INTRODUCTION

This Errata documents a revision to the Final EIR to include analysis of an additional alternative to the proposed project. This alternative, Revised Project C Alternative, would remove the proposed project's turn restrictions to and from the westbound direction on Malcolm Dixon Road. This alternative was developed based on input from County staff and the Planning Commission to reduce traffic impacts at Malcolm Dixon (Chartraw) at Green Valley Road. As demonstrated below, the Revised Project C Alternative would reduce two potentially significant impacts to a less than significant level and would not result in any new significant environmental impacts nor would it increase the severity of any anticipated significant environmental impacts.

As demonstrated by the following discussion, the modification to the EIR does not result in new significant impacts and does not warrant recirculation of the EIR.

BASIS FOR AN ERRATA TO THE FINAL EIR

CEQA Guidelines Section 15088.5 requires that an EIR that has been made available for public review, but not yet certified, be recirculated only if significant new information has been added to the EIR. The relevant paragraphs (a) and (ed) of CEQA Guidelines Section 15088.5 are provided below in italics:

> *15088.5. RECIRCULATION OF AN EIR PRIOR TO CERTIFICATION*
>
> *(a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include, for example, a disclosure showing that:*
>
> > *(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.*
> >
> > *(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.*
> >
> > *(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.*
> >
> > *(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043)*
> >
> > *…*

(e) A decision not to recirculate an EIR must be supported by substantial evidence in the administrative record.

The information contained in this Errata to the Final EIR presents a feasible project alternative that differs from the alternatives previously analyzed, Revised Project C Alternative. The Revised Project C Alternative would reduce potential impacts as discussed below. The project's proponents have agreed to implement the Revised Project C Alternative. No new significant impacts would result from the Revised Project C Alternative and there is no substantial increase in the severity of environmental impacts associated with Revised Project C Alternative. In addition, the modifications to the EIR are not significant because the EIR is not changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project. Based on the above, the clarification to the EIR would not result in any new significant impacts or a substantial increase in the severity of any impact already identified in the EIR. Thus, none of the conditions in Section 15088.5 of the CEQA Guidelines are met, and recirculation is not required.

The analysis provided herein along with Appendix A (Project Trip Redistribution Analysis) provides substantial evidence that the Revised Project Alternative C would reduce two potential impacts associated with project traffic at study area intersections and further demonstrates that intersections that would experience an increase in traffic would not be significantly impacted.

REVISIONS TO THE FINAL EIR

The following change is made to page 3.0-1 in Chapter 3, Errata, of the Final EIR.

EXECUTIVE SUMMARY

~~No changes were made to Chapter ES of the Draft EIR.~~The following change is made to pages ES-3 and ES-4 of the Draft EIR:

ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require an EIR to describe a reasonable range of alternatives to the project or to the location of the project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed project. Four~~Three~~ alternatives to the proposed project were developed based on input from County staff and the technical analysis performed to identify the environmental effects of the proposed project. The alternatives analyzed in this EIR include the following ~~three~~four alternatives in addition to the proposed project.

- No Project (Diamante Estates) Alternative;
- Revised Project A Alternative;
- Revised Project B Alternative~~.~~; and
- Revised Project C Alternative.

Alternatives are described in detail in Chapter 5. Table ES-1 provides a comparison of the alternatives using a qualitative matrix that compares each alternative relative to the other project alternatives. As shown in the table, the No Project (Diamante Estates) Alternative would reduce impacts in seven areas, would increase impacts in four areas, and would have equal impacts in one area. The Revised

Project A Alternative would reduce impacts in two areas and would have equal impacts in nine areas. The Revised Project B Alternative would reduce impacts in nine areas and would have equal impacts in two areas. The Revised Project Alternative C would reduce impacts in three areas and have equal impacts in eight areas. Therefore, the Revised Project B Alternative is the environmentally superior alternative to the proposed project.

TABLE ES-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*NO PROJECT (DIAMANTE ESTATES) ALTERNATIVE*	*REVISED PROJECT A ALTERNATIVE*	*REVISED PROJECT B ALTERNATIVE*	*REVISED PROJECT C ALTERNATIVE*
Aesthetics and Visual Resources	Less	Equal	Less	Equal
Air Quality	Less	Equal	Less	Equal
Biological Resources	Greater	Less	Less	Less
Cultural and Tribal Resources	Greater	Less	Less	Less
Geology and Soils	Less	Equal	Equal	Equal
Greenhouse Gas and Energy	Less	Equal	Less	Equal
Hazards and Hazardous Materials	Equal	Equal	Less	Equal
Hydrology and Water Quality	Greater	Equal	Less	Equal
Noise	Less	Equal	Less	Equal
Public Services	Less	Equal	Less	Equal
Transportation and Circulation	Less	Equal	Equal	Less
Utilities	Greater	Equal	Less	Equal

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT
LESS = DECREASED IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

The following change is made to pages 3.0-8 and 3.0-9 in Chapter 3, Errata, of the Final EIR.

Mitigation Measure 3.7-4: *The Wildland Fire Safe Plan (Vineyards at El Dorado Hills Draft EIR, Appendix G.1.) shall be prepared by a qualified professional as approved by the El Dorado County Fire Prevention Officers Association and shall be approved by the local Fire Protection District having jurisdiction and/or California Department of Forestry and Fire Protection. The Wildland Fire Safe Plan shall be adhered to throughout all phases of project construction, development, and operation.*

This project shall provide a funding mechanism to ensure the maintenance of all emergency access roadways, gates, and vegetative clearances as required by the Wildland Fire Safe Plan, and any required fire access components.

The Wildland Fire Safe Plan shall provide mitigations that reduce the spread of fire from homes to the wildland and from the wildland to homes, as well as to protect evacuation routes and emergency firefighting components.

All improvement plans submitted for the project shall incorporate the applicable measures of the Wildland Fire Safe Plan, including measures ~~as~~ described below or comparable measures.

Grading Plans (site preparation) *– All grading plans shall incorporate the requirements of the Wildland Fire Safe Plan. It is noted that the Wildland Fire Safe Plan improvements may be phased and completed in conjunction with grading and site preparation efforts for individual phases of the project, but shall be completed for all open space areas abutting residential lots associated with an individual phase.*

Grading and Improvement Plans (individual residential lots). *All grading and improvement plans shall be consistent with the Wildland Fire Safe Plan and applicable state and local regulations and shall be submitted to the El Dorado Hills Fire Department and El Dorado County for review and approval.*

Individual Homeowner Responsibility. *All purchasers of residential lots shall be provided with a copy of the Wildland Fire Safe Plan and shall sign an agreement to comply with the requirements of the Wildland Fire Safe Plan and applicable requirements of federal, state, and local regulations. This requirement shall be recorded against the property and shall apply to all subsequent property owners and shall include the following specifications.*

A. *Property shall be landscaped and maintained in perpetuity consistent with the fuel clearance and maintenance requirements described in the Wildland Fire Safe Plan.*

B. *All improvement plans, building permits, grading permits, and any fencing and access improvements (driveways, gates, etc.) shall be consistent with the the Wildland Fire Safe Plan and any applicable laws and regulations. Such permits and plans shall be submitted to El Dorado Hills Fire Department and El Dorado County for review for compliance with the Wildland Fire Safe Plan and applicable laws and regulations.*

Homeowner Association Responsibility. *The Homeowner Association, or other entity identified to the satisfaction of the County of El Dorado, shall be responsible for maintaining the fuel hazard reduction zones in the common open space areas and along the road. The common open space lots shall be maintained annually consistent with the Wildland Fire Safe Plan and any applicable requirements of state and local law. Maintenance shall include, but not be limited to:*

A. *Annually by June 1st, cut or remove all grass and brush to a 2" stubble within 50' along the inner property lines adjacent to the residential lots and 10' along streets/trails and 100' along Malcolm Dixon Road adjacent to the project perimeter.*

B. *Remove all gray pines, all dead trees, and all fallen dead trees and dead tree limbs within 100' of all property lines.*

C. *Remove all dead limbs from live trees that are within 10' of the ground.*

D. *Limb all trees within 30' of the inner property lines at least 8' above the ground as measured on the uphill side of the tree.*

E. *Open space areas may be landscaped and irrigated. Natural areas will follow the open space guidelines for fuel treatment.*

F. *Maintain the oaks in the open space areas as to the following specifications: (a) remove all dead limbs and stems and (b) cut off green stems at 8' above the ground that arch over and are growing down towards the ground. Measure from the uphill side of the tree to determine the appropriate height.*

G. *Permanent wet areas within the open space lots may be allowed to have a variety of vegetation provided the wet areas are isolated with a fuel hazard reduction zone if outside of an existing fuel hazard reduction zone.*

H. *The Homeowner Association shall coordinate with the El Dorado Hills Fire Department for review of the Wildland Fire Safe Plan within five years to determine its adequacy. Any modifications required by the El Dorado Hills Fire Department shall be implemented as necessary.*

The following change is made to page 3.0-19 in Chapter 3, Errata, of the Final EIR.

5.0 ALTERNATIVES TO THE PROPOSED PROJECT

~~No changes were made to Chapter 5.0 of the Draft EIR.~~ The following change is made to pages 5.0-4 and 5.0-5 of the Draft EIR:

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

Four~~Three~~ alternatives to the proposed project were developed based on El Dorado County staff input, input from the public during the NOP review period, and the technical analysis performed to identify the environmental effects of the proposed project. The alternatives analyzed in this EIR include the following ~~three~~four alternatives in addition to the proposed Vineyards at El Dorado Hills Project:

- No Project (Diamante Estates) Alternative;
- Revised Project A Alternative;
- Revised Project B Alternative~~.~~; and
- Revised Project C Alternative

NO PROJECT (DIAMANTE ESTATES) ALTERNATIVE

The CEQA Guidelines (Section 15126.6[e]) require consideration of a No Project Alternative that represents the existing conditions, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved. For purposes of this analysis, the No Project (Diamante Estates) Alternative assumes that the project site would be developed in accordance with the tentative subdivision map for the Diamante Estates Project, which was previously-approved by the County in October 2009. The Diamante Estates project included 19 single family lots, ranging in size from 5.0 to 9.9 acres, and one 2.2-acre open space lot. As part of the Diamante Estates approval, the project site was rezoned from Exclusive Agriculture (AE) to Estate Residential 5-acre (RE-5). The Diamante Estates project included public water service from EID and individual septic systems. The Diamante Estates project required LAFCO approval of annexation of the project site into both the EID and El Dorado Hills Fire Department boundaries.

REVISED PROJECT A ALTERNATIVE

Under the Revised Project A Alternative, the project site would be developed similar to the proposed project with up to 42 units, but some of the lots would be shifted in order to be outside of the required wetland buffers in the southern portion of the project site and to provide a buffer to the schoolhouse and associated outbuildings. Specifically, the lot boundaries for Lots 9, 20, and 21 would be shifted in order to be outside of the wetland buffers. Additionally, Lot 1 would be shifted in order to be outside of the wetland buffers and to provide a 25-foot buffer surrounding the schoolhouse and associated outbuildings. The proposed vineyard component, infrastructure improvements, and landscaping improvements would be the same as the proposed project.

