right turn lane currently contains approximately 125 feet of combined storage/deceleration length with a 180 foot taper. The capacity analysis results indicate 95th percentile queue lengths of approximately 100 feet or less for the eastbound right turn movement based on the existing plus project traffic volumes on a weekend and Saturday that do not include a GERP event. In addition to queue length, a desirable deceleration length of 115 feet is also needed based on the 35 mile per hour speed limit on Vista Boulevard for a total lane length of 215 feet. In summary, the right turn lane should contain a minimum of 215 feet of storage and deceleration length with a 180 foot taper in order to serve existing plus project traffic volumes during non-GERP events.

For GERP events, the Highway Capacity, Synchro, and SimTraffic results indicate an average 95th percentile queue length of  $\pm$ 350 feet for the weekday PM peak hour. Again, a desirable deceleration length of 115 feet is also needed based on the 35 mile per hour speed limit on Vista Boulevard which results in a total length of 465 feet. The right turn lane should therefore be modified to contain a minimum of 465 feet of storage/deceleration length with a 180 foot taper in order to serve existing plus project and 2040 base plus project traffic volumes during a GERP event.

It is suggested that the modification of the Homerun Drive/Touchdown Drive intersection to include stop sign control at the south approach occur prior to construction of the first dwelling unit. It is suggested that the additional left turn lane at the south approach and the modified right turn lane at the west approach of the Vista Boulevard/Homerun Drive intersection and the additional left turn lane at the north approach of the Homerun Drive/Touchdown Drive intersection be installed prior to the construction of the 75th dwelling unit.

## TRAFFIC CRASH REVIEW

Traffic crash data at the Vista Boulevard/Homerun Drive/Scorpius Drive and Homerun Drive/Touchdown Drive intersections was requested from NDOT Traffic Safety Engineering. Crash data was available for the Vista Boulevard/Homerun Drive/Scorpius Drive intersection for the study period from September 1, 2014 to September 1, 2017. A total of 6 crashes occurred at the Vista Boulevard/Homerun Drive/Scorpius Drive intersection during the three-year period with no fatalities reported. The crash type was 3 non-collisions, 2 rear-end collisions, and 1 sideswipe meeting collision. NDOT Traffic Safety Engineering reported that no crash data exists for the Homerun Drive/Touchdown Drive intersection.

## SITE PLAN REVIEW

A copy of the preliminary site plan for the proposed Wingfield Commons development is included with this submittal. The site plan indicates that project access will be provided from a proposed access roadway that intersects Touchdown Drive. The access roadway will start at Touchdown Drive, extend easterly and then southerly along the east boundary of the Golden Eagle Regional Park, before terminating at Hans Berry Road. Various residential streets intersecting the project access road will provide access to the individual lots. The site plan indicates that an emergency access gate will be constructed at the north approach of the Hans Berry Road/Project Access intersection. It is recommended that the project access roadway and the internal residential streets be designed to conform to City of Sparks standards.

A shared pedestrian/bicycle path exists within the Golden Eagle Regional Park. This path connects with the existing sidewalk infrastructure at the signalized Vista Boulevard/Homerun Drive/Scorpius Drive intersection. It is recommended that the proposed subdivision provide a connection to the existing pedestrian/bicycle path within the Golden Eagle Regional Park. In addition, it is recommended that the project developers provide a traffic circulation plan that discourages or prevents Golden Eagle Regional Park traffic from utilizing the project access road and internal residential streets.

## RECOMMENDATIONS

Traffic generated by the Wingfield Commons development will have some impact on the adjacent street network. The following recommendations are made to mitigate project traffic impacts.

It is recommended that any required signing, striping, or traffic control improvements comply with City of Sparks requirements.

It is recommended that the Vista Boulevard/Homerun Drive/Scorpius Drive intersection be improved to include one exclusive left turn lane, one shared left turn-through lane, and one exclusive right turn lane at the south approach.

It is recommended that the existing right turn lane at the west approach of the Vista Boulevard/Homerun Drive/Scorpius Drive intersection be lengthened to provide a minimum of 465 feet of storage/deceleration length with a 180 foot taper in order to serve traffic volumes generated by a major event at the Golden Eagle Regional Park.

It is recommended that the traffic control at the Homerun Drive/Touchdown Drive intersection be modified to include stop sign control at the south and east approaches while the left turn and through movements at the north approach flow free. In addition, it is recommended that an exclusive left turn lane be provided at the north approach.

It is recommended that the Touchdown Drive/Project Access intersection be designed as a three-leg intersection with stop sign control at the east approach and contain an exclusive left turn lane at the north approach.

It is recommended that the project access roadway and the internal residential streets be designed to conform to City of Sparks standards.

It is recommended that connections be made from the proposed subdivision to the existing pedestrian/bicycle network within the Golden Eagle Regional Park.

It is recommended that the project developers provide a traffic circulation plan that discourages or prevents Golden Eagle Regional Park traffic from utilizing the project access road and internal residential streets.

## APPENDIX

# Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 159

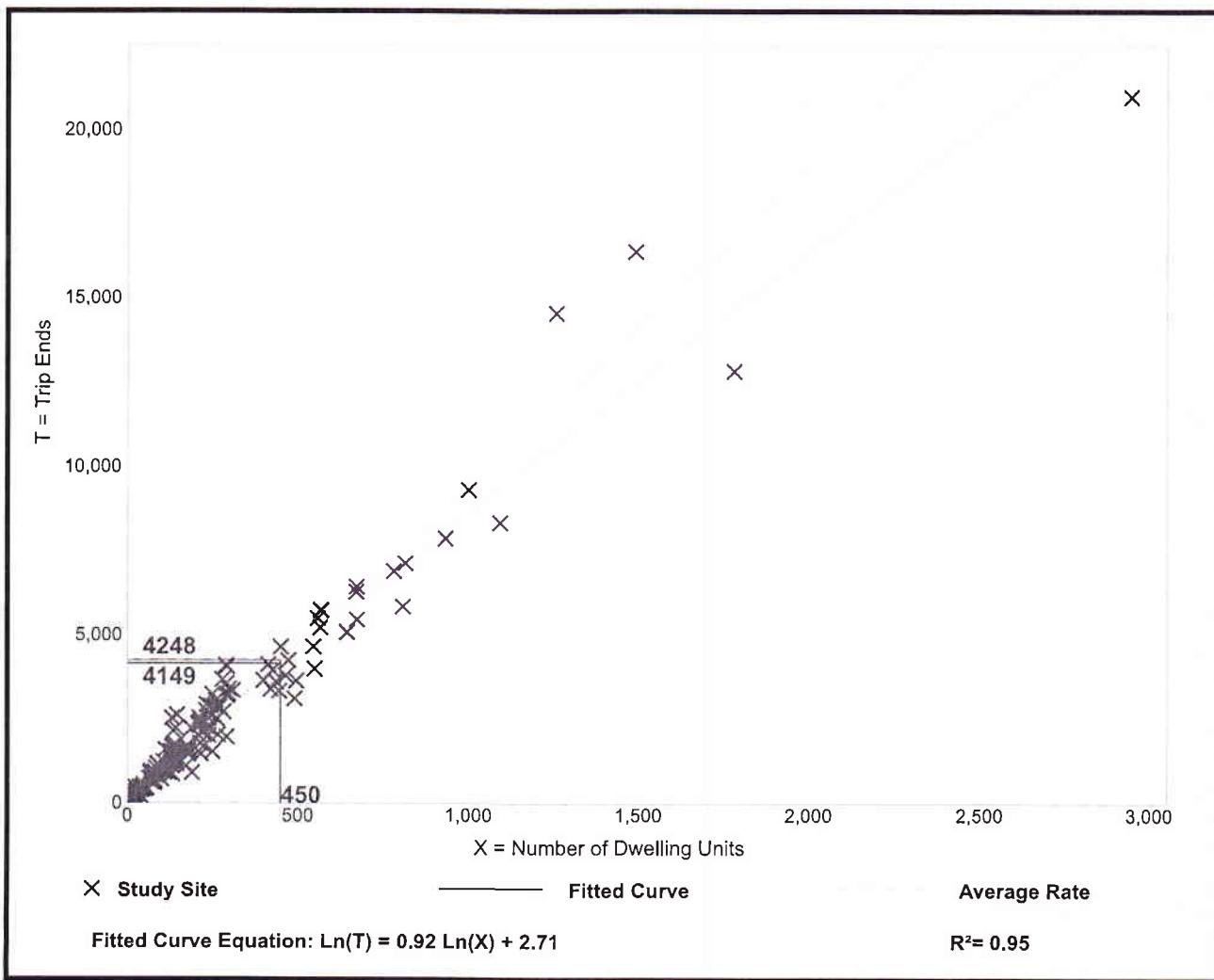
Avg. Num. of Dwelling Units: 264

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

## Data Plot and Equation



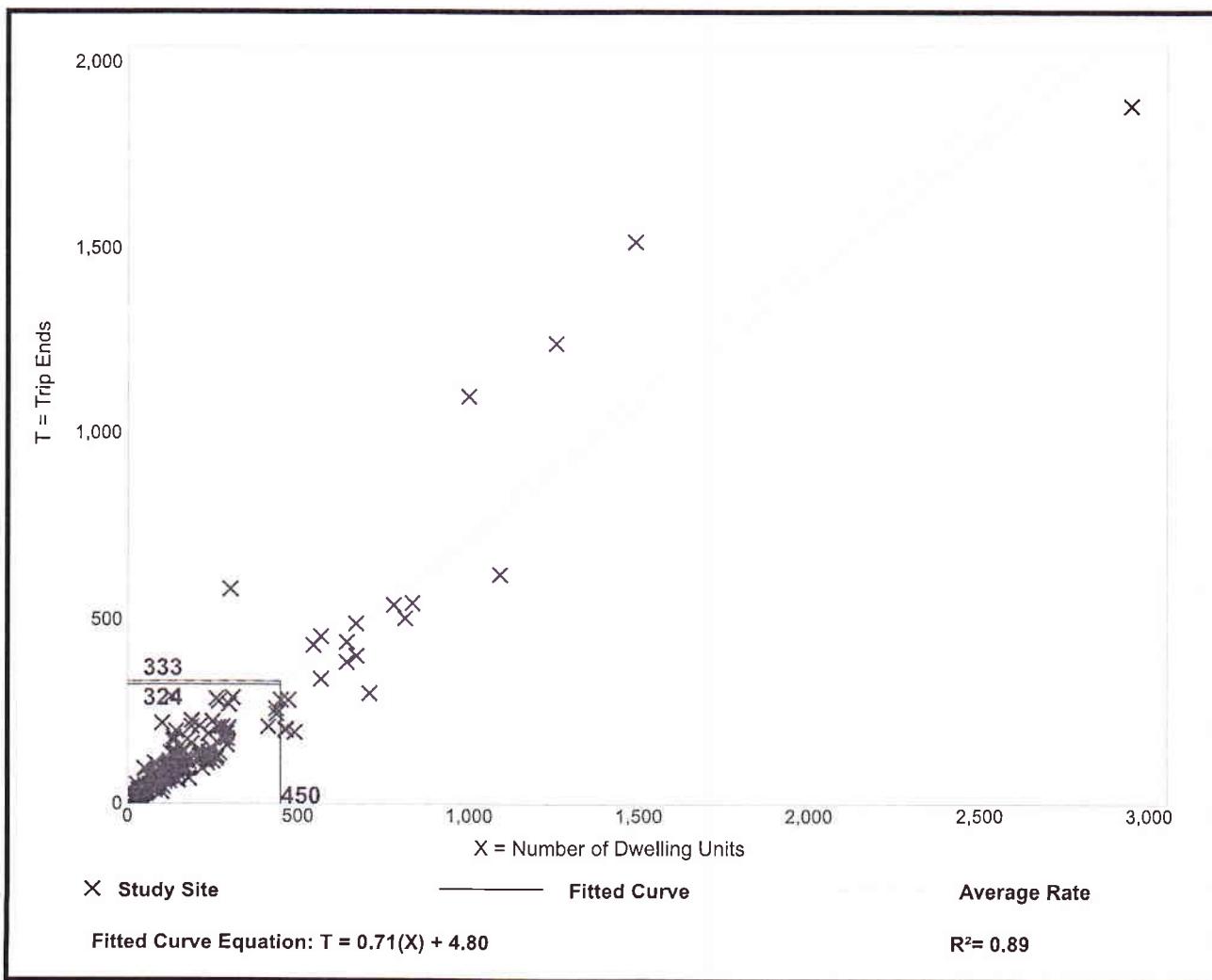
# Single-Family Detached Housing (210)

**Vehicle Trip Ends vs:** Dwelling Units  
On a: Weekday,  
Peak Hour of Adjacent Street Traffic,  
One Hour Between 7 and 9 a.m.  
**Setting/Location:** General Urban/Suburban  
Number of Studies: 173  
Avg. Num. of Dwelling Units: 219  
Directional Distribution: 25% entering, 75% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

## Data Plot and Equation



# Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,  
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 190

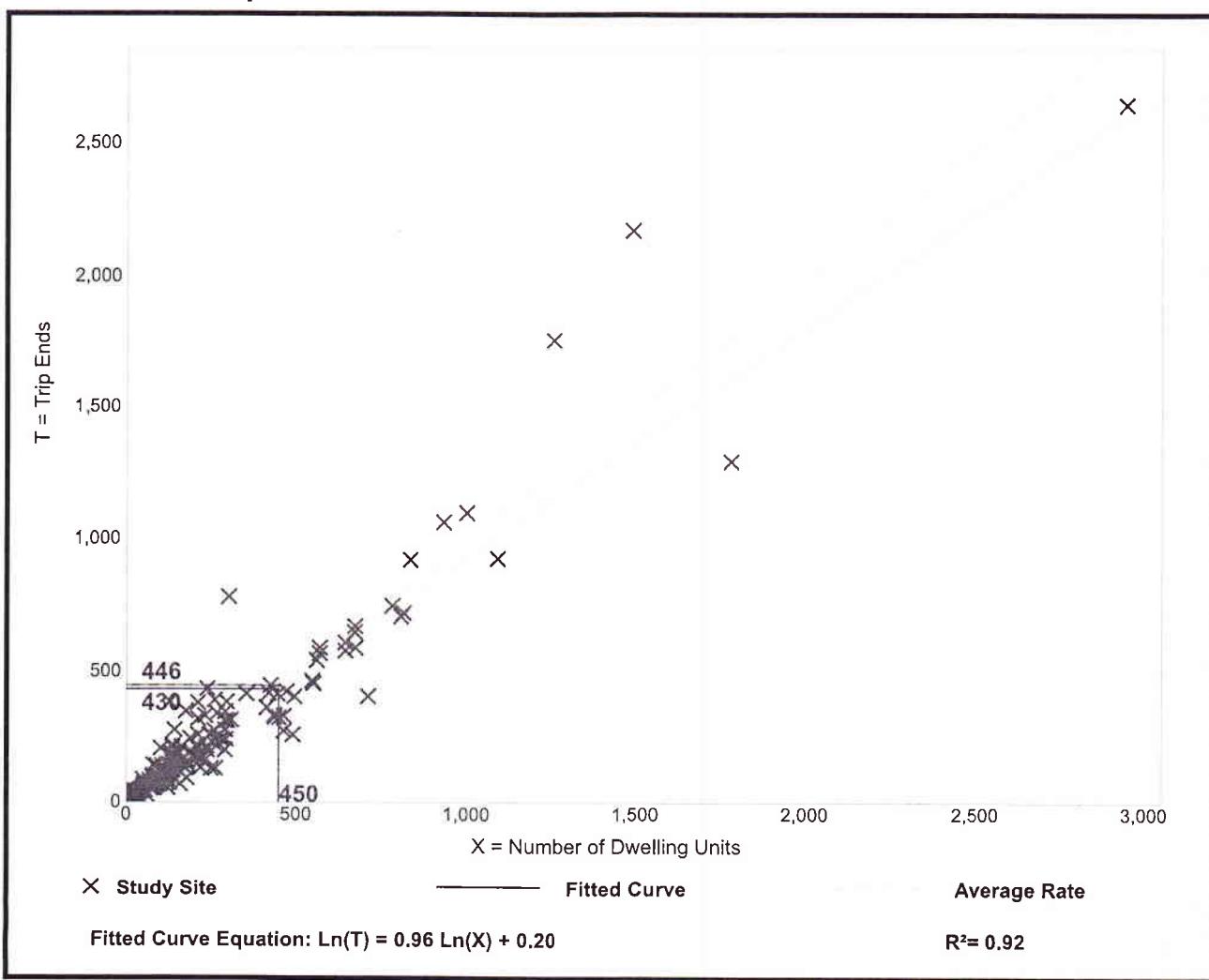
Avg. Num. of Dwelling Units: 242

Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

## Data Plot and Equation



# Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units  
On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 52

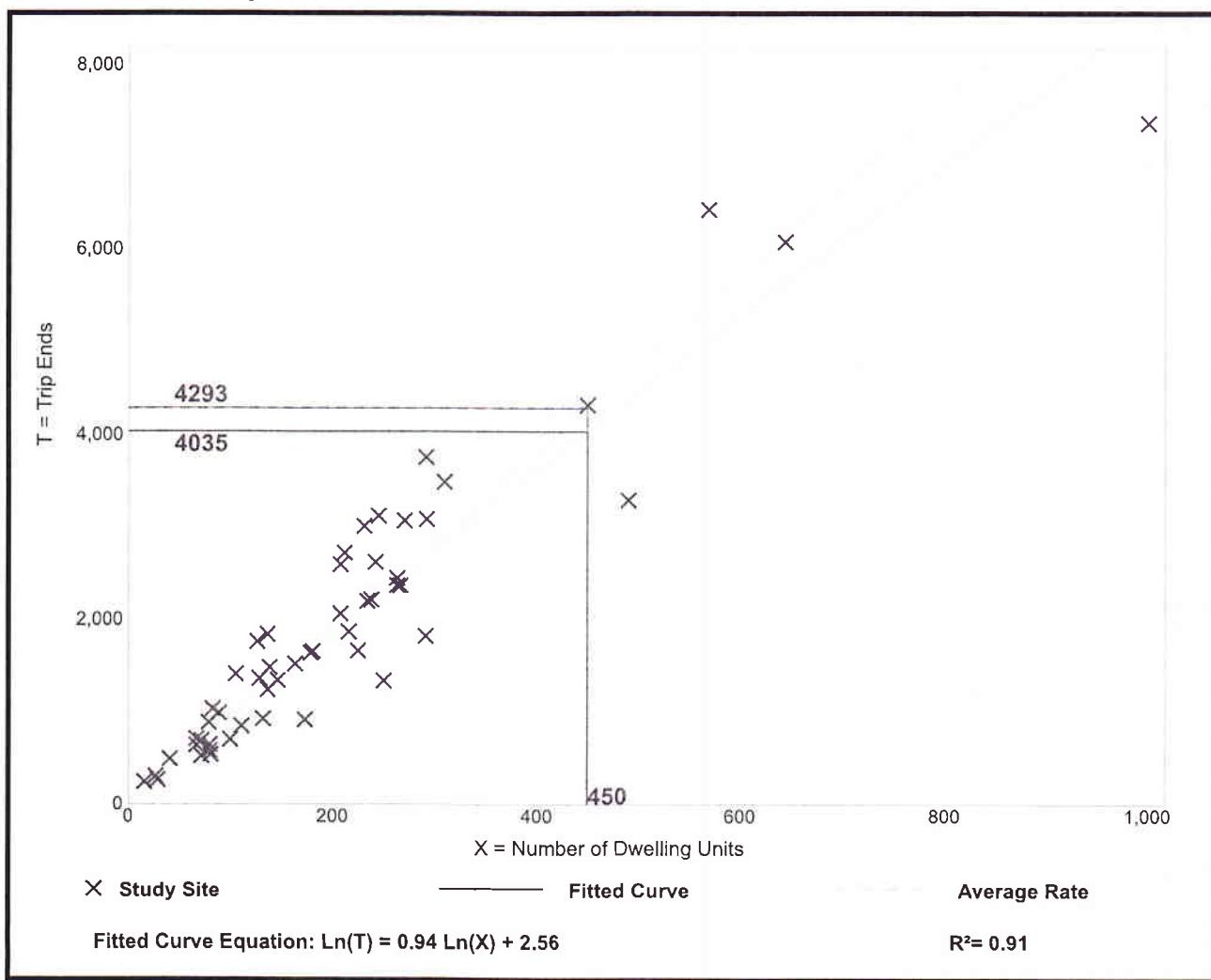
Avg. Num. of Dwelling Units: 207

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.54	5.32 - 15.25	2.17

## Data Plot and Equation



# Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units  
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 31

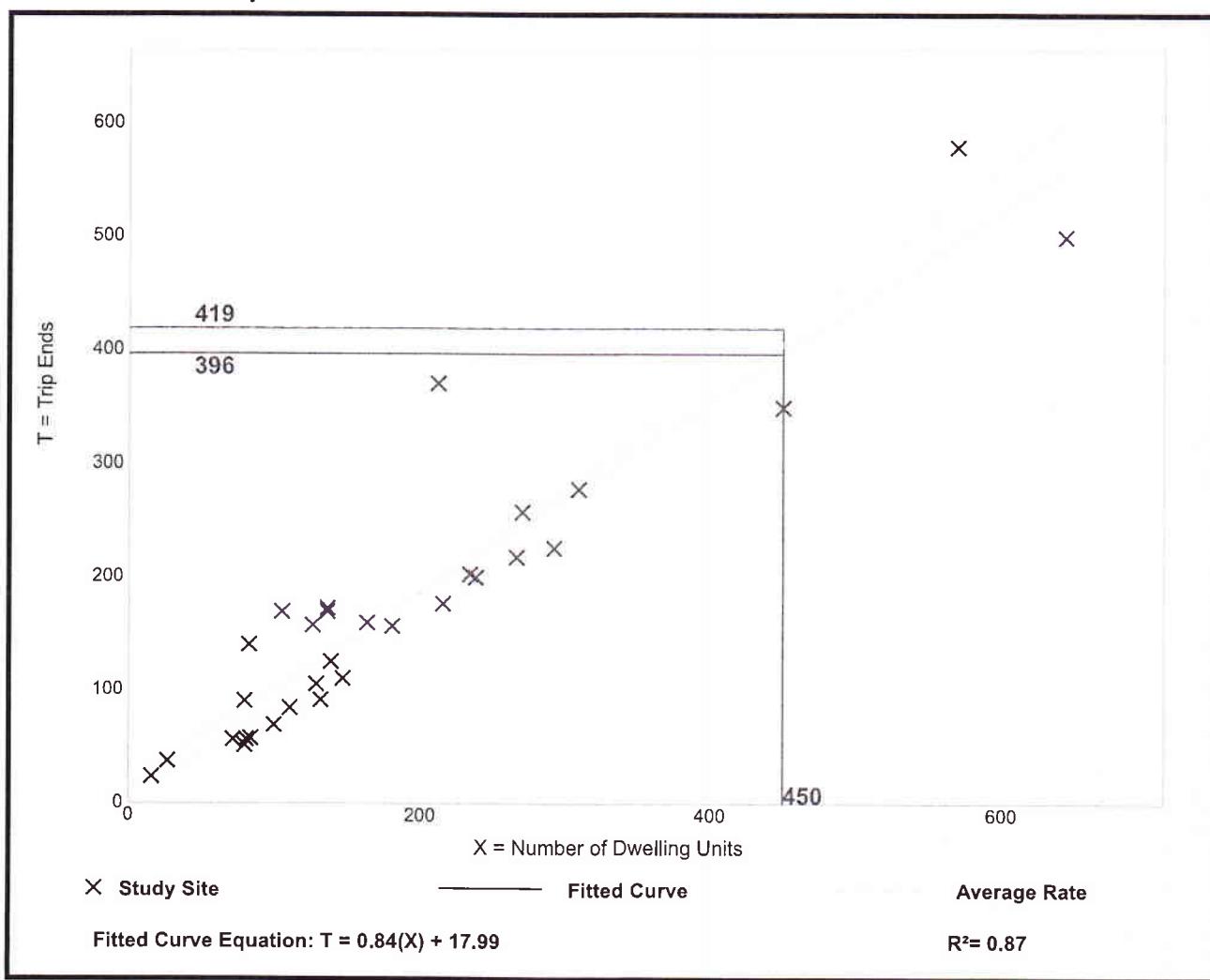
Avg. Num. of Dwelling Units: 188

Directional Distribution: 54% entering, 46% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.93	0.64 - 1.75	0.26

## Data Plot and Equation



## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑	0	↑	↑	0	2	3	0
Traffic Volume (veh/h)	2	137	9	0	651	0	3	0	2	3	0	12
Future Volume (veh/h)	2	137	9	0	651	0	3	0	2	3	0	12
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No	No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	152	10	0	723	0	3	0	2	3	0	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	2369	1057	4	1579	0	319	0	176	111	17	144
Arrive On Green	0.11	0.67	0.67	0.00	0.44	0.00	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1401	0	1585	146	152	1292
Grp Volume(v), veh/h	2	152	10	0	723	0	3	0	2	16	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	0	1401	0	1585	1591	0	0
Q Serve(g_s), s	0.0	0.7	0.1	0.0	6.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.7	0.1	0.0	6.4	0.0	0.1	0.0	0.1	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.19		0.81
Lane Grp Cap(c), veh/h	198	2369	1057	4	1579	0	319	0	176	272	0	0
V/C Ratio(X)	0.01	0.06	0.01	0.00	0.46	0.00	0.01	0.00	0.01	0.06	0.00	0.00
Avail Cap(c_a), veh/h	198	2369	1057	198	1579	0	786	0	704	788	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.8	2.6	2.5	0.0	8.7	0.0	17.8	0.0	17.8	18.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	0.2	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.8	2.7	2.5	0.0	9.7	0.0	17.8	0.0	17.8	18.0	0.0	0.0
LnGrp LOS	B	A	A	A	A	A	B	A	B	B	A	A
Approach Vol, veh/h		164			723			5			16	
Approach Delay, s/veh		2.8			9.7			17.8			18.0	
Approach LOS		A			A			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	10.0	0.0	35.0		10.0	10.0	25.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	20.0	5.0	20.0		20.0	5.0	20.0					
Max Q Clear Time (g_c+l1), s	2.1	0.0	2.7		2.4	2.0	8.4					
Green Ext Time (p_c), s	0.0	0.0	0.8		0.0	0.0	3.7					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary  
3: Homerun/Scorpius & Vista