REVISED PROJECT B ALTERNATIVE

Under the Revised Project B Alternative, the project site would be developed similar to the proposed project with up to 42 units, but the vineyard component of the proposed project would be eliminated. Instead, the vineyard areas would be maintained as open space. Additionally, the lot boundaries for Lots 1, 9, 20, and 21 would be shifted in order to be outside of the required wetland buffers and Lot 1 would be shifted to provide a 25-foot buffer to the schoolhouse and associated outbuildings. Some of the required tree replanting areas would be relocated along the length of Malcolm Dixon Road in order to provide visual screening, except in areas where wetlands and/or riparian habitat exists. Under this alternative, fencing would be provided around the schoolhouse area and a trail would loop around the schoolhouse. Signage would be provided along the trail loop that identifies the history of the schoolhouse and the project's location in the context of the old Coloma Road and the area's history. The proposed infrastructure and landscaping improvements would be the same as the proposed project.

REVISED PROJECT C ALTERNATIVE

Under the Revised Project C Alternative, the project site would be developed similar to the proposed project with up to 42 units.

This alternative would revise the project's access along Malcolm Dixon Road so that there would be no turn restrictions. Under this alternative, traffic would be able to exit the Project site and turn in the westbound direction onto Malcolm Dixon Road and traffic would be able to enter the project site from the westbound direction on Malcolm Dixon Road. This alternative has been developed to reduce intersection impacts, particularly those at Chartraw Road (Malcolm Dixon Road Cutoff Road), identified under Impact 3.11-1 in the Draft EIR.

This alternative would retain the features from Alternative A that shift some of the project's lots in order to be outside of the required wetland buffers in the southern portion of the project site and to provide a buffer to the schoolhouse and associated outbuildings. Specifically, the lot boundaries for Lots 9, 20, and 21 would be shifted in order to be outside of the wetland buffers. Additionally, Lot 1 would be shifted in order to be outside of the wetland buffers and to provide a 25-foot buffer surrounding the schoolhouse and associated outbuildings. The proposed vineyard component, infrastructure improvements, and landscaping improvements would be the same as the proposed project.

The following changes are made to pages 5.0-17 through 5.0-19 of the Draft EIR:

proposed project. The proposed project is estimated to generate up to 474 external vehicle trips on a daily basis, including 39 AM and 48 PM peak hour trips, respectively. However, the off-road vehicles and worker trips associated with the vineyards maintenance and operations would be eliminated; however, these trips were anticipated to be negligible in terms of transportation impacts. Therefore, impacts related to traffic and circulation would be comparable under this alternative when compared to the proposed project.

REVISED PROJECT C ALTERNATIVE

Aesthetics and Visual Resources

Under the Revised Project C Alternative, the project site would be developed similar to the proposed project with up to 42 units, but some of the lots would be shifted in order to be outside of the required wetland buffers in the southern portion of the project site. When compared to the proposed project, approximately the same area of the project site would be developed with residential uses. Developing the entire project site with an equal amount of residential units would likely result in buildings with comparable sizes as the proposed project. Additionally, the building setbacks from Malcolm Dixon Road under this alternative would be similar to the proposed project, which would equally impact the visual and aesthetic appeal of the site compared to the proposed project. Overall, this alternative would have equal impacts to aesthetics when compared to the proposed project.

Air Quality

As described in Chapter 3.2, implementation of the proposed project would generate emissions during both the construction phase and the operational phase. Construction related impacts would be similar under this alternative when compared to the proposed project, as the area of ground disturbance would be comparable, and the duration of construction would be comparable. Additionally, under this alternative, mobile source emissions would be equal to the project. Mobile source (vehicle emissions) are directly related to the number of vehicle trips generated by a project. Under this alternative, the 42 single-family units would generate an equal number of daily vehicle trips when compared to the proposed project, which would generate equal levels of pollutants from mobile sources. Therefore, the Revised Project C Alternative would have equal impacts related to air quality when compared to the proposed project.

Biological Resources

Potential impacts to biological resources are primarily related to the area proposed for disturbance and less on the type of urban uses that would occur on the project site. Under the Revised Project C Alternative, a similar amount of the project site would be disturbed when compared to the proposed project. However, under this alternative, the lot boundaries for Lots 9, 20, and 21 would be shifted in order to be outside of the wetland buffers. This would result in reduced impacts to the on-site wetlands and riparian habitat. As such, impacts associated with biological resources would be reduced when compared to the proposed project.

Cultural and Tribal Resources

Potential impacts to cultural resources are primarily related to the area proposed for disturbance and less to the type of urban uses that would occur on the project site. Under the Revised Project C Alternative, a similar amount of the project site would be disturbed when compared to the proposed project. However, under this alternative, Lot 1 would be shifted in order to be outside of the wetland buffers and outside of a 25-foot buffer surrounding the schoolhouse and associated outbuildings. By shifting Lot 1 in order to increase the buffer area surrounding the schoolhouse, impacts associated with cultural and tribal resources would be reduced when compared to the proposed project.

Geology and Soils

Under the Revised Project C Alternative, the project site would be developed similar to the proposed project with up to 42 units, but some of the lots would be shifted in order to be outside of the required wetland buffers in the southern portion of the project site. The future buildings allowed under this alternative would be exposed to the same level of risk from geologic hazards as the proposed project. As discussed further below, the number of residents resulting from this alternative would be equal to the proposed project. Because an equal number of people may be located on the project site under the Revised Project C Alternative, an equal number of people would be exposed to the risks from geologic hazards as compared to the proposed project. Therefore, this alternative would have equal impacts related to geology and soils when compared to the proposed project.

Greenhouse Gases and Energy

This alternative would result in an equal number of dwelling units as the proposed project over approximately the same area as the project. Implementation of the proposed project would generate GHG emissions during construction and operation. Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of a project. As noted previously, construction related impacts would be similar under this alternative when compared to the proposed project, as the area of ground disturbance would be comparable, and the duration of construction would be comparable.

The Revised Project C Alternative would be required to adhere to the same regulatory requirements as the project. Because an equal number of people would likely reside in the project site under this alternative, the operational greenhouse gas emissions would be similar to the proposed project. As such, the greenhouse gas emissions impact would be equal to the proposed project.

Hazards and Hazardous Materials

The Revised Project C Alternative is similar to the proposed project in that both the project and this alternative would result in future development of the entire project site with residential uses. This alternative would result in an equal number of people residing within the project site. As described in Chapter 3.7, construction activities may result in the use and transport of common hazardous materials, including oils, fuels, paints and solvents. This potential impact would still occur under the Revised Project C Alternative. Additionally, the operational phases of both the proposed project and the Revised Project C Alternative would not pose a significant hazard to the public or the environment. Future development under the Revised Project C Alternative would be subject to the City's General Plan policies and actions, and other local, state, and federal regulations pertaining to hazardous materials. This impact would be equal under this alternative when compared to the proposed project.

Hydrology and Water Quality

Under this alternative, a similar amount of land would be covered with impervious surfaces compared to the proposed project. Similar to the proposed project, stormwater would be directed to on-site detention basin(s), and the storm drainage system would be designed to ensure that post-construction runoff volumes do not exceed pre-development conditions. Because the alternative

would be required to implement improvements in order to manage and treat stormwater flows from the site, impacts related to water quality would be similar.

As described in Chapter 3.9, when the proposed project is developed, the on-site impervious area would increase, leading to faster runoff rates. The Revised Project C Alternative would provide a similar amount of impervious surface on-site as compared to the proposed project, which would also result in similar impacts related to rainfall infiltration and runoff during storm events as compared to the proposed project.

As described in Chapter 3.8, project implementation has the potential to result in the discharge of pollutants into detention basins and would change the existing drainage pattern on the site, although these impacts are less than significant as a result of compliance with local, state, and federal regulations. Under the Revised Project C Alternative, these impacts would be similar as the proposed project. Overall, potential impacts related to hydrology and water quality would be equal under the Revised Project C Alternative when compared to the proposed project.

Noise

As discussed in Chapter 3.9, the primary sources of noise associated with implementation of the proposed project are from increased vehicle trips on study area roadways in the project vicinity from on-site uses, and increased noise from future operation within the project site. Under this alternative, noise associated with vehicle trips is expected to be similar to the proposed project due to the comparable population, and other on-site noise sources would likely be comparable to those generated by the proposed project. The proposed project is estimated to generate approximately 474 new external vehicle trips on a daily basis. When compared to the proposed project, this alternative would result in an equal number of housing units. This alternative would generate an equal number of daily vehicle trips and peak hour trips, which would generate similar noise levels on area roadways. Similar to the proposed project, this alternative would expose future residential uses to noise sources. Therefore, this impact would be equal under this alternative when compared to the proposed project.

Utilities and Public Services

This alternative would result in an equal number of housing units as the project. As described in Chapter 3.10, implementation of the proposed project would result in an increase in demand for police and fire protection services, as well as increased demand for schools, parks, and other public facilities. As discussed previously, there would be an equal change in the population generated under this alternative when compared to the proposed project. As such, this alternative would have equal demand for public services compared to the proposed project. Therefore, impacts related to public services and recreation would be equal to the proposed project.

Development under the proposed project and the Revised Project C Alternative would result in an increase in wastewater generation, water demand, and solid waste generation within the project site. Because the Revised Project C Alternative would result in a population equal to the project, the wastewater generation, water demand, and solid waste generation would also be equal. This alternative would have equal impacts to utilities when compared to the proposed project.

Transportation and Circulation

As described above, this alternative would result in an equal number of total daily vehicle trips, AM peak hour trips, and PM peak hour trips when compared to the proposed project. The proposed project is estimated to generate up to 474 external vehicle trips on a daily basis, including 39 AM and 48 PM peak hour trips, respectively. The equal number of AM and PM peak hour trips under the Revised Project C Alternative would generate similar traffic levels on area roadways when compared to the proposed project. The redistribution of trips that would occur under the Revised Project C Alternative would reduce traffic impacts as described below.

TRIP DISTRIBUTION/ASSIGNMENT

The traffic analysis for the proposed project presented in Draft EIR Section 3.11, Transportation and Circulation, analyzed the trip distribution based on the proposed project's restriction of trips from traveling west along Malcolm Dixon Road and thus assumed that proposed project trips would use Chartraw Road (Malcolm Dixon Road Cutoff Road) to access Green Valley Road before continuing to their final destinations (to the west). Similarly, vehicles destined for the proposed project originating from the west were assigned to Green Valley Road to access Chartraw Road (Malcolm Dixon Road Cutoff Road) before reaching their final destination in the proposed project, thereby avoiding use of Malcolm Dixon Road west of the site due to the proposed project feature that would restrict left turns to the proposed project site from Malcolm Dixon Road. This primary trip routing assumption in the Draft EIR was documented to result in a concentration of project trips at the Green Valley Road intersection with Chartraw Road (Malcolm Dixon Road Cutoff Road) and also result in traffic impacts at the Green Valley intersection with Loch Way as discussed under Impact 3.11-1 on pages 3.11-17 through 3.11-22 in the Draft EIR.

Revised Project C Alternative would revise the proposed project to remove turning restrictions from the project's access points along Malcolm Dixon Road, which would allow vehicles traveling to and from the Project to travel along Malcolm Dixon Road west of the site. Allowing vehicles traveling to and from the proposed project to use Malcolm Dixon Road results in a localized redistribution of project trips. Kimley-Horn analyzed the effect of removing the turn restriction in the Project Trip Redistribution Analysis (Final EIR Appendix A). The analysis assumes ultimate origins and destinations remain the same as the analysis in the Draft EIR. However, trips have been redistributed to reflect the removal of the turning restriction from the proposed project and the trip distribution assumes that trips would optimize their routes for the lowest travel time based on known congestion, traffic control, and other factors that affect delay. The proposed project trip assignments from the originally completed traffic study used for the Draft EIR (Draft EIR Appendix H) served as a reference for the redistribution of proposed project trips through the study intersections.

INTERSECTION LOS IMPACTS

For Existing (2015) Conditions, Figure 5.0-3 summarizes the previously analyzed project trip assignment analyzed in Draft EIR Section 3.11, while Figure 5.0-4 summarizes the additional trip diversion that occurred during Existing (2015) plus Proposed Project Conditions as a result of the Chartraw Road construction. Figure 5.0-5 provides the localized redistribution of project trips for Existing (2015) Conditions under Revised Project C Alternative. For Near-Term (2025) Conditions, Figure 5.-6 provides a summary of the previously completed project trip assignment analyzed in

Draft EIR Section 3.11, and Figure 5.0-7 summarizes the localized redistribution of project trips under Revised Project Alternative C. Under the Revised Project C Alternative, impacts to Intersections #4 (Green Valley Road at Loch Way) and #5 Green Valley Rd. @ Malcolm Dixon Road Cutoff Road (Chartraw Rd) as described below.

Table 5.0-1 provides the intersection operating conditions for the Existing (2015), Existing (2015) Plus Project, and Existing (2015) Plus Revised Project C Alternative conditions. As indicated in Table 5.0-1, the study intersections operate from LOS A to LOS E under the Existing condition. As noted previously, the majority of the study facilities are located within the El Dorado Hills Community Region (LOS E threshold). Four study intersections (Intersections #6 through #8 and #14) are located along the El Dorado Hills Community Region Boundary and are, therefore, considered to be located within a Rural Region (LOS D threshold). Under the Existing (2015) Plus Revised Project C Alternative condition, the addition of project traffic would not result in unacceptable LOS conditions (i.e., worse than LOS E for Community Region and worse than LOS D for Rural Region) at any of the study intersections. Therefore, the Revised Project C Alternative would have a similar impact to the proposed project related to intersection LOS under the Existing (2015) Plus Project condition. It is further noted that while Revised Project C Alternative would increase project trips on Malcolm Dixon Road west of the project site, the increase would not result in a significant impact as shown in Table 5.0-1. Specifically, Intersection #9 (Malcolm Dixon Road at Allegheny Road) would continue to operate at LOS A during the AM and PM peak hours and Intersection #10 (Malcolm Dixon Road at Salmon Falls Road) would operate at LOS B during the AM and PM peak hours.

TABLE 5.0-1: INTERSECTION OPERATIONS – EXISTING (2015) PLUS PROJECT AND EXISTING (2015) PLUS REVISED PROJECT C ALTERNATIVE CONDITIONS

INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	EXISTING (2015)		EXISTING (2015) PLUS PROJECT		EXISTING (2015) PLUS REVISED PROJECT C ALTERNATIVE	
			DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS
1. Green Valley Rd. @ Francisco Dr.	Signal	AM	53.0	D	53.3	D	52.6	D
		PM	62.8	E	63.4	E	55.7	E
2. Green Valley Rd. @ El Dorado Hills Blvd. / Salmon Falls Rd.	Signal	AM	57.8	E	61.3	E	60.5	E
		PM	45.5	D	49.5	D	49.1	D
3. Green Valley Rd. @ Silva Valley Pkwy. / Allegheny Rd.	Signal	AM	25.8	C	26.3	C	26.2	C
		PM	19.1	B	19.7	B	19.5	B
4. Green Valley Rd. @ Loch Wy.	SSSC*	AM	1.0 (21.7 NB)	C	1.0 (23.8 NB)	C	1.0 (23.0 NB)	C
		PM	0.1 (29.1 NB)	D	0.7 (32.3 NB)	D	0.7 (30.6 NB)	D
5. Green Valley Rd. @ Wilson Connector (Chartraw Rd.)	SSSC*	AM	Plus Project Only		1.3 (21.6 SB)	C	0.8 (20.6 SB)	C
		PM			1.0 (31.9 SB)	D	0.7 (28.5 SB)	D
6. Green Valley Rd. @ Malcolm Dixon Rd.	SSSC*	AM	0.5 (15.1 SB)	C	0.1 (14.8 SB)	B	0.2 (16.3 SB)	C
		PM	0.6 (22.8 SB)	C	0.1 (18.2 SB)	C	0.2 (20.2 SB)	C
7. Malcolm Dixon Rd. (North) @ Chartraw Rd.	SSSC*	AM	Plus Project Only		5.1 (7.4 WB)	A	1.6 (8.6 SB)	A
		PM			2.5 (7.5 WB)	A	0.3 (8.7 SB)	A
8. Malcolm Dixon Rd. (South) @ Chartraw Rd.	SSSC*	AM	Plus Project Only		4.3 (9.0 EB)	A	3.7 (9.0 SB)	A
		PM			5.4 (9.5 EB)	A	4.9 (9.3 EB)	A
9. Malcolm Dixon Rd. @ Allegheny Rd.	SSSC*	AM	4.6 (9.8 NB)	A	4.8 (9.4 NB)	A	4.7 (9.7 NB)	A
		PM	4.1 (9.1 NB)	A	4.2 (9.1 NB)	A	3.6 (9.3 NB)	A
10. Malcolm Dixon Rd. @ Salmon Falls Rd.	SSSC*	AM	2.5 (12.0 WB)	B	2.2 (11.2 WB)	B	2.3 (11.5 WB)	B
		PM	1.3 (12.2 WB)	B	1.1 (11.6 WB)	B	1.3 (11.9 WB)	B
11. Silva Valley Pkwy. @ Appian Wy.	AWSC	AM	24.3	C	24.7	C	24.7	C
		PM	22.2	C	22.5	C	22.5	C
12. Silva Valley Pkwy. @ Harvard Wy.	Signal	AM	33.2	C	33.2	C	33.2	C
		PM	26.9	C	26.9	C	26.9	C

Intersection	Traffic Control	Peak Hour	Existing (2015)		Existing (2015) Plus Project		Existing (2015) Plus Revised Project C Alternative	
			Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
13. Silva Valley Pkwy. @ Golden Eagle Lane / Walker Park Dr.	AWSC	AM	44.0	E	44.2	E	44.2	E
		PM	14.5	B	14.5	B	14.5	B
14. Malcolm Dixon Rd. @ Wilson Estates / Project Driveway	SSSC*	AM	Plus Project Only		1.4 (9.3 SB)	A	1.8 (8.9 SB)	A
		PM			0.9 (9.2 SB)	A	2.8 (9.2 SB)	A

*Note: **Bold** indicates unacceptable operations. Shaded represents significant impact. * Side Street Stop Control (SSSC) intersections are reported with the intersection delay followed by the worst movement's delay. The reported LOS corresponds to the worst movement.*
Source: Kimley-Horn, 2016; Kimley-Horn, 2019.

Table 5.0-2 provides the intersection operating conditions for the Future (2025) Plus Project and Future (2015) Plus Revised Project C Alternative conditions. As shown in Table 5.0-2, the redistribution of trips under Revised Project C Alternative continues results in a significant impact at Intersection #2 (Green Valley Road @ El Dorado Hills Boulevard/Salmon Falls Road), although conditions are slightly improved in comparison to the proposed project. This impact can be mitigated through Mitigation Measure 3.11-1, as described under Impact 3.11-1 in Draft EIR Section 3.11. Though Intersection #4 and Intersection #5 operate unacceptably at LOS F for AM and PM peak-hour conditions, these intersections are not considered to be significantly impacted as the Revised Project C Alternative does not contribute ten or more trips to the intersections during peak-hours. Analysis worksheets for these intersections are provided as an appendix to the Project Trip Redistribution Analysis (Draft EIR Appendix H3). As shown in Table 5.0-2, when vehicles originating from or destined for the project site are no longer restricted from traveling along Malcolm Dixon Road west of the site, the localized redistribution of trips results in the elimination of the previously documented significant impacts at the Green Valley Road intersections with Loch Way (Intersection #4) and with Chartraw Road (Intersection #5) under Near-Term (2025) plus Revised Project C Alternative Conditions. Therefore, the Revised Project C Alternative would avoid the potentially significant impacts at these two intersections and Mitigation Measures 3.11-2 and 3.11-3 are not warranted under the Revised Project C Alternative. While Revised Project C Alternative would increase project trips on Malcolm Dixon Road west of the project site, the increase would not result in a significant impact as shown in Table 5.0-2. Specifically, Intersection #9 (Malcolm Dixon Road at Allegheny Road) would continue to operate at LOS A during the AM and PM peak hours and Intersection #10 (Malcolm Dixon Road at Salmon Falls Road) would operate at LOS B during the AM and PM peak hours.

Table 5.0-2: Intersection Operations – Future (2025) Plus Project Condition

Intersection	Traffic Control	Peak Hour	Future (2025)		Future (2025) Plus Project		Future (2015) Plus Revised Project C Alternative	
			Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1. Green Valley Rd. @ Francisco Dr.	Signal	AM	35.4	D	35.7	D	34.9	C
		PM	59.1	E	59.6	E	53.8	D
2. Green Valley Rd. @ El Dorado Hills Blvd. / Salmon Falls Rd.	Signal	AM	**98.7**	**F**	**102.2**	**F**	**101.2**	**F**
		PM	**98.9**	**F**	**105.2**	**F**	**103.3**	**F**
3. Green Valley Rd. @ Silva Valley Pkwy. / Allegheny Rd.	Signal	AM	32.3	C	33.6	C	33.7	C
		PM	31.4	C	33.2	C	32.3	C
4. Green Valley Rd. @ Loch Wy.	SSSC*	AM	1.5 (43.6 NB)	E	1.6 (46.6 NB)	E	1.6 (44.0 NB)	E
		PM	**1.0 (50.4 NB)**	**F**	**1.1 (54.7 NB)**	**F**	**1.0 (51.0 NB)**	**F**
5. Green Valley Rd. @ Wilson	SSSC*	AM	2.8 (48.3 SB)	E	**3.7 (54.1 SB)**	**F**	3.0 (49.3 SB)	E