07/23/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑	2	30	2	13	1	1	3
Traffic Volume (veh/h)	4	740	42	17	359	2	30	2	13	1	1	3
Future Volume (veh/h)	4	740	42	17	359	2	30	2	13	1	1	3
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No	No		No
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	822	47	19	399	2	33	2	14	1	1	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	1579	704	198	1611	8	318	22	157	112	57	110
Arrive On Green	0.11	0.44	0.44	0.11	0.44	0.44	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3626	18	1412	202	1414	144	513	986
Grp Volume(v), veh/h	4	822	47	19	195	206	33	0	16	5	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1867	1412	0	1616	1644	0	0
Q Serve(g_s), s	0.1	7.5	0.8	0.4	3.1	3.1	0.8	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	7.5	0.8	0.4	3.1	3.1	0.9	0.0	0.4	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.88	0.20		0.60
Lane Grp Cap(c), veh/h	198	1579	704	198	790	830	318	0	180	279	0	0
V/C Ratio(X)	0.02	0.52	0.07	0.10	0.25	0.25	0.10	0.00	0.09	0.02	0.00	0.00
Avail Cap(c_a), veh/h	198	1579	704	198	790	830	789	0	718	809	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.8	9.0	7.2	18.0	7.8	7.8	18.2	0.0	18.0	17.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.2	0.2	0.7	0.7	0.1	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.1	4.2	0.4	0.3	1.8	1.9	0.5	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.9	10.3	7.3	18.2	8.6	8.5	18.3	0.0	18.2	17.9	0.0	0.0
LnGrp LOS	B	B	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		873			420			49			5	
Approach Delay, s/veh		10.1			9.0			18.3			17.9	
Approach LOS		B			A			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	10.0	10.0	25.0		10.0	10.0	25.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	20.0	5.0	20.0		20.0	5.0	20.0					
Max Q Clear Time (g_c+l1), s	2.9	2.4	9.5		2.1	2.1	5.1					
Green Ext Time (p_c), s	0.1	0.0	4.1		0.0	0.0	1.9					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.1									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary  
3: Homerun/Scorpius & Vista

07/20/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑	1	5	0	11	2	0	13
Traffic Volume (veh/h)	3	60	90	9	278	1	5	0	11	2	0	13
Future Volume (veh/h)	3	60	90	9	278	1	5	0	11	2	0	13
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	67	100	10	309	1	6	0	12	2	0	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	1579	704	198	1615	5	319	0	176	100	12	154
Arrive On Green	0.11	0.44	0.44	0.11	0.44	0.44	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3633	12	1400	0	1585	94	105	1390
Grp Volume(v), veh/h	3	67	100	10	151	159	6	0	12	16	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	1868	1400	0	1585	1589	0	0
Q Serve(g_s), s	0.1	0.5	1.7	0.2	2.3	2.3	0.0	0.0	0.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.5	1.7	0.2	2.3	2.3	0.1	0.0	0.3	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.12		0.87
Lane Grp Cap(c), veh/h	198	1579	704	198	790	830	319	0	176	267	0	0
V/C Ratio(X)	0.02	0.04	0.14	0.05	0.19	0.19	0.02	0.00	0.07	0.06	0.00	0.00
Avail Cap(c_a), veh/h	198	1579	704	198	790	830	785	0	704	786	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.8	7.1	7.4	17.9	7.6	7.6	17.8	0.0	17.9	18.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.4	0.1	0.5	0.5	0.0	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	0.3	0.9	0.2	1.3	1.4	0.1	0.0	0.2	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.8	7.1	7.8	18.0	8.1	8.1	17.9	0.0	18.1	18.0	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		170			320			18			16	
Approach Delay, s/veh		7.7			8.4			18.0			18.0	
Approach LOS		A			A			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+R <sub>c</sub> ), s	10.0	10.0	25.0		10.0	10.0	25.0					
Change Period (Y+R <sub>c</sub> ), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	20.0	5.0	20.0		20.0	5.0	20.0					
Max Q Clear Time (g_c+l1), s	2.3	2.2	3.7		2.4	2.1	4.3					
Green Ext Time (p_c), s	0.0	0.0	0.6		0.0	0.0	1.4					
Intersection Summary												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary  
3: Homerun/Scorpius & Vista

07/20/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑			↔	
Traffic Volume (veh/h)	1	433	80	9	552	2	80	3	30	3	1	2
Future Volume (veh/h)	1	433	80	9	552	2	80	3	30	3	1	2
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	481	89	10	613	2	89	3	33	3	1	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	1579	704	198	1615	5	318	15	164	176	62	59
Arrive On Green	0.11	0.44	0.44	0.11	0.44	0.44	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3633	12	1414	134	1472	505	556	530
Grp Volume(v), veh/h	1	481	89	10	300	315	89	0	36	6	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	1868	1414	0	1605	1591	0	0
Q Serve(g_s), s	0.0	3.9	1.5	0.2	5.1	5.1	2.5	0.0	0.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	3.9	1.5	0.2	5.1	5.1	2.6	0.0	0.9	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.92	0.50		0.33
Lane Grp Cap(c), veh/h	198	1579	704	198	790	830	318	0	178	297	0	0
V/C Ratio(X)	0.01	0.30	0.13	0.05	0.38	0.38	0.28	0.00	0.20	0.02	0.00	0.00
Avail Cap(c_a), veh/h	198	1579	704	198	790	830	789	0	714	799	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.8	8.0	7.4	17.9	8.4	8.4	18.9	0.0	18.2	17.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.4	0.1	1.4	1.3	0.5	0.0	0.6	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	2.1	0.8	0.2	3.0	3.2	1.5	0.0	0.6	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.8	8.5	7.7	18.0	9.7	9.7	19.4	0.0	18.7	17.9	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		571			625			125			6	
Approach Delay, s/veh		8.4			9.8			19.2			17.9	
Approach LOS		A			A			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	10.0	10.0	25.0		10.0	10.0	25.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	20.0	5.0	20.0		20.0	5.0	20.0					
Max Q Clear Time (g_c+l1), s	4.6	2.2	5.9		2.1	2.0	7.1					
Green Ext Time (p_c), s	0.3	0.0	2.9		0.0	0.0	2.9					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.1									
HCM 6th LOS			B									

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑	0	228	0	27	3	0	12
Traffic Volume (veh/h)	2	137	84	8	651	0	228	0	27	3	0	12
Future Volume (veh/h)	2	137	84	8	651	0	228	0	27	3	0	12
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No	No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	152	93	9	723	0	253	0	30	3	0	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	1306	583	182	1306	0	464	0	355	117	37	289
Arrive On Green	0.10	0.37	0.37	0.10	0.37	0.00	0.22	0.00	0.22	0.22	0.00	0.22
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1401	0	1585	134	164	1292
Grp Volume(v), veh/h	2	152	93	9	723	0	253	0	30	16	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	0	1401	0	1585	1590	0	0
Q Serve(g_s), s	0.0	1.4	1.9	0.2	7.9	0.0	7.9	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.4	1.9	0.2	7.9	0.0	8.2	0.0	0.7	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.19		0.81
Lane Grp Cap(c), veh/h	182	1306	583	182	1306	0	464	0	355	444	0	0
V/C Ratio(X)	0.01	0.12	0.16	0.05	0.55	0.00	0.55	0.00	0.08	0.04	0.00	0.00
Avail Cap(c_a), veh/h	182	1306	583	182	1306	0	779	0	712	791	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.8	10.2	10.4	19.8	12.3	0.0	17.9	0.0	15.0	14.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.6	0.1	1.7	0.0	1.0	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	0.8	1.1	0.2	5.0	0.0	4.6	0.0	0.5	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	10.4	11.0	20.0	14.0	0.0	18.9	0.0	15.1	14.9	0.0	0.0
LnGrp LOS	B	B	B	B	B	A	B	A	B	B	A	A
Approach Vol, veh/h		247			732			283			16	
Approach Delay, s/veh		10.7			14.1			18.5			14.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	16.0	10.0	23.0		16.0	10.0	23.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	22.0	5.0	18.0		22.0	5.0	18.0					
Max Q Clear Time (g_c+l1), s	10.2	2.2	3.9		2.4	2.0	9.9					
Green Ext Time (p_c), s	0.7	0.0	0.9		0.0	0.0	3.0					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay		14.4										
HCM 6th LOS		B										

HCM 6th Signalized Intersection Summary  
3: Homerun/Scorpius & Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑			↔	
Traffic Volume (veh/h)	4	740	295	45	359	2	178	2	30	1	1	3
Future Volume (veh/h)	4	740	295	45	359	2	178	2	30	1	1	3
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No	No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	822	245	50	399	2	198	2	33	1	1	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	1449	646	182	1478	7	408	17	278	114	96	182
Arrive On Green	0.10	0.41	0.41	0.10	0.41	0.41	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3626	18	1412	91	1508	139	518	986
Grp Volume(v), veh/h	4	822	245	50	195	206	198	0	35	5	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	1867	1412	0	1599	1643	0	0
Q Serve(g_s), s	0.1	8.7	5.3	1.3	3.6	3.6	6.4	0.0	0.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	8.7	5.3	1.3	3.6	3.6	6.5	0.0	0.9	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.94	0.20		0.60
Lane Grp Cap(c), veh/h	182	1449	646	182	724	761	408	0	295	391	0	0
V/C Ratio(X)	0.02	0.57	0.38	0.28	0.27	0.27	0.48	0.00	0.12	0.01	0.00	0.00
Avail Cap(c_a), veh/h	182	1449	646	218	724	761	723	0	652	745	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.8	11.2	10.2	20.4	9.7	9.7	18.9	0.0	16.7	16.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	1.7	0.8	0.9	0.9	0.9	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.1	5.4	3.1	0.9	2.3	2.4	3.7	0.0	0.6	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.9	12.8	11.9	21.2	10.6	10.5	19.8	0.0	16.8	16.4	0.0	0.0
LnGrp LOS	B	B	B	C	B	B	A	B	B	A	A	
Approach Vol, veh/h		1071			451			233			5	
Approach Delay, s/veh		12.6			11.7			19.4			16.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	14.1	10.0	25.0		14.1	10.0	25.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	20.0	6.0	19.0		20.0	5.0	20.0					
Max Q Clear Time (g_c+l1), s	8.5	3.3	10.7		2.1	2.1	5.6					
Green Ext Time (p_c), s	0.6	0.0	4.0		0.0	0.0	1.9					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay		13.3										
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary  
3: Homerun/Scorpius & Vista

07/20/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑	↑	↑	↑	24	2	0	13
Traffic Volume (veh/h)	3	64	128	13	278	1	120	0	24	2	0	13
Future Volume (veh/h)	3	64	128	13	278	1	120	0	24	2	0	13
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No	No		No
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	71	114	14	309	1	133	0	27	2	0	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	1487	663	196	1521	5	359	0	223	100	17	196
Arrive On Green	0.11	0.42	0.42	0.11	0.42	0.42	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3633	12	1400	0	1585	77	122	1393
Grp Volume(v), veh/h	3	71	114	14	151	159	133	0	27	16	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1868	1400	0	1585	1593	0	0
Q Serve(g_s), s	0.1	0.5	2.0	0.3	2.5	2.5	3.6	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.5	2.0	0.3	2.5	2.5	4.0	0.0	0.7	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.12		0.87
Lane Grp Cap(c), veh/h	196	1487	663	196	744	782	359	0	223	314	0	0
V/C Ratio(X)	0.02	0.05	0.17	0.07	0.20	0.20	0.37	0.00	0.12	0.05	0.00	0.00
Avail Cap(c_a), veh/h	196	1487	663	196	744	782	809	0	733	814	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.0	7.8	8.3	18.1	8.4	8.4	18.4	0.0	17.0	16.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.2	0.6	0.6	0.6	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	0.3	1.1	0.2	1.5	1.5	2.3	0.0	0.4	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.0	7.9	8.8	18.3	9.0	9.0	19.1	0.0	17.3	17.0	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		188			324			160			16	
Approach Delay, s/veh		8.6			9.4			18.8			17.0	
Approach LOS		A			A			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	11.4	10.0	24.0		11.4	10.0	24.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	21.0	5.0	19.0		21.0	5.0	19.0					
Max Q Clear Time (g_c+l1), s	6.0	2.3	4.0		2.4	2.1	4.5					
Green Ext Time (p_c), s	0.4	0.0	0.6		0.0	0.0	1.4					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			11.5									
HCM 6th LOS			B									

# HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius & Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑ ↗	↑ ↘	↗ ↙	↑ ↗	↑ ↘	↗ ↙	↑ ↗	↑ ↘	↗ ↙	↑ ↗	↑ ↘	↗ ↙
Traffic Volume (veh/h)	1	433	283	32	552	2	254	3	49	3	1	2
Future Volume (veh/h)	1	433	283	32	552	2	254	3	49	3	1	2
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbt)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No		No		No
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	481	247	36	613	2	282	3	54	3	1	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	1271	567	177	1300	4	490	21	371	261	97	125
Arrive On Green	0.10	0.36	0.36	0.10	0.36	0.36	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3554	1585	1781	3633	12	1414	84	1514	626	397	512
Grp Volume(v), veh/h	1	481	247	36	300	315	282	0	57	6	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1868	1414	0	1598	1535	0	0
Q Serve(g_s), s	0.0	5.1	6.0	0.9	6.6	6.6	9.3	0.0	1.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.1	6.0	0.9	6.6	6.6	9.4	0.0	1.4	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.95	0.50		0.33
Lane Grp Cap(c), veh/h	177	1271	567	177	636	668	490	0	391	483	0	0
V/C Ratio(X)	0.01	0.38	0.44	0.20	0.47	0.47	0.58	0.00	0.15	0.01	0.00	0.00
Avail Cap(c_a), veh/h	177	1271	567	177	636	668	762	0	699	770	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter()	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.4	12.0	12.3	20.8	12.5	12.5	17.9	0.0	14.9	14.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	2.4	0.6	2.5	2.4	1.1	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	3.2	3.8	0.7	4.6	4.8	5.3	0.0	0.9	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.4	12.9	14.7	21.4	15.0	14.9	19.0	0.0	15.0	14.4	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	B	A	B	B	A	A
Approach Vol, veh/h		729			651			339			6	
Approach Delay, s/veh		13.5			15.3			18.3			14.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	17.3	10.0	23.0		17.3	10.0	23.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	22.0	5.0	18.0		22.0	5.0	18.0					
Max Q Clear Time (g_c+l1), s	11.4	2.9	8.0		2.1	2.0	8.6					
Green Ext Time (p_c), s	0.9	0.0	2.9		0.0	0.0	2.5					

## Intersection Summary

HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

**Intersection**

Int Delay, s/veh 3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		B			↑
Traffic Vol, veh/h	0	4	1	0	2	7
Future Vol, veh/h	0	4	1	0	2	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	1	0	2	8

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	13	1	0	0	1
Stage 1	1	-	-	-	-
Stage 2	12	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	1006	1084	-	-	1622
Stage 1	1022	-	-	-	-
Stage 2	1011	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1005	1084	-	-	1622
Mov Cap-2 Maneuver	1005	-	-	-	-
Stage 1	1021	-	-	-	-
Stage 2	1011	-	-	-	-

Approach	WB	NB	SB	
HCM Control Delay, s	8.3	0	1.6	
HCM LOS	A			

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1084	1622
HCM Lane V/C Ratio	-	-	0.004	0.001
HCM Control Delay (s)	-	-	8.3	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	-

**Intersection**

Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		B		A	
Traffic Vol, veh/h	0	23	22	0	30	30
Future Vol, veh/h	0	23	22	0	30	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	26	24	0	33	33

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	123	24	0	0	24
Stage 1	24	-	-	-	-
Stage 2	99	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	872	1052	-	-	1591
Stage 1	999	-	-	-	-
Stage 2	925	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	854	1052	-	-	1591
Mov Cap-2 Maneuver	854	-	-	-	-
Stage 1	978	-	-	-	-
Stage 2	925	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1052	1591	-
HCM Lane V/C Ratio	-	-	0.024	0.021	-
HCM Control Delay (s)	-	-	8.5	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

## Intersection

Int Delay, s/veh 3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑	↓	↔	
Traffic Vol, veh/h	0	9	8	0	49	50
Future Vol, veh/h	0	9	8	0	49	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	9	0	54	56

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	173	9	0	0	9
Stage 1	9	-	-	-	-
Stage 2	164	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	817	1073	-	-	1611
Stage 1	1014	-	-	-	-
Stage 2	865	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	788	1073	-	-	1611
Mov Cap-2 Maneuver	788	-	-	-	-
Stage 1	979	-	-	-	-
Stage 2	865	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	3.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1073	1611	-
HCM Lane V/C Ratio	-	-	0.009	0.034	-
HCM Control Delay (s)	-	-	8.4	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

## Intersection

Int Delay, s/veh 4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑		↓	
Traffic Vol, veh/h	0	57	56	0	45	45
Future Vol, veh/h	0	57	56	0	45	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	63	62	0	50	50

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	212	62	0	0	62
Stage 1	62	-	-	-	-
Stage 2	150	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	776	1003	-	-	1541
Stage 1	961	-	-	-	-
Stage 2	878	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	750	1003	-	-	1541
Mov Cap-2 Maneuver	750	-	-	-	-
Stage 1	929	-	-	-	-
Stage 2	878	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1003	1541	-
HCM Lane V/C Ratio	-	-	0.063	0.032	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

**Intersection**

Int Delay, s/veh 8.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		B			U
Traffic Vol, veh/h	0	254	1	0	85	7
Future Vol, veh/h	0	254	1	0	85	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	282	1	0	94	8

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	197	1	0	0	1
Stage 1	1	-	-	-	-
Stage 2	196	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	792	1084	-	-	1622
Stage 1	1022	-	-	-	-
Stage 2	837	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	746	1084	-	-	1622
Mov Cap-2 Maneuver	746	-	-	-	-
Stage 1	963	-	-	-	-
Stage 2	837	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	6.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1084	1622	-
HCM Lane V/C Ratio	-	-	0.26	0.058	-
HCM Control Delay (s)	-	-	9.5	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	1	0.2	-

## Intersection

Int Delay, s/veh 7.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		B		S	T
Traffic Vol, veh/h	0	188	22	0	311	30
Future Vol, veh/h	0	188	22	0	311	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	209	24	0	346	33

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	749	24	0	0	24
Stage 1	24	-	-	-	-
Stage 2	725	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	379	1052	-	-	1591
Stage 1	999	-	-	-	-
Stage 2	479	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	295	1052	-	-	1591
Mov Cap-2 Maneuver	295	-	-	-	-
Stage 1	777	-	-	-	-
Stage 2	479	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	7.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1052	1591
HCM Lane V/C Ratio	-	-	0.199	0.217
HCM Control Delay (s)	-	-	9.3	7.9
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.8

## Intersection

Int Delay, s/veh 6.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑	↓	↔	
Traffic Vol, veh/h	0	137	8	0	91	50
Future Vol, veh/h	0	137	8	0	91	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	152	9	0	101	56

Major/Minor	Minor1	Major1	Major2	
Conflicting Flow All	267	9	0	0 9 0
Stage 1	9	-	-	- -
Stage 2	258	-	-	- -
Critical Hdwy	6.42	6.22	-	- 4.12 -
Critical Hdwy Stg 1	5.42	-	-	- -
Critical Hdwy Stg 2	5.42	-	-	- -
Follow-up Hdwy	3.518	3.318	-	- 2.218 -
Pot Cap-1 Maneuver	722	1073	-	- 1611 -
Stage 1	1014	-	-	- -
Stage 2	785	-	-	- -
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	675	1073	-	- 1611 -
Mov Cap-2 Maneuver	675	-	-	- -
Stage 1	948	-	-	- -
Stage 2	785	-	-	- -

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	4.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1073	1611	-
HCM Lane V/C Ratio	-	-	0.142	0.063	-
HCM Control Delay (s)	-	-	8.9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.2	-

## Intersection

Int Delay, s/veh 7.5

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations						
Traffic Vol, veh/h	0	250	56	0	271	45
Future Vol, veh/h	0	250	56	0	271	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	278	62	0	301	50

Major/Minor Minor1 Major1 Major2

Conflicting Flow All	714	62	0	0	62	0
Stage 1	62	-	-	-	-	-
Stage 2	652	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	398	1003	-	-	1541	-
Stage 1	961	-	-	-	-	-
Stage 2	518	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	318	1003	-	-	1541	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	518	-	-	-	-	-

Approach WB NB SB

HCM Control Delay, s	10	0	6.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1003	1541	-
HCM Lane V/C Ratio	-	-	0.277	0.195	-
HCM Control Delay (s)	-	-	10	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0.7	-

Intersection

Int Delay, s/veh 8.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑		↓	↔
Traffic Vol, veh/h	0	250	4	0	83	2
Future Vol, veh/h	0	250	4	0	83	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	278	4	0	92	2

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	190	4	0	0	4
Stage 1	4	-	-	-	-
Stage 2	186	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	799	1080	-	-	1618
Stage 1	1019	-	-	-	-
Stage 2	846	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	753	1080	-	-	1618
Mov Cap-2 Maneuver	753	-	-	-	-
Stage 1	961	-	-	-	-
Stage 2	846	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	7.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1618
HCM Lane V/C Ratio	-	-	0.257	0.057
HCM Control Delay (s)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	1	0.2

**Intersection**

Int Delay, s/veh 8.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑	↓	↔	↔
Traffic Vol, veh/h	0	281	21	0	315	28
Future Vol, veh/h	0	281	21	0	315	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	312	23	0	350	31

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	754	23	0	0	23
Stage 1	23	-	-	-	-
Stage 2	731	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	377	1054	-	-	1592
Stage 1	1000	-	-	-	-
Stage 2	476	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	293	1054	-	-	1592
Mov Cap-2 Maneuver	293	-	-	-	-
Stage 1	776	-	-	-	-
Stage 2	476	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	7.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1054	1592
HCM Lane V/C Ratio	-	-	0.296	0.22
HCM Control Delay (s)	-	-	9.8	7.9
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0.8

Intersection

Int Delay, s/veh 6.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		P		U	
Traffic Vol, veh/h	0	128	9	0	42	49
Future Vol, veh/h	0	128	9	0	42	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	142	10	0	47	54

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	158	10	0	0	10
Stage 1	10	-	-	-	-
Stage 2	148	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	833	1071	-	-	1610
Stage 1	1013	-	-	-	-
Stage 2	880	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	808	1071	-	-	1610
Mov Cap-2 Maneuver	808	-	-	-	-
Stage 1	983	-	-	-	-
Stage 2	880	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1071	1610	-
HCM Lane V/C Ratio	-	-	0.133	0.029	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection

Int Delay, s/veh 6.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑		↓	↔
Traffic Vol, veh/h	0	193	57	0	226	45
Future Vol, veh/h	0	193	57	0	226	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	214	63	0	251	50

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	615	63	0	0	63
Stage 1	63	-	-	-	-
Stage 2	552	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	455	1002	-	-	1540
Stage 1	960	-	-	-	-
Stage 2	577	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	379	1002	-	-	1540
Mov Cap-2 Maneuver	379	-	-	-	-
Stage 1	799	-	-	-	-
Stage 2	577	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	6.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1002	1540	-
HCM Lane V/C Ratio	-	-	0.214	0.163	-
HCM Control Delay (s)	-	-	9.6	7.8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.6	-

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑	0	3	0	2	3	0	12
Traffic Volume (veh/h)	2	137	13	2	651	0	3	0	1	3	0	12
Future Volume (veh/h)	2	137	13	2	651	0	3	0	2	3	0	12
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No	No		No
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	152	14	2	723	0	3	0	2	3	0	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	1579	704	198	1579	0	319	0	176	111	17	144
Arrive On Green	0.11	0.44	0.44	0.11	0.44	0.00	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1401	0	1585	146	152	1292
Grp Volume(v), veh/h	2	152	14	2	723	0	3	0	2	16	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	0	1401	0	1585	1591	0	0
Q Serve(g_s), s	0.0	1.1	0.2	0.0	6.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.1	0.2	0.0	6.4	0.0	0.1	0.0	0.1	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.19		0.81
Lane Grp Cap(c), veh/h	198	1579	704	198	1579	0	319	0	176	272	0	0
V/C Ratio(X)	0.01	0.10	0.02	0.01	0.46	0.00	0.01	0.00	0.01	0.06	0.00	0.00
Avail Cap(c_a), veh/h	198	1579	704	198	1579	0	786	0	704	788	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter( )	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.8	7.3	7.0	17.8	8.7	0.0	17.8	0.0	17.8	18.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	1.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	0.6	0.1	0.0	3.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.8	7.4	7.1	17.8	9.7	0.0	17.8	0.0	17.8	18.0	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h					725			5			16	
Approach Delay, s/veh					9.7			17.8			18.0	
Approach LOS					A			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	10.0	10.0	25.0		10.0	10.0	25.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	20.0	5.0	20.0		20.0	5.0	20.0					
Max Q Clear Time (g_c+l1), s	2.1	2.0	3.1		2.4	2.0	8.4					
Green Ext Time (p_c), s	0.0	0.0	0.8		0.0	0.0	3.7					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				9.5								
HCM 6th LOS				A								