Connector (Chartraw Rd.)		PM	1.5 **(71.2 SB)**	**F**	2.1 **(93.8 SB)**	**F**	**1.6 (73.7 SB)**	**F**
6. Green Valley Rd. @ Malcolm Dixon Rd.	SSSC*	AM	0.4 (22.7 SB)	C	0.4 (22.9 SB)	C	0.5 (24.5 SB)	C
		PM	0.1 (12.4 SB)	B	0.1 (12.5 SB)	B	0.2 (18.9 SB)	C
7. Malcolm Dixon Rd. (North) @ Chartraw Rd.	SSSC*	AM	2.0 (7.3 WB)	A	1.8 (7.3 WB)	A	5.8 (8.9 SB)	A
		PM	1.2 (7.4 WB)	A	1.1 (7.4 WB)	A	2.8 (9.0 SB)	A
8. Malcolm Dixon Rd. (South) @ Chartraw Rd.	SSSC*	AM	3.5 (8.9 EB)	A	4.1 (9.1 EB)	A	3.6 (9.0 EB)	A
		PM	2.9 (8.7 EB)	A	3.6 (8.8 EB)	A	2.9 (8.7 EB)	A
9. Malcolm Dixon Rd. @ Allegheny Rd.	SSSC*	AM	6.2 (9.5 NB)	A	6.2 (9.5 NB)	A	6.1 (9.7 NB)	A
		PM	6.1 (9.2 NB)	A	6.1 (9.2 NB)	A	5.8 (9.4 NB)	A
10. Malcolm Dixon Rd. @ Salmon Falls Rd.	SSSC*	AM	1.5 (10.4 WB)	B	1.5 (10.4 WB)	B	1.6 (10.6 WB)	B
		PM	1.2 (11.6 WB)	B	1.2 (11.6 WB)	B	1.3 (11.8 SB)	B
11. Silva Valley Pkwy. @ Appian Wy.	AWSC	AM	22.8	C	23.3	C	23.3	C
		PM	24.3	C	25.0	C	25.0	C
12. Silva Valley Pkwy. @ Harvard Wy.	Signal	AM	57.4	E	59.5	E	59.5	E
		PM	54.2	D	54.3	D	54.3	D
13. Silva Valley Pkwy. @ Golden Eagle Lane / Walker Park Dr.	AWSC	AM	48.4	E	48.6	E	48.6	E
		PM	24.3	C	24.6	C	24.6	C
14. Malcolm Dixon Rd. @ Wilson Estates / Project Driveway	SSSC*	AM	3.0 (8.5 NB)	A	4.1 (9.3 NB)	A	4.5 (8.7 SB)	A
		PM	3.3 (8.4 NB)	A	3.4 (9.3 NB)	A	4.8 (8.7 SB)	A

*NOTES: **BOLD** INDICATES UNACCEPTABLE OPERATIONS. SHADED REPRESENTS SIGNIFICANT IMPACT. * SIDE STREET STOP CONTROL (SSSC) INTERSECTIONS ARE REPORTED WITH THE INTERSECTION DELAY FOLLOWED BY THE WORST MOVEMENT'S DELAY. THE REPORTED LOS CORRESPONDS TO THE WORST MOVEMENT.*

SOURCE: KIMLEY-HORN, 2016; KIMLEY-HORN, 2019.

Under Revised Project C Alternative, impacts associated with roadway segment operations, bicycle and pedestrian facilities, public transit, and emergency access, are anticipated to be less than significant, comparable to the proposed project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project (Diamante Estates) Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed project.

Table 5.0-3~~1~~ presents a comparison of the alternative project impacts with those of the proposed Vineyards at El Dorado Hills Project.

TABLE 5.0-3~~1~~: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*NO PROJECT (DIAMANTE ESTATES) ALTERNATIVE*	*REVISED PROJECT A ALTERNATIVE*	*REVISED PROJECT B ALTERNATIVE*	*REVISED PROJECT C ALTERNATIVE*
Aesthetics and Visual Resources	Less	Equal	Less	Equal
Air Quality	Less	Equal	Less	Equal
Biological Resources	Greater	Less	Less	Less
Cultural and Tribal Resources	Greater	Less	Less	Less
Geology and Soils	Less	Equal	Equal	Equal
Greenhouse Gas and Energy	Less	Equal	Less	Equal
Hazards and Hazardous Materials	Equal	Equal	Less	Equal
Hydrology and Water Quality	Greater	Equal	Less	Equal
Noise	Less	Equal	Less	Equal
Public Services	Less	Equal	Less	Equal
Transportation and Circulation	Less	Equal	Equal	Less

Environmental Issue	*No Project (Diamante Estates) Alternative*	*Revised Project A Alternative*	*Revised Project B Alternative*	*Revised Project C Alternative*
Utilities	Greater	Equal	Less	Equal

Greater = Greater impact than that of the proposed project
Less = Decreased impact than that of the proposed project
Equal = No Substantial Change in impact from that of the proposed project

As shown in the table, the No Project (Diamante Estates) Alternative would reduce impacts in seven areas, would increase impacts in four areas, and would have equal impacts in one area. The Revised Project A Alternative would reduce impacts in two areas and would have equal impacts in nine areas. The Revised Project B Alternative would reduce impacts in nine areas and would have equal impacts in two areas. The Revised Project Alternative C would reduce impacts in three areas and have equal impacts in eight areas. Therefore, the Revised Project B Alternative is the environmentally superior alternative to the proposed project.

5.4 Comparative Evaluation of the Project and Alternatives to Satisfy Project Objectives

This section examines how each of the alternatives selected for more detailed analysis meets the project objectives.

- *Create a high-quality residential development that is consistent with the General Plan.*

The No Project (Diamante Estates) Alternative would satisfy this project objective because under this alternative, the project site would be developed in accordance with the tentative subdivision map for the Diamante Estates Project, which was previously-approved by the County in October 2009. The Diamante Estates project included 19 single family lots, ranging in size from 5.0 to 9.9 acres, and one 2.2-acre open space lot. This density is consistent with the General Plan. The Revised Project A Alternative, ~~and~~ Revised Project B Alternative, and Revised Project C Alternative would also meet this objective because these alternatives would provide high-quality residential development that is consistent with the General Plan.

- *Emphasize preservation of open space, oak woodlands, natural habitat and wetlands, existing topography, and the schoolhouse site through clustering residential units in order to minimize impacts to open space and habitat on the project site and to receive the associated density bonus.*

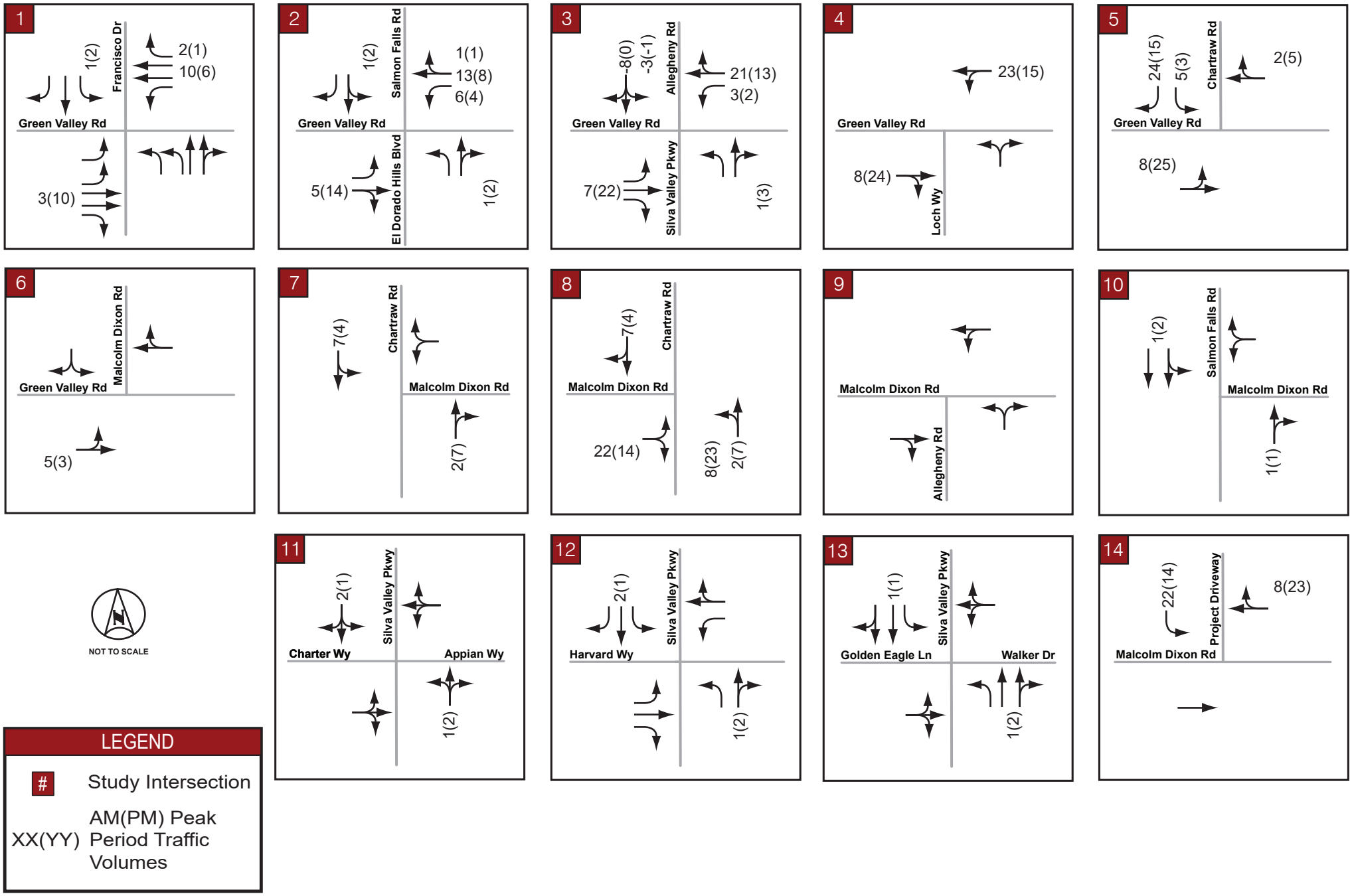
The No Project (Diamante Estates) Alternative would not satisfy this project objective because the tentative subdivision map for the Diamante Estates Project does not include clustered residential areas. Less open space, oak woodlands, natural habitat, and wetlands would be preserved under the No Project (Diamante Estates) Alternative. Further, the No Project (Diamante Estates) Alternative would not receive the density bonus. The Revised Project A Alternative, ~~and~~ Revised Project B Alternative, and Revised Project C Alternative would meet this objective because these alternatives would cluster residential units in order to preserve open space, oak woodlands, natural habitat, and wetlands. These alternatives would also receive the density bonus.

- *Provide community resources through creation of a public trail that traverses the project site and connects to the public road system.*

The No Project (Diamante Estates) Alternative would not satisfy this project objective because this alternative would not create a public trail that traverses the site and connects to the public road system. The Revised Project A Alternative, ~~and~~ Revised Project B Alternative, and Revised Project C Alternative would meet this objective because these alternatives would include creation of a public trail.

- *Redesign the approved Diamante Estates project to reduce impacts associated with wetland disturbance, loss of open space, and water supply and to incorporate community-oriented features, including a public trail.*

The No Project (Diamante Estates) Alternative would not satisfy this project objective because under this alternative, the project site would be developed in accordance with the tentative subdivision map for the Diamante Estates Project. Impacts associated with wetland disturbance, loss of open space, and water supply would not be reduced under the No Project (Diamante Estates) Alternative. The Revised Project A Alternative, ~~and~~ Revised Project B Alternative, and Revised Project C Alternative would meet this objective because these alternatives would redesign the approved Diamante Estates project in order to reduce impacts associated with wetland disturbance, loss of open space, and water supply. The Revised Project A Alternative, ~~and~~ Revised Project B Alternative, and Revised Project C Alternative would also incorporate community-oriented features.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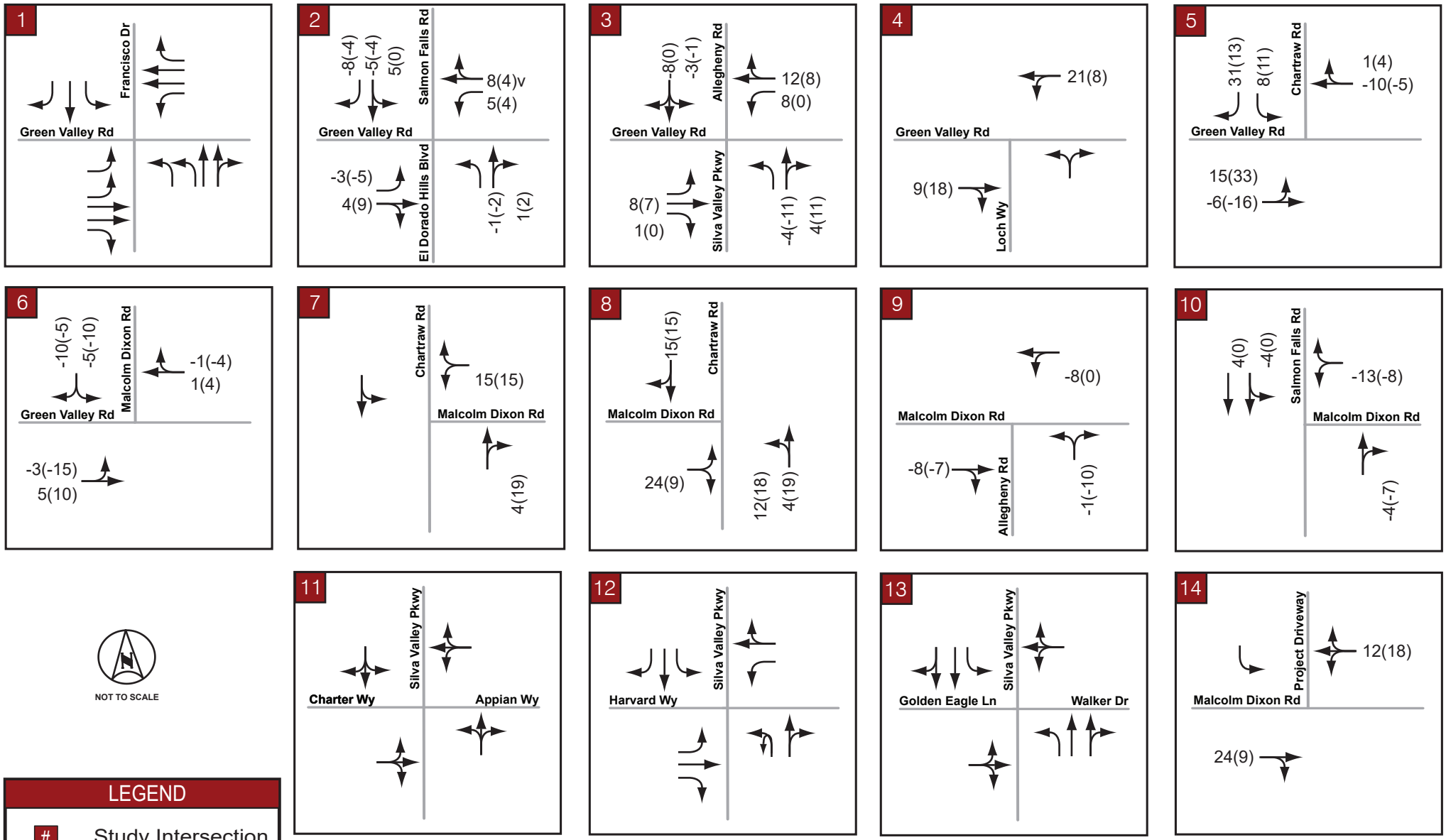
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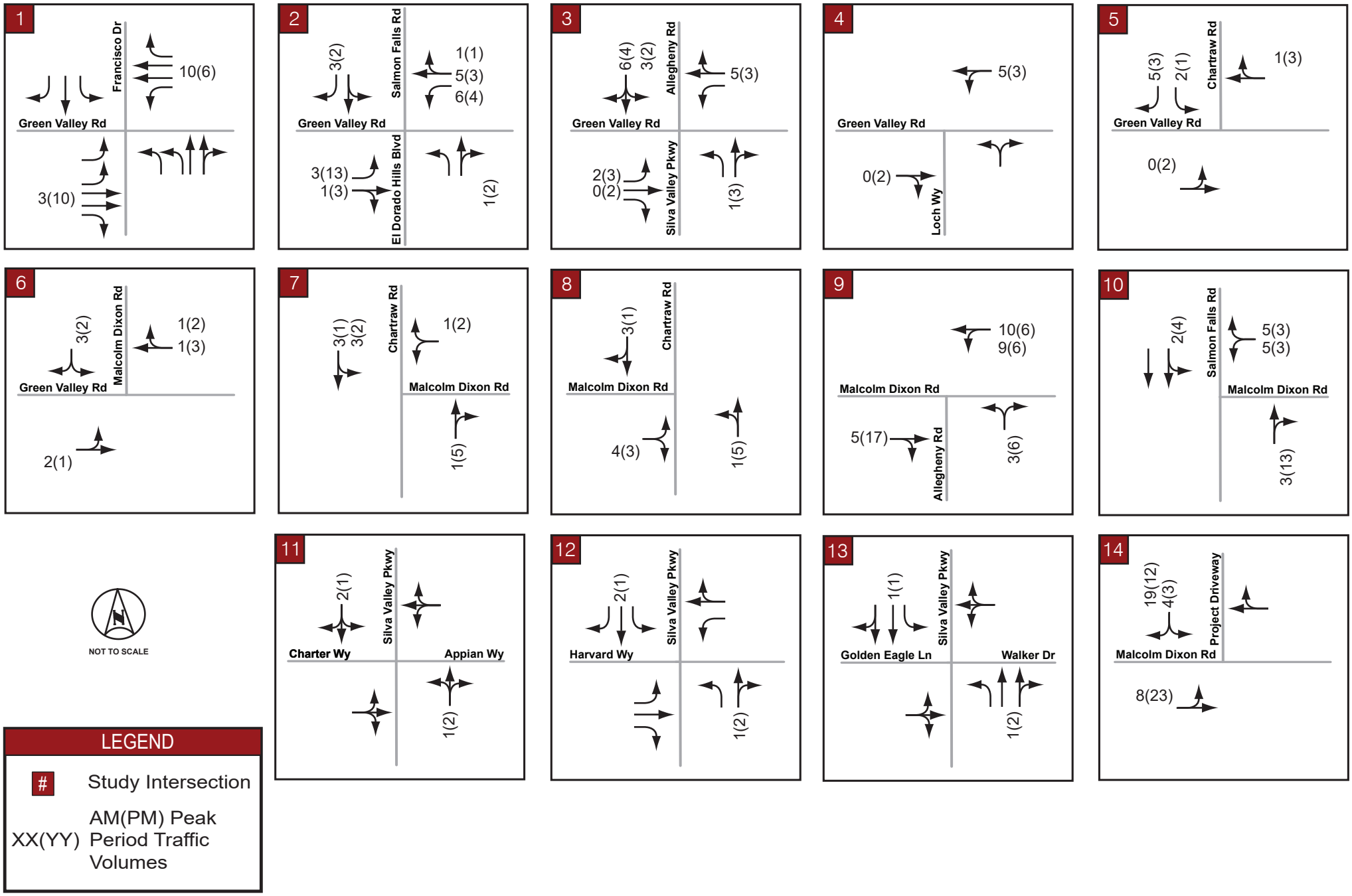
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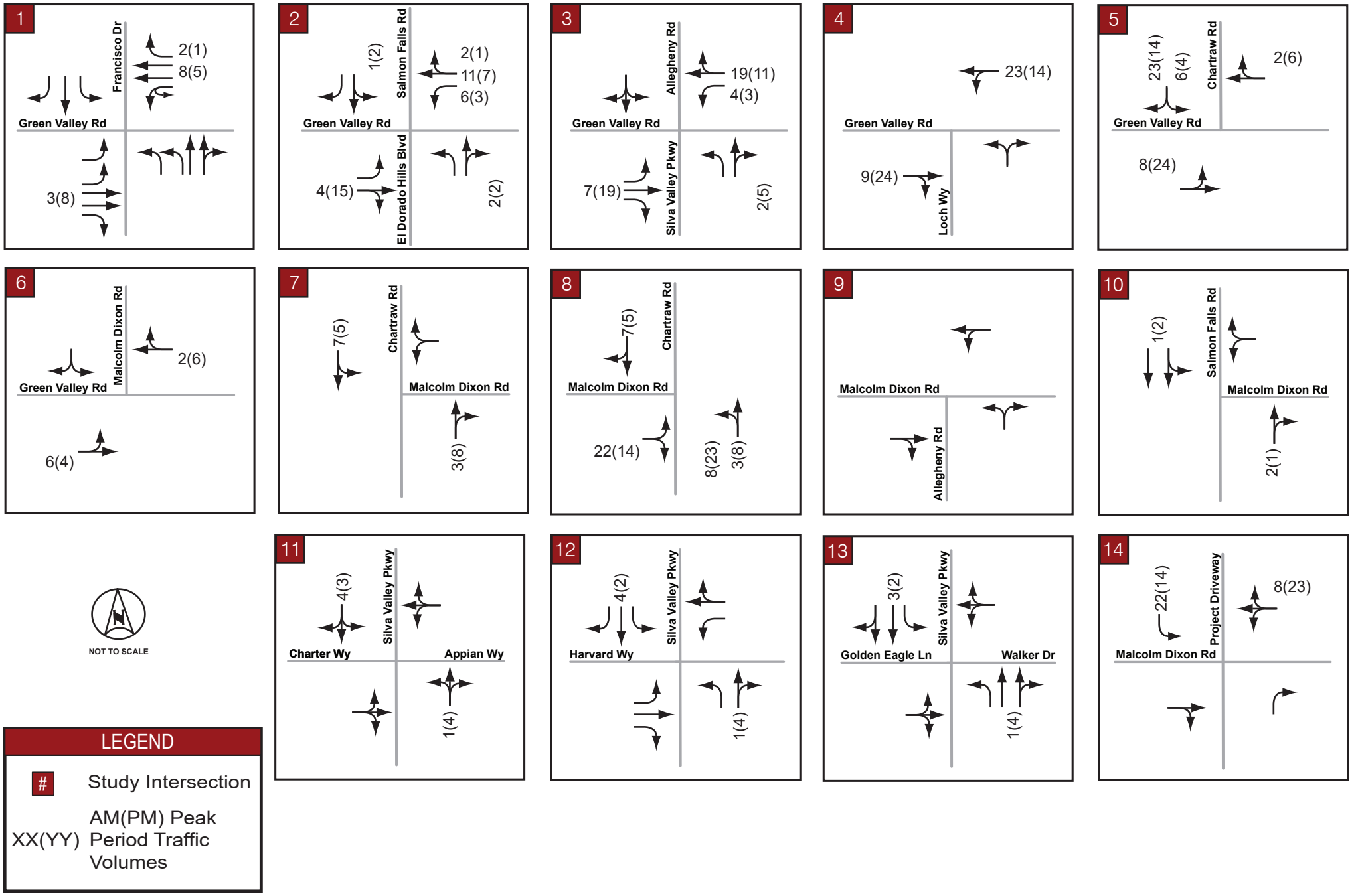
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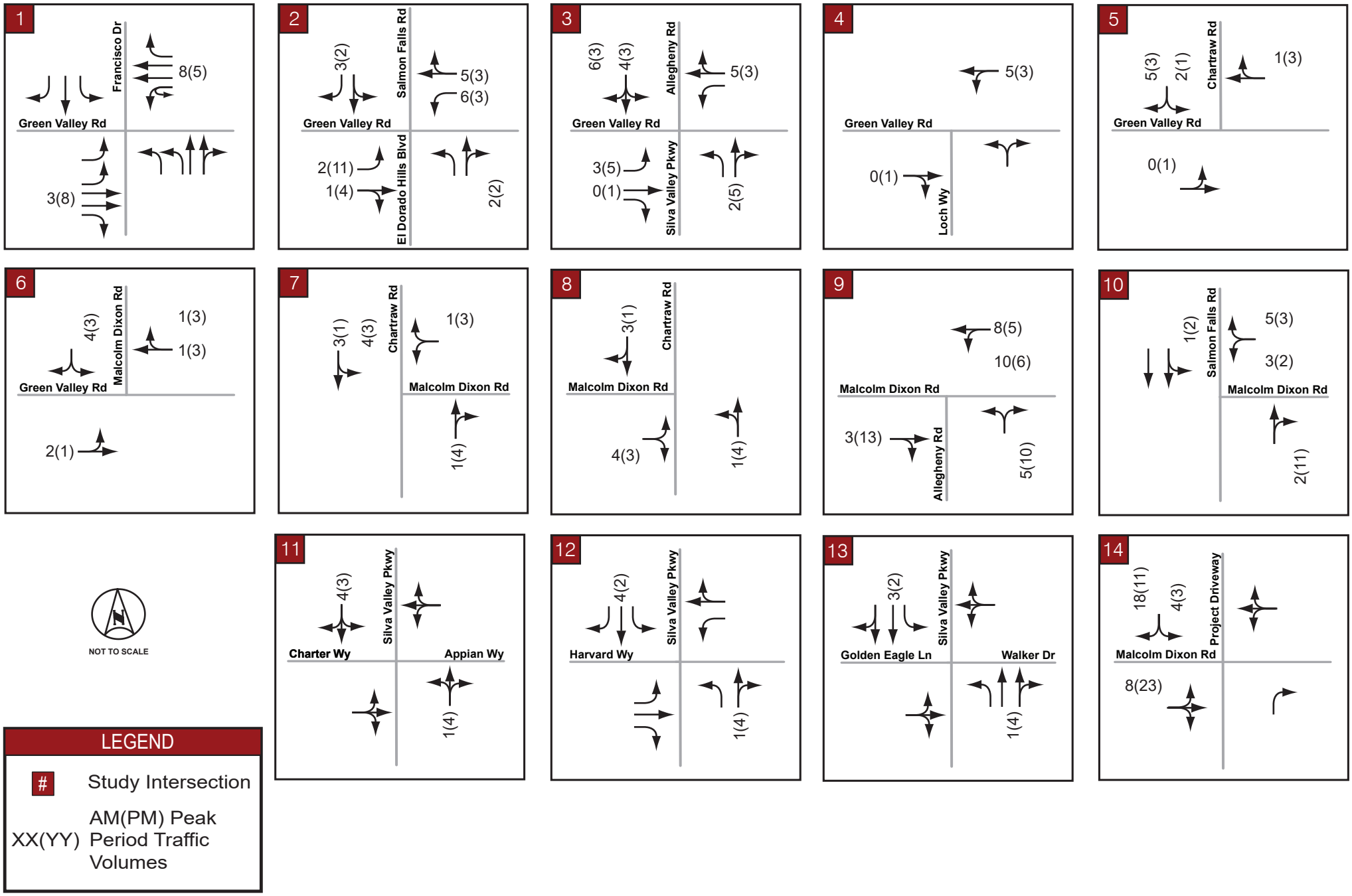