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑		↔		
Traffic Volume (veh/h)	4	740	450	49	359	2	214	2	24	1	1	3
Future Volume (veh/h)	4	740	450	49	359	2	214	2	24	1	1	3
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No		No		No
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	822	389	54	399	2	238	2	27	1	1	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	1402	626	176	1431	7	441	23	314	117	106	207
Arrive On Green	0.10	0.39	0.39	0.10	0.39	0.39	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1585	1781	3626	18	1412	110	1491	152	504	984
Grp Volume(v), veh/h	4	822	389	54	195	206	238	0	29	5	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1867	1412	0	1602	1639	0	0
Q Serve(g_s), s	0.1	9.2	10.0	1.4	3.8	3.8	7.9	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	9.2	10.0	1.4	3.8	3.8	8.1	0.0	0.7	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.93	0.20		0.60
Lane Grp Cap(c), veh/h	176	1402	626	176	701	737	441	0	338	431	0	0
V/C Ratio(X)	0.02	0.59	0.62	0.31	0.28	0.28	0.54	0.00	0.09	0.01	0.00	0.00
Avail Cap(c_a), veh/h	176	1402	626	211	701	737	700	0	632	723	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.6	12.1	12.3	21.2	10.4	10.4	19.0	0.0	16.1	15.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.8	4.6	1.0	1.0	0.9	1.0	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.1	5.8	6.5	1.0	2.5	2.6	4.6	0.0	0.5	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.7	13.9	16.9	22.2	11.4	11.4	20.0	0.0	16.2	15.8	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	B	A	B	B	A	A
Approach Vol, veh/h		1215			455			267			5	
Approach Delay, s/veh		14.9			12.7			19.6			15.8	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	15.7	10.0	25.0		15.7	10.0	25.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	20.0	6.0	19.0		20.0	5.0	20.0					
Max Q Clear Time (g_c+l1), s	10.1	3.4	12.0		2.1	2.1	5.8					
Green Ext Time (p_c), s	0.6	0.0	3.8		0.0	0.0	1.9					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.0									
HCM 6th LOS			B									

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑		↔	↔	↔
Traffic Volume (veh/h)	3	64	172	14	278	1	32	0	4	2	0	13
Future Volume (veh/h)	3	64	172	14	278	1	32	0	4	2	0	13
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	71	-31	16	309	1	36	0	4	2	0	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	1663	742	189	1701	6	306	0	169	96	11	148
Arrive On Green	0.11	0.47	0.00	0.11	0.47	0.47	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3633	12	1400	0	1585	94	104	1391
Grp Volume(v), veh/h	3	71	-31	16	151	159	36	0	4	16	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1868	1400	0	1585	1589	0	0
Q Serve(g_s), s	0.1	0.5	0.0	0.4	2.3	2.3	0.6	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.5	0.0	0.4	2.3	2.3	1.0	0.0	0.1	0.4	0.0	0.0
Prop In Lane	1.00			1.00			0.01	1.00		1.00	0.12	0.87
Lane Grp Cap(c), veh/h	189	1663	742	189	832	874	306	0	169	255	0	0
V/C Ratio(X)	0.02	0.04	-0.04	0.08	0.18	0.18	0.12	0.00	0.02	0.06	0.00	0.00
Avail Cap(c_a), veh/h	189	1663	742	189	832	874	693	0	607	687	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.8	6.8	0.0	18.9	7.3	7.3	19.2	0.0	18.8	19.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.5	0.5	0.2	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	0.3	0.0	0.3	1.3	1.4	0.6	0.0	0.1	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.8	6.8	0.0	19.1	7.7	7.7	19.4	0.0	18.9	19.1	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		43			326				40			16
Approach Delay, s/veh		12.6			8.3				19.3			19.1
Approach LOS		B			A				B			B
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	10.0	10.0	27.0		10.0	10.0	27.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	18.0	5.0	22.0		18.0	5.0	22.0					
Max Q Clear Time (g_c+l1), s	3.0	2.4	2.5		2.4	2.1	4.3					
Green Ext Time (p_c), s	0.1	0.0	0.3		0.0	0.0	1.5					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.2									
HCM 6th LOS			B									

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑ ↗	↑ ↘	↗ ↙	↖ ↖	↑ ↗	↙ ↖	↑ ↗	↑ ↖		↙ ↖	↙ ↖	
Traffic Volume (veh/h)	1	433	224	20	552	2	150	0	26	3	4	2
Future Volume (veh/h)	1	433	224	20	552	2	150	0	26	3	4	2
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No										
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	481	166	22	613	2	167	0	29	3	4	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	1404	626	195	1435	5	394	0	263	158	166	62
Arrive On Green	0.11	0.39	0.39	0.11	0.39	0.39	0.17	0.00	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	3554	1585	1781	3633	12	1410	0	1585	315	1000	376
Grp Volume(v), veh/h	1	481	166	22	300	315	167	0	29	9	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1868	1410	0	1585	1691	0	0
Q Serve(g_s), s	0.0	4.3	3.2	0.5	5.6	5.6	4.9	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	4.3	3.2	0.5	5.6	5.6	5.0	0.0	0.7	0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.33		0.22
Lane Grp Cap(c), veh/h	195	1404	626	195	702	738	394	0	263	386	0	0
V/C Ratio(X)	0.01	0.34	0.27	0.11	0.43	0.43	0.42	0.00	0.11	0.02	0.00	0.00
Avail Cap(c_a), veh/h	195	1404	626	195	702	738	840	0	765	898	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.1	9.6	9.3	18.3	10.0	10.0	17.9	0.0	16.1	15.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	1.0	0.3	1.9	1.8	0.7	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	2.5	1.8	0.4	3.6	3.8	2.8	0.0	0.4	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.1	10.3	10.4	18.5	11.9	11.8	18.7	0.0	16.3	15.9	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	A	B	B	A	A	
Approach Vol, veh/h		648			637			196			9	
Approach Delay, s/veh		10.3			12.1			18.3			15.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	12.6	10.0	23.0		12.6	10.0	23.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	22.0	5.0	18.0		22.0	5.0	18.0					
Max Q Clear Time (g_c+l1), s	7.0	2.5	6.3		2.2	2.0	7.6					
Green Ext Time (p_c), s	0.5	0.0	2.9		0.0	0.0	2.6					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.2									
HCM 6th LOS			B									

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑	0	228	0	27	3	0	12
Traffic Volume (veh/h)	2	137	88	10	651	0	228	0	27	3	0	12
Future Volume (veh/h)	2	137	88	10	651	0	228	0	27	3	0	12
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No		No		No	
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	152	87	11	723	0	253	0	30	3	0	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	1306	583	182	1306	0	464	0	355	117	37	289
Arrive On Green	0.10	0.37	0.37	0.10	0.37	0.00	0.22	0.00	0.22	0.22	0.00	0.22
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1401	0	1585	134	164	1292
Grp Volume(v), veh/h	2	152	87	11	723	0	253	0	30	16	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	0	1401	0	1585	1590	0	0
Q Serve(g_s), s	0.0	1.4	1.8	0.3	7.9	0.0	7.9	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.4	1.8	0.3	7.9	0.0	8.2	0.0	0.7	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.19		0.81
Lane Grp Cap(c), veh/h	182	1306	583	182	1306	0	464	0	355	444	0	0
V/C Ratio(X)	0.01	0.12	0.15	0.06	0.55	0.00	0.55	0.00	0.08	0.04	0.00	0.00
Avail Cap(c_a), veh/h	182	1306	583	182	1306	0	779	0	712	791	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.8	10.2	10.4	19.9	12.3	0.0	17.9	0.0	15.0	14.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.5	0.1	1.7	0.0	1.0	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	0.8	1.1	0.2	5.0	0.0	4.6	0.0	0.5	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	10.4	10.9	20.0	14.0	0.0	18.9	0.0	15.1	14.9	0.0	0.0
LnGrp LOS	B	B	B	C	B	A	B	A	B	B	A	A
Approach Vol, veh/h					734				283			16
Approach Delay, s/veh					14.1				18.5			14.9
Approach LOS					B				B			B
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	16.0	10.0	23.0		16.0	10.0	23.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	22.0	5.0	18.0		22.0	5.0	18.0					
Max Q Clear Time (g_c+1), s	10.2	2.3	3.8		2.4	2.0	9.9					
Green Ext Time (p_c), s	0.7	0.0	0.9		0.0	0.0	3.0					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.4								
HCM 6th LOS				B								

# HCM 6th Signalized Intersection Summary

## 3: Homerun/Scorpius & Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑		↔		↔
Traffic Volume (veh/h)	4	740	703	77	359	2	362	2	41	1	1	3
Future Volume (veh/h)	4	740	703	77	359	2	362	2	41	1	1	3
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	822	587	86	399	2	402	2	46	1	1	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	1146	511	160	1169	6	581	21	488	139	145	311
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3554	1585	1781	3626	18	1412	66	1529	194	455	973
Grp Volume(v), veh/h	4	822	587	86	195	206	402	0	48	5	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	1867	1412	0	1595	1622	0	0
Q Serve(g_s), s	0.1	11.4	18.0	2.6	4.7	4.7	15.0	0.0	1.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	11.4	18.0	2.6	4.7	4.7	15.1	0.0	1.2	0.1	0.0	0.0
Prop In Lane	1.00			1.00			0.01	1.00		0.96	0.20	0.60
Lane Grp Cap(c), veh/h	160	1146	511	160	573	602	581	0	510	596	0	0
V/C Ratio(X)	0.03	0.72	1.15	0.54	0.34	0.34	0.69	0.00	0.09	0.01	0.00	0.00
Avail Cap(c_a), veh/h	160	1146	511	160	573	602	686	0	628	713	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.2	16.7	18.9	24.3	14.4	14.4	18.0	0.0	13.3	13.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	3.9	87.7	3.6	1.6	1.5	2.4	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.1	8.1	27.2	2.1	3.4	3.5	8.4	0.0	0.7	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.3	20.6	106.7	27.9	16.0	15.9	20.4	0.0	13.4	13.0	0.0	0.0
LnGrp LOS	C	C	F	C	B	B	C	A	B	B	A	A
Approach Vol, veh/h		1413			487			450			5	
Approach Delay, s/veh		56.3			18.1			19.7			13.0	
Approach LOS		E			B			B			B	

### Timer - Assigned Phs

	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	22.8	10.0	23.0	22.8	10.0	23.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	22.0	5.0	18.0	22.0	5.0	18.0
Max Q Clear Time (g_c+l1), s	17.1	4.6	20.0	2.1	2.1	6.7
Green Ext Time (p_c), s	0.8	0.0	0.0	0.0	0.0	1.7

### Intersection Summary

HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary

### 3: Homerun/Scorpius & Vista

07/20/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑	↗	↖	↗			↔	
Traffic Volume (veh/h)	3	64	210	18	278	1	147	0	17	2	0	13
Future Volume (veh/h)	3	64	210	18	278	1	147	0	17	2	0	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	71	11	20	309	1	163	0	19	2	0	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1701	759	164	1739	6	350	0	243	84	21	214
Arrive On Green	0.09	0.48	0.48	0.09	0.48	0.48	0.15	0.00	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1781	3554	1585	1781	3633	12	1400	0	1585	65	135	1397
Grp Volume(v), veh/h	3	71	11	20	151	159	163	0	19	16	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1868	1400	0	1585	1597	0	0
Q Serve(g_s), s	0.1	0.6	0.2	0.6	2.6	2.6	5.5	0.0	0.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.6	0.2	0.6	2.6	2.6	5.9	0.0	0.6	0.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.12		0.87
Lane Grp Cap(c), veh/h	164	1701	759	164	851	894	350	0	243	319	0	0
V/C Ratio(X)	0.02	0.04	0.01	0.12	0.18	0.18	0.47	0.00	0.08	0.05	0.00	0.00
Avail Cap(c_a), veh/h	164	1701	759	164	851	894	625	0	554	626	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.4	7.5	7.4	22.6	8.1	8.1	21.9	0.0	19.7	19.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.5	0.4	1.0	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.3	0.1	0.4	1.6	1.7	3.5	0.0	0.4	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	7.6	7.5	23.0	8.5	8.5	22.9	0.0	19.9	19.7	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C	A	B	B	A	A
Approach Vol, veh/h		85			330			182			16	
Approach Delay, s/veh		8.1			9.4			22.6			19.7	
Approach LOS		A			A			C			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	13.3	10.0	31.0		13.3	10.0	31.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	19.0	5.0	26.0		19.0	5.0	26.0					
Max Q Clear Time (g_c+l1), s	7.9	2.6	2.6		2.5	2.1	4.6					
Green Ext Time (p_c), s	0.4	0.0	0.4		0.0	0.0	1.6					