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Draft EIR Figure 5.0-7

Revised Project C Alternative Near-Term (2025) Project Trip Assignment

Draft EIR Appendix H3

Project Trip Redistribution Analysis

Kimley Horn – November 7, 2019

Kimley»Horn

Memorandum

To: Martin Boon, Orbis Financial, LLC

From: Matt Weir, P.E., T.E., PTOE
Alyssa Swanson, EIT

Re: **Project Trip Redistribution Analysis**
Vineyards at El Dorado Hills

Date: November 7, 2019

Per your request and as directed by the County, we have prepared this memorandum to summarize the findings of our revised assessment of the distribution of proposed project's trips through the study intersections. As you are aware, the purpose of this analysis was to determine if reasonable, revised traffic analysis assumptions could be applied to alleviate the project's previously documented significant impacts at study intersections under Existing (2015) and Near-Term (2025) Conditions. This analysis relies on the underlying methodologies and is based on the results summarized in the originally completed traffic study for the proposed project[1]. In addition, it is assumed that no modifications to the project itself are being considered that would affect the trip generation characteristics, and that the global trip distribution scheme is also unchanged.

The originally completed traffic analysis for the proposed project assumed that project trips would be restricted from traveling west along Malcolm Dixon Road, and instead would use Chartraw Road (Connector Road) to access Green Valley Road before continuing to their final destinations (to the west). The reverse was also assumed whereby vehicles destined for the proposed project originating from the west would use Green Valley Road to access Chartraw Road before reaching their final destination in the proposed project, thereby avoiding use of Malcolm Dixon Road west of the site. This primary trip routing assumption was originally applied for a variety of reasons; however, it was documented to result in a concentration of project trips at the Green Valley Road intersection with Chartraw Road. The revised analysis documented in this memorandum instead assumes that no such restrictions are in place, and vehicles traveling to and from the proposed project may travel along Malcolm Dixon Road west of the site.

Allowing vehicles traveling to and from the proposed project to use Malcolm Dixon Road results in a localized redistribution of project trips. While assuming that ultimate origins and destinations remain the same as the previously completed analysis, the redistribution completed for this analysis was undertaken assuming that project trips would optimize their routes for the lowest travel time based on known congestion, traffic control, and other factors that affect delay. The project trip assignments from the originally completed traffic study served as a reference for the redistribution of project trips through the study intersections. For Existing (2015) Conditions, **Exhibit 1** summarizes the previously analyzed project trip assignment, while **Exhibit 2** summarizes the additional trip diversion that occurred during Existing (2015) plus Proposed Project Conditions as a result of the Chartraw Road construction. **Exhibit 3** provides the localized redistribution of project trips for Existing (2015) Conditions. For Near-Term (2025) Conditions, **Exhibit 4** provides a summary of the previously completed project trip assignment, and **Exhibit 5** summarizes the localized redistribution of project trips.

[1] *Transportation Impact Study, Vineyards at El Dorado Hills (WO#30)*, Kimley-Horn and Associates, Inc., November 11, 2016.

The study intersections were reanalyzed for Existing (2015) plus Proposed Project Conditions and Near-Term (2025) plus Proposed Project Conditions. Table 1 and Table 2 provide the intersection levels of service under these revised conditions for Existing (2015) Conditions and Near-Term (2025) Conditions, respectively.

Table 1 – Existing (2015) Intersection Levels of Service with Project Trip Redistribution

ID	Intersection	Control	Peak Hour	Existing (2015)		Existing (2015) plus Project	
				Delay (sec)	LOS	Delay (sec)	LOS
1	Green Valley Rd @ Francisco Dr	Signal	AM	53.0	D	52.6	D
			PM	62.8	E	55.7	E
2	Green Valley Rd @ El Dorado Hills Blvd/Salmon Falls Rd	Signal	AM	57.8	E	60.5	E
			PM	45.5	D	49.1	D
3	Green Valley Rd @ Silva Valley Pkwy/Allegheny Rd	Signal	AM	25.8	C	26.2	C
			PM	19.1	B	19.5	B
4	Green Valley Rd @ Loch Way	SSSC*	AM	1.0 (21.7 NB)	C	1.0 (23.0 NB)	C
			PM	0.7 (29.1 NB)	D	0.7 (30.6 NB)	D
5	Green Valley Rd @ Chartraw Rd	SSSC*	AM	*plus Project Only*		0.8 (20.6 SB)	C
			PM			0.7 (28.5 SB)	D
6	Green Valley Rd @ Malcolm Dixon Rd	SSSC*	AM	0.5 (15.1 SB)	C	0.2 (16.3 SB)	C
			PM	0.6 (22.8 SB)	C	0.2 (20.2 SB)	C
7	Malcolm Dixon Rd (N) @ Chartraw Rd	SSSC*	AM	*plus Project Only*		1.6 (8.6 SB)	A
			PM			0.3 (8.7 SB)	A
8	Malcolm Dixon Rd (S) @ Chartraw Rd	SSSC*	AM	*plus Project Only*		3.7 (9.0 EB)	A
			PM			4.9 (9.3 EB)	A
9	Malcolm Dixon Rd @ Allegheny Rd	SSSC*	AM	4.6 (9.8 NB)	A	4.7 (9.7 NB)	A
			PM	4.1 (9.1 NB)	A	3.6 (9.3 NB)	A
10	Salmon Falls Rd @ Malcolm Dixon Rd	SSSC*	AM	2.5 (12.0 WB)	B	2.3 (11.5 WB)	B
			PM	1.3 (12.2 WB)	B	1.3 (11.9 WB)	B
11	Silva Valley Pkwy @ Appian Way	AWSC	AM	24.3	C	24.7	C
			PM	22.2	C	22.5	C
12	Silva Valley Pkwy @ Harvard Way	Signal	AM	33.2	C	33.2	C
			PM	26.9	C	26.9	C
13	Silva Valley Pkwy @ Golden Eagle Ln/Walker Park Dr	AWSC	AM	44.0	E	44.2	E
			PM	14.5	B	14.5	B
14	Malcolm Dixon Rd @ Project Dwy/Wilson Dwy	SSSC*	AM	*plus Project Only*		1.8 (8.9 SB)	A
			PM			2.8 (9.2 SB)	A

Notes:

Bold represents unacceptable operations. Shaded represents significant impact.

*Side Street Stop Controlled (SSSC) intersections are reported with the intersection delay followed by the worst minor street movement's delay. The reported LOS corresponds to the worst minor street movement.