## Intersection Summary

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HCM 6th Ctrl Delay

HCM 6th LOS

13.4

B

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑		↔		
Traffic Volume (veh/h)	1	433	427	43	552	2	324	0	45	3	4	2
Future Volume (veh/h)	1	433	427	43	552	2	324	0	45	3	4	2
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	481	363	48	613	2	360	0	50	3	4	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1176	524	164	1202	4	559	0	478	211	264	111
Arrive On Green	0.09	0.33	0.33	0.09	0.33	0.33	0.30	0.00	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3633	12	1410	0	1585	409	874	366
Grp Volume(v), veh/h	1	481	363	48	300	315	360	0	50	9	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	1868	1410	0	1585	1649	0	0
Q Serve(g_s), s	0.0	5.7	10.8	1.4	7.4	7.4	12.8	0.0	1.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.7	10.8	1.4	7.4	7.4	13.0	0.0	1.2	0.2	0.0	0.0
Prop In Lane	1.00			1.00			0.01	1.00		1.00	0.33	0.22
Lane Grp Cap(c), veh/h	164	1176	524	164	588	618	559	0	478	586	0	0
V/C Ratio(X)	0.01	0.41	0.69	0.29	0.51	0.51	0.64	0.00	0.10	0.02	0.00	0.00
Avail Cap(c_a), veh/h	164	1176	524	164	588	618	1222	0	1224	1339	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.4	14.1	15.8	23.1	14.7	14.7	17.8	0.0	13.7	13.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	7.3	1.0	3.1	3.0	1.3	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	3.8	7.8	1.0	5.5	5.7	7.2	0.0	0.8	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.5	15.1	23.1	24.0	17.8	17.6	19.0	0.0	13.8	13.3	0.0	0.0
LnGrp LOS	C	B	C	C	B	B	B	A	B	B	A	A
Approach Vol, veh/h		845			663			410			9	
Approach Delay, s/veh		18.6			18.2			18.4			13.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	21.4	10.0	23.0		21.4	10.0	23.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	42.0	5.0	18.0		42.0	5.0	18.0					
Max Q Clear Time (g_c+1), s	15.0	3.4	12.8		2.2	2.0	9.4					
Green Ext Time (p_c), s	1.4	0.0	2.1		0.0	0.0	2.3					

Intersection Summary

HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

**Intersection**

Int Delay, s/veh 4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		Y		Y	
Traffic Vol, veh/h	0	4	1	0	7	8
Future Vol, veh/h	0	4	1	0	7	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	1	0	8	9

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	26	1	0	0	1
Stage 1	1	-	-	-	-
Stage 2	25	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	989	1084	-	-	1622
Stage 1	1022	-	-	-	-
Stage 2	998	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	984	1084	-	-	1622
Mov Cap-2 Maneuver	984	-	-	-	-
Stage 1	1017	-	-	-	-
Stage 2	998	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1084	1622
HCM Lane V/C Ratio	-	-	0.004	0.005
HCM Control Delay (s)	-	-	8.3	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

## Intersection

Int Delay, s/veh 4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑	↓	↔	↑↓
Traffic Vol, veh/h	0	120	120	0	250	250
Future Vol, veh/h	0	120	120	0	250	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	133	133	0	278	278

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	967	133	0	0	133
Stage 1	133	-	-	-	-
Stage 2	834	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	282	916	-	-	1452
Stage 1	893	-	-	-	-
Stage 2	426	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	218	916	-	-	1452
Mov Cap-2 Maneuver	218	-	-	-	-
Stage 1	691	-	-	-	-
Stage 2	426	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1452	-
HCM Lane V/C Ratio	-	-	0.146	0.191	-
HCM Control Delay (s)	-	-	9.6	8.1	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.7	-

## Intersection

Int Delay, s/veh 2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		B		S	T
Traffic Vol, veh/h	0	15	21	0	69	117
Future Vol, veh/h	0	15	21	0	69	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	17	23	0	77	130

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	307	23	0	0	23
Stage 1	23	-	-	-	-
Stage 2	284	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	685	1054	-	-	1592
Stage 1	1000	-	-	-	-
Stage 2	764	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	649	1054	-	-	1592
Mov Cap-2 Maneuver	649	-	-	-	-
Stage 1	948	-	-	-	-
Stage 2	764	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1054	1592	-
HCM Lane V/C Ratio	-	-	0.016	0.048	-
HCM Control Delay (s)	-	-	8.5	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.2	-

Intersection

Int Delay, s/veh 5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑		↑	
Traffic Vol, veh/h	0	120	56	0	168	80
Future Vol, veh/h	0	120	56	0	168	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	133	62	0	187	89

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	525	62	0	0	62
Stage 1	62	-	-	-	-
Stage 2	463	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	513	1003	-	-	1541
Stage 1	961	-	-	-	-
Stage 2	634	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	447	1003	-	-	1541
Mov Cap-2 Maneuver	447	-	-	-	-
Stage 1	838	-	-	-	-
Stage 2	634	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	5.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1003	1541
HCM Lane V/C Ratio	-	-	0.133	0.121
HCM Control Delay (s)	-	-	9.1	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.4

## Intersection

Int Delay, s/veh 8.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		P			↑
Traffic Vol, veh/h	0	254	1	0	90	8
Future Vol, veh/h	0	254	1	0	90	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	282	1	0	100	9

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	210	1	0	0	1
Stage 1	1	-	-	-	-
Stage 2	209	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	778	1084	-	-	1622
Stage 1	1022	-	-	-	-
Stage 2	826	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	730	1084	-	-	1622
Mov Cap-2 Maneuver	730	-	-	-	-
Stage 1	959	-	-	-	-
Stage 2	826	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	6.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1084	1622	-
HCM Lane V/C Ratio	-	-	0.26	0.062	-
HCM Control Delay (s)	-	-	9.5	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	1	0.2	-

## Intersection

Int Delay, s/veh 6.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	285	120	0	531	250
Future Vol, veh/h	0	285	120	0	531	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	317	133	0	590	278

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1591	133	0
Stage 1	133	-	-
Stage 2	1458	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	118	916	-
Stage 1	893	-	-
Stage 2	214	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	61	916	-
Mov Cap-2 Maneuver	61	-	-
Stage 1	464	-	-
Stage 2	214	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	6.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1452	-
HCM Lane V/C Ratio	-	-	0.346	0.406	-
HCM Control Delay (s)	-	-	11	9.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.6	2	-

## Intersection

Int Delay, s/veh 5.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		Y		Y	
Traffic Vol, veh/h	0	143	21	0	111	117
Future Vol, veh/h	0	143	21	0	111	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	159	23	0	123	130

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	399	23	0	0	23	0
Stage 1	23	-	-	-	-	-
Stage 2	376	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	607	1054	-	-	1592	-
Stage 1	1000	-	-	-	-	-
Stage 2	694	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	557	1054	-	-	1592	-
Mov Cap-2 Maneuver	557	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	694	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	3.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1054	1592	-
HCM Lane V/C Ratio	-	-	0.151	0.077	-
HCM Control Delay (s)	-	-	9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-

**Intersection**

Int Delay, s/veh 7.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations						
Traffic Vol, veh/h	0	313	56	0	394	80
Future Vol, veh/h	0	313	56	0	394	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	348	62	0	438	89

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	1027	62	0	0	62	0
Stage 1	62	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	260	1003	-	-	1541	-
Stage 1	961	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	182	1003	-	-	1541	-
Mov Cap-2 Maneuver	182	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	370	-	-	-	-	-

Approach	WB	NB	SB
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HCM Control Delay, s	10.5	0	6.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1003	1541	-
HCM Lane V/C Ratio	-	-	0.347	0.284	-
HCM Control Delay (s)	-	-	10.5	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.6	1.2	-

**Intersection**

Int Delay, s/veh 8.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B				
Traffic Vol, veh/h	0	250	4	0	83	7
Future Vol, veh/h	0	250	4	0	83	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	278	4	0	92	8

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	196	4	0	0	4
Stage 1	4	-	-	-	-
Stage 2	192	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	793	1080	-	-	1618
Stage 1	1019	-	-	-	-
Stage 2	841	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	748	1080	-	-	1618
Mov Cap-2 Maneuver	748	-	-	-	-
Stage 1	961	-	-	-	-
Stage 2	841	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	6.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1618	-
HCM Lane V/C Ratio	-	-	0.257	0.057	-
HCM Control Delay (s)	-	-	9.5	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	1	0.2	-

**Intersection**

Int Delay, s/veh 4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		B			A
Traffic Vol, veh/h	0	165	120	0	281	250
Future Vol, veh/h	0	165	120	0	281	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	183	133	0	312	278

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1035	133	0	0	133
Stage 1	133	-	-	-	-
Stage 2	902	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	257	916	-	-	1452
Stage 1	893	-	-	-	-
Stage 2	396	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	192	916	-	-	1452
Mov Cap-2 Maneuver	192	-	-	-	-
Stage 1	666	-	-	-	-
Stage 2	396	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	4.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1452	-
HCM Lane V/C Ratio	-	-	0.2	0.215	-
HCM Control Delay (s)	-	-	9.9	8.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.8	-

Intersection

Int Delay, s/veh 5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	128	15	0	42	69
Future Vol, veh/h	0	128	15	0	42	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	142	17	0	47	77

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	188	17	0	0	17
Stage 1	17	-	-	-	-
Stage 2	171	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	801	1062	-	-	1600
Stage 1	1006	-	-	-	-
Stage 2	859	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	776	1062	-	-	1600
Mov Cap-2 Maneuver	776	-	-	-	-
Stage 1	975	-	-	-	-
Stage 2	859	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	2.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1062	1600
HCM Lane V/C Ratio	-	-	0.134	0.029
HCM Control Delay (s)	-	-	8.9	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1

Intersection

Int Delay, s/veh 5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑	↔	↓	↔
Traffic Vol, veh/h	0	193	120	0	226	168
Future Vol, veh/h	0	193	120	0	226	168
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	214	133	0	251	187

Major/Minor	Minor1	Major1	Major2	
Conflicting Flow All	822	133	0	0 133 0
Stage 1	133	-	-	- - -
Stage 2	689	-	-	- - -
Critical Hdwy	6.42	6.22	-	- 4.12 -
Critical Hdwy Stg 1	5.42	-	-	- - -
Critical Hdwy Stg 2	5.42	-	-	- - -
Follow-up Hdwy	3.518	3.318	-	- 2.218 -
Pot Cap-1 Maneuver	344	916	-	- 1452 -
Stage 1	893	-	-	- - -
Stage 2	498	-	-	- - -
Platoon blocked, %		-	-	-
Mov Cap-1 Maneuver	278	916	-	- 1452 -
Mov Cap-2 Maneuver	278	-	-	- - -
Stage 1	721	-	-	- - -
Stage 2	498	-	-	- - -

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	4.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	916 1452	-
HCM Lane V/C Ratio	-	-	0.234 0.173	-
HCM Control Delay (s)	-	-	10.1 8	0
HCM Lane LOS	-	-	B A	A
HCM 95th %tile Q(veh)	-	-	0.9 0.6	-

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑	↑	↑	↑		↔	↔	↔
Traffic Volume (veh/h)	2	153	13	2	726	0	3	0	2	3	0	12
Future Volume (veh/h)	2	153	13	2	726	0	3	0	2	3	0	12
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No	No		No
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	170	14	2	807	0	3	0	2	3	0	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	1579	704	198	1579	0	319	0	176	111	17	144
Arrive On Green	0.11	0.44	0.44	0.11	0.44	0.00	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1401	0	1585	146	152	1292
Grp Volume(v), veh/h	2	170	14	2	807	0	3	0	2	16	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	0	1401	0	1585	1591	0	0
Q Serve(g_s), s	0.0	1.3	0.2	0.0	7.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.3	0.2	0.0	7.3	0.0	0.1	0.0	0.1	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.19		0.81
Lane Grp Cap(c), veh/h	198	1579	704	198	1579	0	319	0	176	272	0	0
V/C Ratio(X)	0.01	0.11	0.02	0.01	0.51	0.00	0.01	0.00	0.01	0.06	0.00	0.00
Avail Cap(c_a), veh/h	198	1579	704	198	1579	0	786	0	704	788	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.8	7.3	7.0	17.8	9.0	0.0	17.8	0.0	17.8	18.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	1.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	0.7	0.1	0.0	4.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.8	7.4	7.1	17.8	10.2	0.0	17.8	0.0	17.8	18.0	0.0	0.0
LnGrp LOS	B	A	A	B	B	A	B	A	B	B	A	A
Approach Vol, veh/h		186			809			5			16	
Approach Delay, s/veh		7.5			10.2			17.8			18.0	
Approach LOS		A			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	10.0	10.0	25.0		10.0	10.0	25.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	20.0	5.0	20.0		20.0	5.0	20.0					
Max Q Clear Time (g_c+l1), s	2.1	2.0	3.3		2.4	2.0	9.3					
Green Ext Time (p_c), s	0.0	0.0	0.9		0.0	0.0	4.0					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.9									
HCM 6th LOS			A									