As shown in Table 1, the redistribution of project trips does not result in a significant impact as defined by the County. Analysis worksheets for these conditions are provided in Appendix A.

Kimley»Horn

Table 2 – Near-Term (2025) Intersection Levels of Service with Project Trip Redistribution

ID	Intersection	Control	Peak Hour	Near-Term (2025)		Near-Term (2025) plus Project	
				Delay (sec)	LOS	Delay (sec)	LOS
1	Green Valley Rd @ Francisco Dr	Signal	AM	35.4	D	34.9	C
			PM	59.1	E	53.8	D
2	Green Valley Rd @ El Dorado Hills Blvd/Salmon Falls Rd	Signal	AM	**98.7**	**F**	**101.2**	**F**
			PM	**98.9**	**F**	**103.3**	**F**
3	Green Valley Rd @ Silva Valley Pkwy/Allegheny Rd	Signal	AM	32.3	C	33.7	C
			PM	31.4	C	32.3	C
4	Green Valley Rd @ Loch Way	SSSC*	AM	1.5 (43.6 NB)	E	1.6 (44.0 NB)	E
			PM	**1.0 (50.4 NB)**	**F**	**1.0 (51.0 NB)**	**F**
5	Green Valley Rd @ Chartraw Rd	SSSC*	AM	2.8 (48.3 SB)	E	3.0 (49.3 SB)	E
			PM	**1.5 (71.2 SB)**	**F**	**1.6 (73.7 SB)**	**F**
6	Green Valley Rd @ Malcolm Dixon Rd	SSSC*	AM	0.4 (22.7 SB)	C	0.5 (24.5 SB)	C
			PM	0.1 (12.4 SB)	B	0.2 (18.9 SB)	C
7	Malcolm Dixon Rd (N) @ Chartraw Rd	SSSC*	AM	2.0 (7.3 WB)	A	5.8 (8.9 SB)	A
			PM	1.2 (7.4 WB)	A	2.8 (9.0 SB)	A
8	Malcolm Dixon Rd (S) @ Chartraw Rd	SSSC*	AM	3.5 (8.9 EB)	A	3.6 (9.0 EB)	A
			PM	2.9 (8.7 EB)	A	2.9 (8.7 EB)	A
9	Malcolm Dixon Rd @ Allegheny Rd	SSSC*	AM	6.2 (9.5 NB)	A	6.1 (9.7 NB)	A
			PM	6.1 (9.2 NB)	A	5.8 (9.4 NB)	A
10	Salmon Falls Rd @ Malcolm Dixon Rd	SSSC*	AM	1.5 (10.4 WB)	B	1.6 (10.6 WB)	B
			PM	1.2 (11.6 WB)	B	1.3 (11.8 WB)	B
11	Silva Valley Pkwy @ Appian Way	AWSC	AM	22.8	C	23.3	C
			PM	24.3	C	25.0	C
12	Silva Valley Pkwy @ Harvard Way	Signal	AM	57.4	E	59.5	E
			PM	54.2	D	54.3	D
13	Silva Valley Pkwy @ Golden Eagle Ln/Walker Park Dr	AWSC	AM	48.4	E	48.6	E
			PM	24.3	C	24.6	C
14	Malcolm Dixon Rd @ Project Dwy/Wilson Dwy	SSSC*	AM	3.0 (8.5 NB)	A	4.5 (8.7 SB)	A
			PM	3.3 (8.4 NB)	A	4.8 (8.7 SB)	A

Notes:

Bold represents unacceptable operations. Shaded represents significant impact.

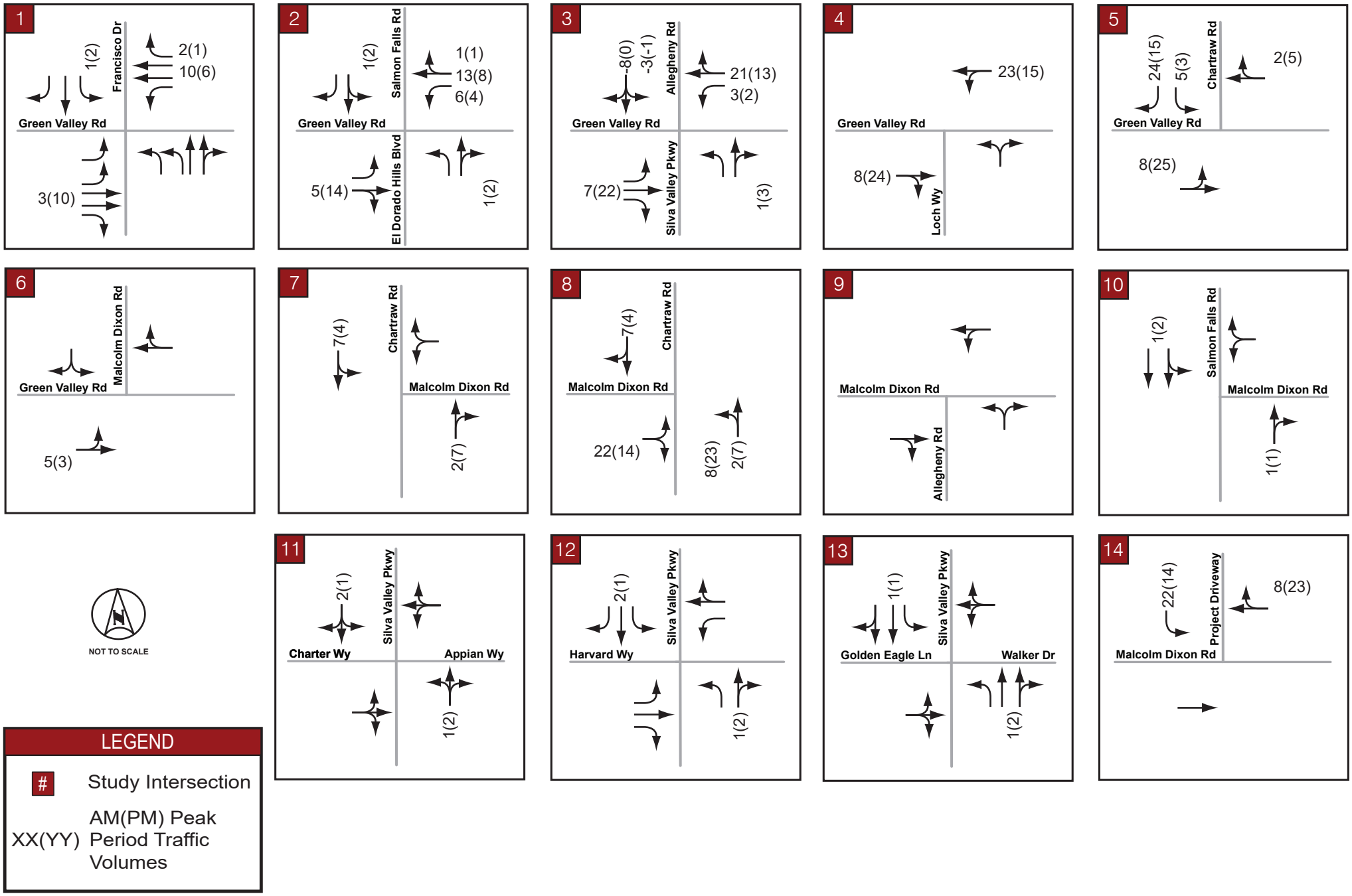
*Side Street Stop Controlled (SSSC) intersections are reported with the intersection delay followed by the worst movement's delay. The reported LOS corresponds to the worst movement.

As shown in Table 2, the redistribution of project trips results in a significant impact at Intersection #2 (Green Valley Road @ El Dorado Hills Boulevard/Salmon Falls Road). This impact can be mitigated through the methods described in the originally completed traffic study which consist of a now-completed County Capital Improvement Program (CIP) project that improved the efficiency of the traffic signal operations at this intersection. Though Intersection #4 and Intersection #5 operate unacceptably at LOS F for AM and PM peak-hour conditions, these intersections are not considered to be significantly impacted as the project does not contribute ten or more trips to the intersections during peak-hours. Analysis worksheets for these intersections are provided in Appendix B. Furthermore, as shown in Table 2, when vehicles originating from or destined for the proposed project are no longer restricted from traveling along Malcolm Dixon Road west of the site, the localized redistribution of trips results in the elimination of the previously documented significant impacts at the Green Valley Road intersections with Loch Way (Intersection #4) and with Chartraw Road (Intersection #5) under Near-Term (2025) plus Proposed Project Conditions.

Attachments:

Exhibit 1 – Previous Existing (2015) Project Trip Assignment
Exhibit 2 – Previous Chartraw Redistribution Volumes
Exhibit 3 – Revised Existing (2015) Project Trip Assignment
Exhibit 4 – Previous Near-Term (2025) Project Trip Assignment
Exhibit 5 – Revised Near-Term (2025) Project Trip Assignment

Appendix A – Analysis Worksheets for Existing (2015) plus Proposed Project Conditions with Project Trip Redistribution
Appendix B – Analysis Worksheets for Near-Term (2025) plus Proposed Project Conditions with Project Trip Redistribution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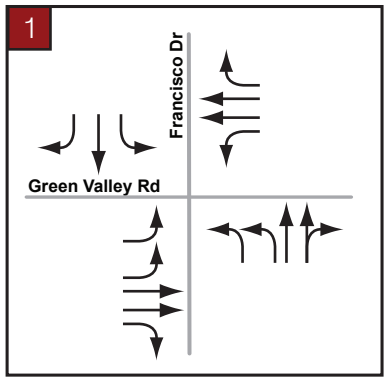
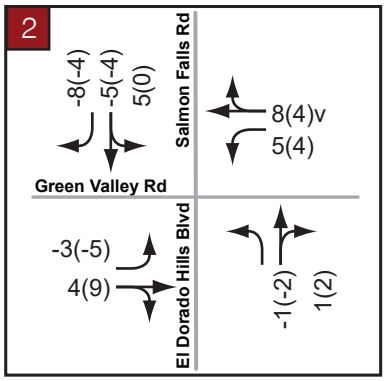
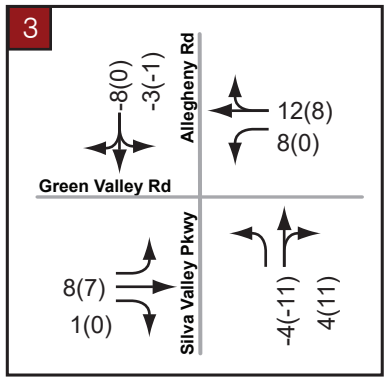
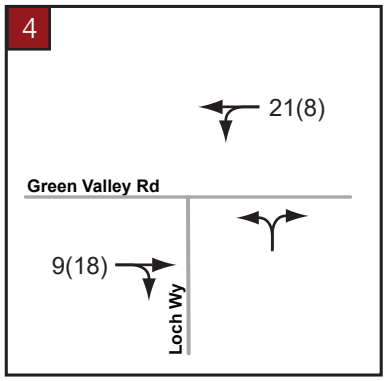
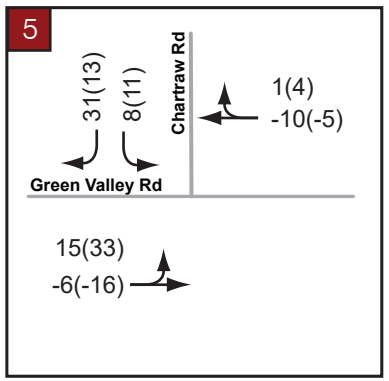
Francisco Dr
1(2)
2(1)
10(6)
3(10)
2
Green Valley Rd
Salmon Falls Rd
El Dorado Hills Blvd
1(2)
1(1)
13(8)
6(4)
5(14)
1(2)
3
Green Valley Rd
Allegheny Rd
Silva Valley Pkwy
-8(0)
-3(-1)
21(13)
3(2)
7(22)
1(3)
4
Green Valley Rd
Loch Wy
23(15)
8(24)
5
Green Valley Rd
Chartraw Rd
24(15)
5(3)
2(5)
8(25)
6
Green Valley Rd
Malcolm Dixon Rd
5(3)
7
Chartraw Rd
Malcolm Dixon Rd
7(4)
2(7)
8
Malcolm Dixon Rd
Chartraw Rd
7(4)
22(14)
8(23)
2(7)
9
Malcolm Dixon Rd
Allegheny Rd
10
Salmon Falls Rd
Malcolm Dixon Rd
1(2)
1(1)
11
Charter Wy
Silva Valley Pkwy
Appian Wy
2(1)
1(2)
12
Harvard Wy
Silva Valley Pkwy
2(1)
1(2)
13
Golden Eagle Ln
Silva Valley Pkwy
Walker Dr
1(1)
1(2)
14
Malcolm Dixon Rd
Project Driveway
22(14)
8(23)
NOT TO SCALE
LEGEND
Study Intersection
XX(YY) AM(PM) Peak Period Traffic Volumes