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑		↔		
Traffic Volume (veh/h)	4	826	450	49	401	2	214	2	24	1	1	3
Future Volume (veh/h)	4	826	450	49	401	2	214	2	24	1	1	3
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No		No		No
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	918	417	54	446	2	238	2	27	1	1	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	168	1475	658	168	1506	7	430	23	309	113	104	204
Arrive On Green	0.09	0.42	0.42	0.09	0.42	0.42	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1585	1781	3628	16	1412	110	1491	154	501	983
Grp Volume(v), veh/h	4	918	417	54	218	230	238	0	29	5	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1867	1412	0	1602	1639	0	0
Q Serve(g_s), s	0.1	10.8	11.1	1.5	4.3	4.3	8.3	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	10.8	11.1	1.5	4.3	4.3	8.5	0.0	0.8	0.1	0.0	0.0
Prop In Lane	1.00			1.00		0.01	1.00		0.93	0.20		0.60
Lane Grp Cap(c), veh/h	168	1475	658	168	738	775	430	0	332	421	0	0
V/C Ratio(X)	0.02	0.62	0.63	0.32	0.30	0.30	0.55	0.00	0.09	0.01	0.00	0.00
Avail Cap(c_a), veh/h	168	1475	658	168	738	775	617	0	544	631	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.8	12.2	12.3	22.4	10.3	10.3	20.0	0.0	17.0	16.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	2.0	4.6	1.1	1.0	1.0	1.1	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.1	6.8	7.1	1.1	2.8	3.0	4.9	0.0	0.5	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.8	14.2	16.9	23.5	11.4	11.3	21.1	0.0	17.1	16.7	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	A	B	B	A	A
Approach Vol, veh/h		1339			502			267			5	
Approach Delay, s/veh		15.1			12.6			20.7			16.7	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	16.0	10.0	27.0		16.0	10.0	27.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	18.0	5.0	22.0		18.0	5.0	22.0					
Max Q Clear Time (g_c+l1), s	10.5	3.5	13.1		2.1	2.1	6.3					
Green Ext Time (p_c), s	0.5	0.0	5.0		0.0	0.0	2.2					

## Intersection Summary

HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑ ↗	↑ ↘	↗ ↙	↖ ↗	↑ ↗	↑ ↘	↗ ↙	↖ ↗	↖ ↘	↗ ↙	↖ ↗	↖ ↘
Traffic Volume (veh/h)	3	71	172	14	310	1	32	0	4	2	0	13
Future Volume (veh/h)	3	71	172	14	310	1	32	0	4	2	0	13
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	79	-26	16	344	1	36	0	4	2	0	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	1663	742	189	1701	5	306	0	169	96	11	148
Arrive On Green	0.11	0.47	0.00	0.11	0.47	0.47	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3635	11	1400	0	1585	94	104	1391
Grp Volume(v), veh/h	3	79	-26	16	168	177	36	0	4	16	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	1868	1400	0	1585	1589	0	0
Q Serve(g_s), s	0.1	0.6	0.0	0.4	2.6	2.6	0.6	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.6	0.0	0.4	2.6	2.6	1.0	0.0	0.1	0.4	0.0	0.0
Prop In Lane	1.00			1.00			0.01	1.00		1.00	0.12	0.87
Lane Grp Cap(c), veh/h	189	1663	742	189	832	875	306	0	169	255	0	0
V/C Ratio(X)	0.02	0.05	-0.04	0.08	0.20	0.20	0.12	0.00	0.02	0.06	0.00	0.00
Avail Cap(c_a), veh/h	189	1663	742	189	832	875	693	0	607	687	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.8	6.8	0.0	18.9	7.3	7.3	19.2	0.0	18.8	19.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.2	0.5	0.5	0.2	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	0.3	0.0	0.3	1.5	1.6	0.6	0.0	0.1	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.8	6.9	0.0	19.1	7.9	7.9	19.4	0.0	18.9	19.1	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		56			361			40			16	
Approach Delay, s/veh		10.7			8.4			19.3			19.1	
Approach LOS		B			A			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	10.0	10.0	27.0		10.0	10.0	27.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	18.0	5.0	22.0		18.0	5.0	22.0					
Max Q Clear Time (g_c+l1), s	3.0	2.4	2.6		2.4	2.1	4.6					
Green Ext Time (p_c), s	0.1	0.0	0.3		0.0	0.0	1.7					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.9									
HCM 6th LOS			A									

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBC	NBL	NBT	NBC	SBL	SBT	SBC
Lane Configurations	↑ ↗	↑ ↘	↗ ↙	↖ ↗	↑ ↗	↖ ↙	↑ ↗	↑ ↘	↖ ↙	↑ ↗	↖ ↙	↙ ↗
Traffic Volume (veh/h)	1	483	224	20	616	2	150	0	26	3	4	2
Future Volume (veh/h)	1	483	224	20	616	2	150	0	26	3	4	2
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No		No		No
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	537	166	22	684	2	167	0	29	3	4	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	1404	626	195	1436	4	394	0	263	158	166	62
Arrive On Green	0.11	0.39	0.39	0.11	0.39	0.39	0.17	0.00	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	3554	1585	1781	3635	11	1410	0	1585	315	1000	376
Grp Volume(v), veh/h	1	537	166	22	334	352	167	0	29	9	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1868	1410	0	1585	1691	0	0
Q Serve(g_s), s	0.0	4.9	3.2	0.5	6.4	6.4	4.9	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	4.9	3.2	0.5	6.4	6.4	5.0	0.0	0.7	0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.33		0.22
Lane Grp Cap(c), veh/h	195	1404	626	195	702	738	394	0	263	386	0	0
V/C Ratio(X)	0.01	0.38	0.27	0.11	0.48	0.48	0.42	0.00	0.11	0.02	0.00	0.00
Avail Cap(c_a), veh/h	195	1404	626	195	702	738	840	0	765	898	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.1	9.8	9.3	18.3	10.3	10.3	17.9	0.0	16.1	15.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	1.0	0.3	2.3	2.2	0.7	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	2.9	1.8	0.4	4.2	4.4	2.8	0.0	0.4	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.1	10.6	10.4	18.5	12.6	12.5	18.7	0.0	16.3	15.9	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	B	A	B	B	A	A
Approach Vol, veh/h		704			708			196			9	
Approach Delay, s/veh		10.6			12.7			18.3			15.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	12.6	10.0	23.0		12.6	10.0	23.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	22.0	5.0	18.0		22.0	5.0	18.0					
Max Q Clear Time (g_c+l1), s	7.0	2.5	6.9		2.2	2.0	8.4					
Green Ext Time (p_c), s	0.5	0.0	3.1		0.0	0.0	2.8					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.5									
HCM 6th LOS			B									

# HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius & Vista

07/20/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑ ↗	↑ ↘	↗ ↙	↖ ↗	↑ ↗	0	228	0	27	3	0	12
Traffic Volume (veh/h)	2	153	88	10	726	0	228	0	27	3	0	12
Future Volume (veh/h)	2	153	88	10	726	0	228	0	27	3	0	12
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No			No		No		No	
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	170	87	11	807	0	253	0	30	3	0	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	1306	583	182	1306	0	464	0	355	117	37	289
Arrive On Green	0.10	0.37	0.37	0.10	0.37	0.00	0.22	0.00	0.22	0.22	0.00	0.22
Sat Flow, veh/h	1781	3554	1585	1781	3647	0	1401	0	1585	134	164	1292
Grp Volume(v), veh/h	2	170	87	11	807	0	253	0	30	16	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	0	1401	0	1585	1590	0	0
Q Serve(g_s), s	0.0	1.6	1.8	0.3	9.1	0.0	7.9	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.6	1.8	0.3	9.1	0.0	8.2	0.0	0.7	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.19		0.81
Lane Grp Cap(c), veh/h	182	1306	583	182	1306	0	464	0	355	444	0	0
V/C Ratio(X)	0.01	0.13	0.15	0.06	0.62	0.00	0.55	0.00	0.08	0.04	0.00	0.00
Avail Cap(c_a), veh/h	182	1306	583	182	1306	0	779	0	712	791	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.8	10.3	10.4	19.9	12.7	0.0	17.9	0.0	15.0	14.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.5	0.1	2.2	0.0	1.0	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	0.9	1.1	0.2	5.9	0.0	4.6	0.0	0.5	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.8	10.5	10.9	20.0	14.9	0.0	18.9	0.0	15.1	14.9	0.0	0.0
LnGrp LOS	B	B	B	C	B	A	B	A	B	B	A	A
Approach Vol, veh/h		259			818			283			16	
Approach Delay, s/veh		10.7			14.9			18.5			14.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+R <sub>c</sub> ), s	16.0	10.0	23.0		16.0	10.0	23.0					
Change Period (Y+R <sub>c</sub> ), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	22.0	5.0	18.0		22.0	5.0	18.0					
Max Q Clear Time (g <sub>c+l1</sub> ), s	10.2	2.3	3.8		2.4	2.0	11.1					
Green Ext Time (p <sub>c</sub> ), s	0.7	0.0	1.0		0.0	0.0	3.0					
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			14.9									
HCM 6th LOS			B									

# HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius & Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑ ↗	↑ ↘	↗ ↙	↑ ↗	↑ ↘	↙ ↖	↑ ↗	↑ ↘	↙ ↖	↗ ↙	↖ ↖	↙ ↗
Traffic Volume (veh/h)	4	826	703	77	401	2	362	2	41	1	1	3
Future Volume (veh/h)	4	826	703	77	401	2	362	2	41	1	1	3
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	918	587	86	446	2	402	2	46	1	1	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	1146	511	160	1169	5	581	21	488	139	145	311
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3554	1585	1781	3628	16	1412	66	1529	194	455	973
Grp Volume(v), veh/h	4	918	587	86	218	230	402	0	48	5	0	0
Grp Sat Flow(s), veh/h/ln	1781	1777	1585	1781	1777	1867	1412	0	1595	1622	0	0
Q Serve(g_s), s	0.1	13.2	18.0	2.6	5.3	5.3	15.0	0.0	1.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	13.2	18.0	2.6	5.3	5.3	15.1	0.0	1.2	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.96	0.20		0.60
Lane Grp Cap(c), veh/h	160	1146	511	160	573	602	581	0	510	596	0	0
V/C Ratio(X)	0.03	0.80	1.15	0.54	0.38	0.38	0.69	0.00	0.09	0.01	0.00	0.00
Avail Cap(c_a), veh/h	160	1146	511	160	573	602	686	0	628	713	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.2	17.3	18.9	24.3	14.6	14.6	18.0	0.0	13.3	13.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	5.9	87.7	3.6	1.9	1.8	2.4	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.1	9.4	27.2	2.1	3.9	4.0	8.4	0.0	0.7	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.3	23.2	106.7	27.9	16.5	16.5	20.4	0.0	13.4	13.0	0.0	0.0
LnGrp LOS	C	C	F	C	B	B	C	A	B	B	A	A
Approach Vol, veh/h		1509			534			450			5	
Approach Delay, s/veh		55.7			18.3			19.7			13.0	
Approach LOS		E			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	22.8	10.0	23.0		22.8	10.0	23.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	22.0	5.0	18.0		22.0	5.0	18.0					
Max Q Clear Time (g_c+l1), s	17.1	4.6	20.0		2.1	2.1	7.3					
Green Ext Time (p_c), s	0.8	0.0	0.0		0.0	0.0	1.9					

## Intersection Summary

HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D

## HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius &amp; Vista

07/20/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑	↑↑		↑	↑		↔		
Traffic Volume (veh/h)	3	71	210	18	310	1	147	0	17	2	0	13
Future Volume (veh/h)	3	71	210	18	310	1	147	0	17	2	0	13
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No	No		No
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	79	16	20	344	1	163	0	19	2	0	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1701	759	164	1740	5	350	0	243	84	21	214
Arrive On Green	0.09	0.48	0.48	0.09	0.48	0.48	0.15	0.00	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1781	3554	1585	1781	3635	11	1400	0	1585	65	135	1397
Grp Volume(v), veh/h	3	79	16	20	168	177	163	0	19	16	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1868	1400	0	1585	1597	0	0
Q Serve(g_s), s	0.1	0.6	0.3	0.6	3.0	3.0	5.5	0.0	0.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.6	0.3	0.6	3.0	3.0	5.9	0.0	0.6	0.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.12		0.87
Lane Grp Cap(c), veh/h	164	1701	759	164	851	894	350	0	243	319	0	0
V/C Ratio(X)	0.02	0.05	0.02	0.12	0.20	0.20	0.47	0.00	0.08	0.05	0.00	0.00
Avail Cap(c_a), veh/h	164	1701	759	164	851	894	625	0	554	626	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.4	7.5	7.5	22.6	8.2	8.2	21.9	0.0	19.7	19.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.3	0.5	0.5	1.0	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.1	0.4	0.2	0.4	1.8	1.9	3.5	0.0	0.4	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.5	7.6	7.5	23.0	8.7	8.6	22.9	0.0	19.9	19.7	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C	A	B	B	A	A
Approach Vol, veh/h	98				365			182			16	
Approach Delay, s/veh	8.0				9.4			22.6			19.7	
Approach LOS		A			A			C			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+R <sub>c</sub> ), s	13.3	10.0	31.0		13.3	10.0	31.0					
Change Period (Y+R <sub>c</sub> ), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	19.0	5.0	26.0		19.0	5.0	26.0					
Max Q Clear Time (g_c+l1), s	7.9	2.6	2.6		2.5	2.1	5.0					
Green Ext Time (p_c), s	0.4	0.0	0.4		0.0	0.0	1.8					

Intersection Summary

HCM 6th Ctrl Delay

13.1

HCM 6th LOS

B

# HCM 6th Signalized Intersection Summary

3: Homerun/Scorpius & Vista

07/20/2018

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑↑	↑	↑↑↑	↑↑	↑	↑	↑	↑	↔	↔
Traffic Volume (veh/h)	1	483	427	43	616	2	324	0	45	3	4	2
Future Volume (veh/h)	1	483	427	43	616	2	324	0	45	3	4	2
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No		No		No	
Adj Sat Flow, veh/h/in	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	537	368	48	684	2	360	0	50	3	4	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1176	524	164	1202	4	559	0	478	211	264	111
Arrive On Green	0.09	0.33	0.33	0.09	0.33	0.33	0.30	0.00	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3635	11	1410	0	1585	409	874	366
Grp Volume(v), veh/h	1	537	368	48	334	352	360	0	50	9	0	0
Grp Sat Flow(s), veh/h/in	1781	1777	1585	1781	1777	1868	1410	0	1585	1649	0	0
Q Serve(g_s), s	0.0	6.5	11.0	1.4	8.4	8.4	12.8	0.0	1.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.5	11.0	1.4	8.4	8.4	13.0	0.0	1.2	0.2	0.0	0.0
Prop In Lane	1.00			1.00		0.01	1.00		1.00	0.33		0.22
Lane Grp Cap(c), veh/h	164	1176	524	164	588	618	559	0	478	586	0	0
V/C Ratio(X)	0.01	0.46	0.70	0.29	0.57	0.57	0.64	0.00	0.10	0.02	0.00	0.00
Avail Cap(c_a), veh/h	164	1176	524	164	588	618	1222	0	1224	1339	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.4	14.4	15.9	23.1	15.0	15.0	17.8	0.0	13.7	13.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.3	7.6	1.0	4.0	3.8	1.3	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/in	0.0	4.4	7.9	1.0	6.4	6.6	7.2	0.0	0.8	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.5	15.6	23.5	24.0	19.0	18.8	19.0	0.0	13.8	13.3	0.0	0.0
LnGrp LOS	C	B	C	C	B	B	B	A	B	B	A	A
Approach Vol, veh/h		906			734			410			9	
Approach Delay, s/veh		18.8			19.2			18.4			13.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	21.4	10.0	23.0		21.4	10.0	23.0					
Change Period (Y+Rc), s	5.0	5.0	5.0		5.0	5.0	5.0					
Max Green Setting (Gmax), s	42.0	5.0	18.0		42.0	5.0	18.0					
Max Q Clear Time (g_c+l1), s	15.0	3.4	13.0		2.2	2.0	10.4					
Green Ext Time (p_c), s	1.4	0.0	2.2		0.0	0.0	2.4					

## Intersection Summary

HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

## Intersection

Int Delay, s/veh 4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑	↓	↔	
Traffic Vol, veh/h	0	4	1	0	7	8
Future Vol, veh/h	0	4	1	0	7	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	1	0	8	9

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	26	1	0	0	1
Stage 1	1	-	-	-	-
Stage 2	25	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	989	1084	-	-	1622
Stage 1	1022	-	-	-	-
Stage 2	998	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	984	1084	-	-	1622
Mov Cap-2 Maneuver	984	-	-	-	-
Stage 1	1017	-	-	-	-
Stage 2	998	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1084	1622	-
HCM Lane V/C Ratio	-	-	0.004	0.005	-
HCM Control Delay (s)	-	-	8.3	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

**Intersection**

Int Delay, s/veh 4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		P		U	
Traffic Vol, veh/h	0	120	120	0	250	250
Future Vol, veh/h	0	120	120	0	250	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	133	133	0	278	278

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	967	133	0	0	133
Stage 1	133	-	-	-	-
Stage 2	834	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	282	916	-	-	1452
Stage 1	893	-	-	-	-
Stage 2	426	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	218	916	-	-	1452
Mov Cap-2 Maneuver	218	-	-	-	-
Stage 1	691	-	-	-	-
Stage 2	426	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1452
HCM Lane V/C Ratio	-	-	0.146	0.191
HCM Control Delay (s)	-	-	9.6	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.7

**Intersection**

Int Delay, s/veh 2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑		↔	
Traffic Vol, veh/h	0	15	21	0	69	117
Future Vol, veh/h	0	15	21	0	69	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	17	23	0	77	130

Major/Minor	Minor1	Major1	Major2	
Conflicting Flow All	307	23	0	0 23 0
Stage 1	23	-	-	- - -
Stage 2	284	-	-	- - -
Critical Hdwy	6.42	6.22	-	- 4.12 -
Critical Hdwy Stg 1	5.42	-	-	- - -
Critical Hdwy Stg 2	5.42	-	-	- - -
Follow-up Hdwy	3.518	3.318	-	- 2.218 -
Pot Cap-1 Maneuver	685	1054	-	- 1592 -
Stage 1	1000	-	-	- - -
Stage 2	764	-	-	- - -
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	649	1054	-	- 1592 -
Mov Cap-2 Maneuver	649	-	-	- - -
Stage 1	948	-	-	- - -
Stage 2	764	-	-	- - -

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1054	1592	-
HCM Lane V/C Ratio	-	-	0.016	0.048	-
HCM Control Delay (s)	-	-	8.5	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.2	-

Intersection

Int Delay, s/veh 5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		B			W
Traffic Vol, veh/h	0	120	56	0	168	80
Future Vol, veh/h	0	120	56	0	168	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	133	62	0	187	89

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	525	62	0	0	62
Stage 1	62	-	-	-	-
Stage 2	463	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	513	1003	-	-	1541
Stage 1	961	-	-	-	-
Stage 2	634	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	447	1003	-	-	1541
Mov Cap-2 Maneuver	447	-	-	-	-
Stage 1	838	-	-	-	-
Stage 2	634	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	5.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1003	1541
HCM Lane V/C Ratio	-	-	0.133	0.121
HCM Control Delay (s)	-	-	9.1	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.4

Intersection

Int Delay, s/veh 8.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		Y		Y	
Traffic Vol, veh/h	0	254	1	0	90	8
Future Vol, veh/h	0	254	1	0	90	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	282	1	0	100	9

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	210	1	0	0	1	0
Stage 1	1	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	778	1084	-	-	1622	-
Stage 1	1022	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	730	1084	-	-	1622	-
Mov Cap-2 Maneuver	730	-	-	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	826	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	6.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1084	1622
HCM Lane V/C Ratio	-	-	0.26	0.062
HCM Control Delay (s)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	1	0.2

**Intersection**

Int Delay, s/veh      6.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑		↓	
Traffic Vol, veh/h	0	285	120	0	531	250
Future Vol, veh/h	0	285	120	0	531	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	317	133	0	590	278

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1591	133	0	0	133
Stage 1	133	-	-	-	-
Stage 2	1458	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	118	916	-	-	1452
Stage 1	893	-	-	-	-
Stage 2	214	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	61	916	-	-	1452
Mov Cap-2 Maneuver	61	-	-	-	-
Stage 1	464	-	-	-	-
Stage 2	214	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	6.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1452
HCM Lane V/C Ratio	-	-	0.346	0.406
HCM Control Delay (s)	-	-	11	9.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.6	2

## Intersection

Int Delay, s/veh 5.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑	↓	↔	↔
Traffic Vol, veh/h	0	143	21	0	111	117
Future Vol, veh/h	0	143	21	0	111	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	159	23	0	123	130

Major/Minor	Minor1	Major1	Major2	
Conflicting Flow All	399	23	0	0 23 0
Stage 1	23	-	-	- - -
Stage 2	376	-	-	- - -
Critical Hdwy	6.42	6.22	-	- 4.12 -
Critical Hdwy Stg 1	5.42	-	-	- - -
Critical Hdwy Stg 2	5.42	-	-	- - -
Follow-up Hdwy	3.518	3.318	-	- 2.218 -
Pot Cap-1 Maneuver	607	1054	-	- 1592 -
Stage 1	1000	-	-	- - -
Stage 2	694	-	-	- - -
Platoon blocked, %		-	-	-
Mov Cap-1 Maneuver	557	1054	-	- 1592 -
Mov Cap-2 Maneuver	557	-	-	- - -
Stage 1	917	-	-	- - -
Stage 2	694	-	-	- - -

Approach	WB	NB	SB
HCM Control Delay, s	9	0	3.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBL	Ln1	SBL	SBT
Capacity (veh/h)	-	-	1054	1592	-	-
HCM Lane V/C Ratio	-	-	0.151	0.077	-	-
HCM Control Delay (s)	-	-	9	7.5	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-	-

## Intersection

Int Delay, s/veh 7.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		P		L	
Traffic Vol, veh/h	0	313	56	0	394	80
Future Vol, veh/h	0	313	56	0	394	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	348	62	0	438	89

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1027	62	0	0	62
Stage 1	62	-	-	-	-
Stage 2	965	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	260	1003	-	-	1541
Stage 1	961	-	-	-	-
Stage 2	370	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	182	1003	-	-	1541
Mov Cap-2 Maneuver	182	-	-	-	-
Stage 1	674	-	-	-	-
Stage 2	370	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	6.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1003	1541
HCM Lane V/C Ratio	-	-	0.347	0.284
HCM Control Delay (s)	-	-	10.5	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.6	1.2

Intersection

Int Delay, s/veh 8.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		P		↑	
Traffic Vol, veh/h	0	250	4	0	83	7
Future Vol, veh/h	0	250	4	0	83	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	278	4	0	92	8

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	196	4	0	0	4
Stage 1	4	-	-	-	-
Stage 2	192	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	793	1080	-	-	1618
Stage 1	1019	-	-	-	-
Stage 2	841	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	748	1080	-	-	1618
Mov Cap-2 Maneuver	748	-	-	-	-
Stage 1	961	-	-	-	-
Stage 2	841	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	6.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1618	-
HCM Lane V/C Ratio	-	-	0.257	0.057	-
HCM Control Delay (s)	-	-	9.5	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	1	0.2	-

Intersection

Int Delay, s/veh 4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	165	120	0	281	250
Future Vol, veh/h	0	165	120	0	281	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	183	133	0	312	278

Major/Minor	Minor1	Major1	Major2	
Conflicting Flow All	1035	133	0	0 133 0
Stage 1	133	-	-	- -
Stage 2	902	-	-	- -
Critical Hdwy	6.42	6.22	-	- 4.12 -
Critical Hdwy Stg 1	5.42	-	-	- -
Critical Hdwy Stg 2	5.42	-	-	- -
Follow-up Hdwy	3.518	3.318	-	- 2.218 -
Pot Cap-1 Maneuver	257	916	-	- 1452 -
Stage 1	893	-	-	- -
Stage 2	396	-	-	- -
Platoon blocked, %		-	-	-
Mov Cap-1 Maneuver	192	916	-	- 1452 -
Mov Cap-2 Maneuver	192	-	-	- -
Stage 1	666	-	-	- -
Stage 2	396	-	-	- -

Approach	WB	NB	SB	
HCM Control Delay, s	9.9	0	4.3	
HCM LOS	A			

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1452	-
HCM Lane V/C Ratio	-	-	0.2	0.215	-
HCM Control Delay (s)	-	-	9.9	8.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.8	-

Intersection

Int Delay, s/veh 5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑		←	
Traffic Vol, veh/h	0	128	15	0	42	69
Future Vol, veh/h	0	128	15	0	42	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	142	17	0	47	77

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	188	17	0	0	17
Stage 1	17	-	-	-	-
Stage 2	171	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	801	1062	-	-	1600
Stage 1	1006	-	-	-	-
Stage 2	859	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	776	1062	-	-	1600
Mov Cap-2 Maneuver	776	-	-	-	-
Stage 1	975	-	-	-	-
Stage 2	859	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	2.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1062	1600	-
HCM Lane V/C Ratio	-	-	0.134	0.029	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection

Int Delay, s/veh 5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	↑		↑	↓
Traffic Vol, veh/h	0	193	120	0	226	168
Future Vol, veh/h	0	193	120	0	226	168
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	214	133	0	251	187

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	822	133	0	0	133
Stage 1	133	-	-	-	-
Stage 2	689	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	344	916	-	-	1452
Stage 1	893	-	-	-	-
Stage 2	498	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	278	916	-	-	1452
Mov Cap-2 Maneuver	278	-	-	-	-
Stage 1	721	-	-	-	-
Stage 2	498	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	4.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1452	-
HCM Lane V/C Ratio	-	-	0.234	0.173	-
HCM Control Delay (s)	-	-	10.1	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.9	0.6	-