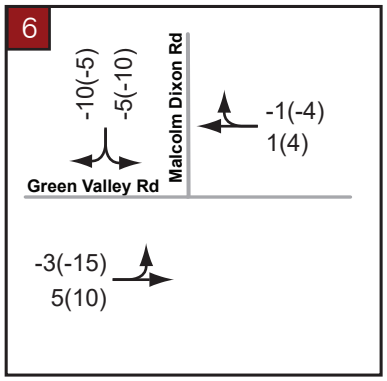


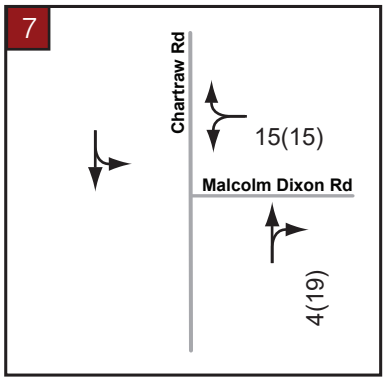


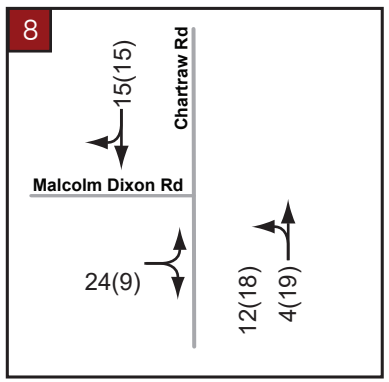


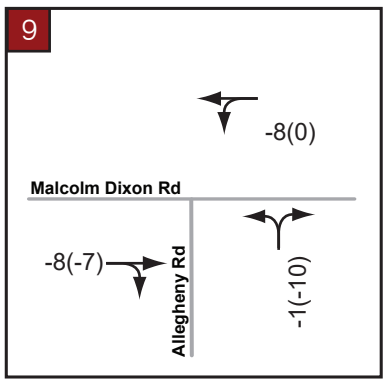


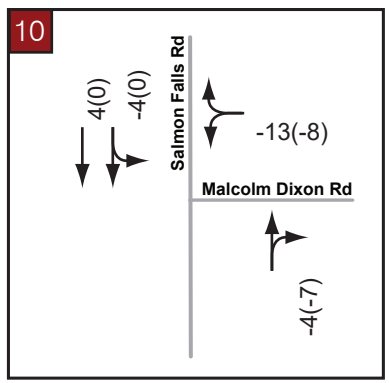


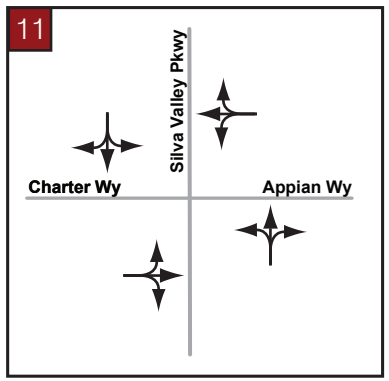


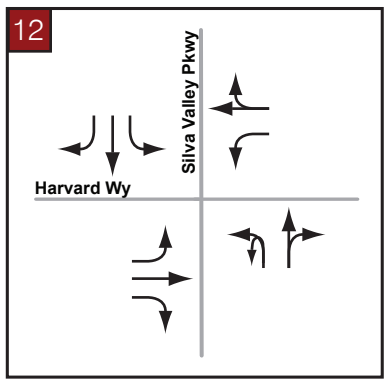


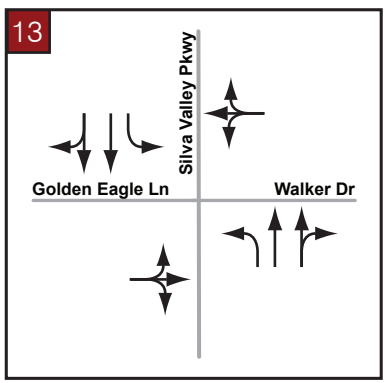


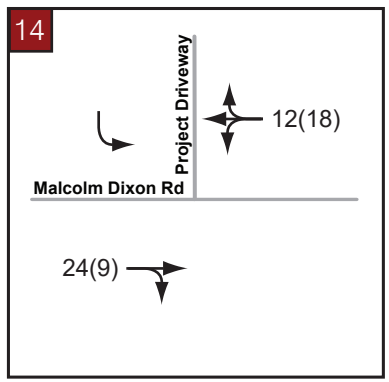








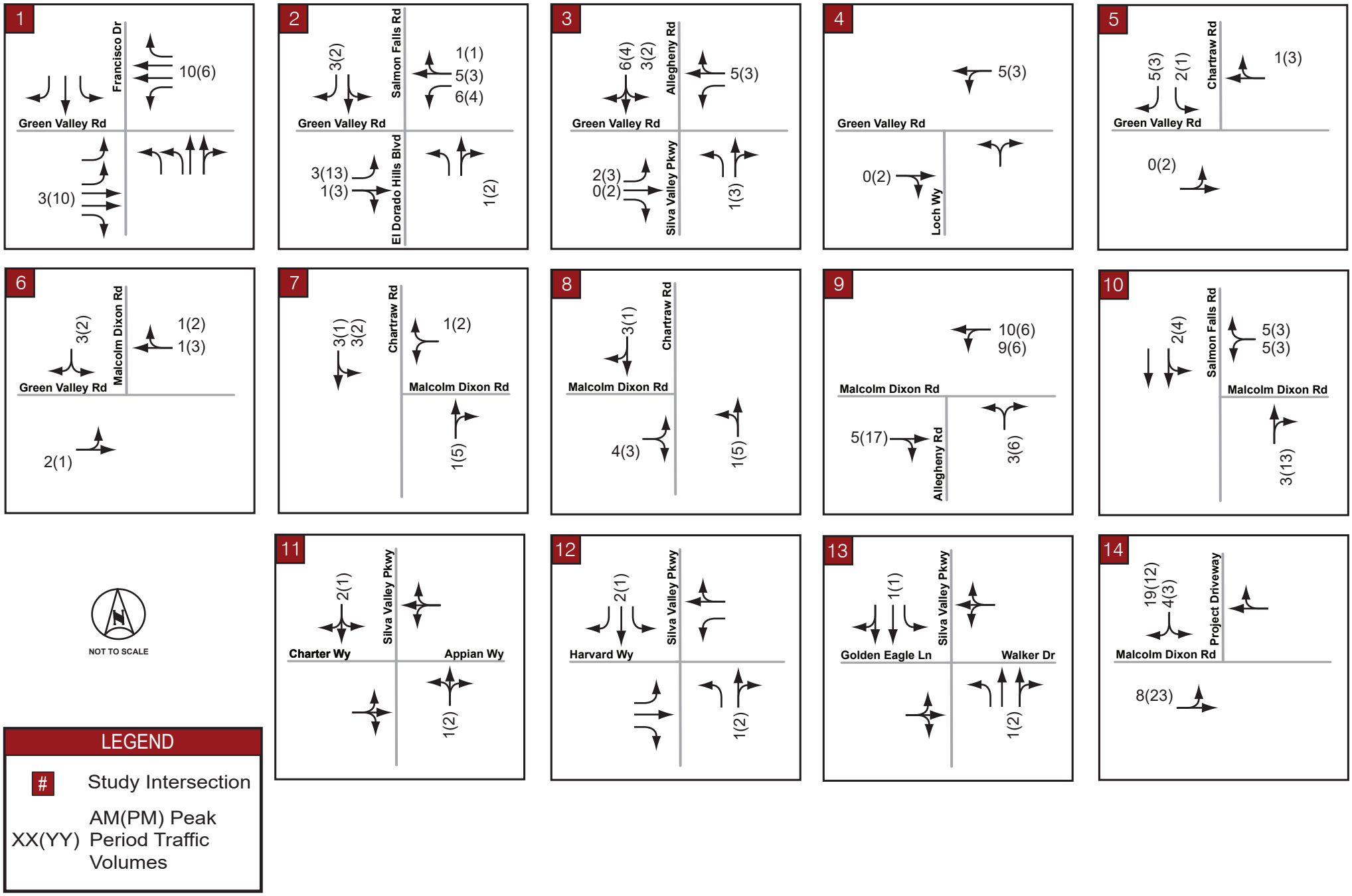




NOT TO SCALE

LEGEND

#	Study Intersection
XX(YY)	AM(PM) Peak Period Traffic Volumes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3(13)
1(3)
El Dorado Hills Blvd
1(2)
3
Allegheny Rd
Green Valley Rd
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3(2)
5(3)
2(3)
0(2)
Silva Valley Pkwy
1(3)
4
Green Valley Rd
5(3)
0(2)
Loch Wy
5
Chartraw Rd
Green Valley Rd
5(3)
2(1)
1(3)
0(2)
6
Malcolm Dixon Rd
Green Valley Rd
3(2)
1(2)
1(3)
2(1)
7
Chartraw Rd
3(1)
3(2)
1(2)
Malcolm Dixon Rd
1(5)
8
Chartraw Rd
3(1)
Malcolm Dixon Rd
4(3)
1(5)
9
10(6)
9(6)
Malcolm Dixon Rd
5(17)
Allegheny Rd
3(6)
10
Salmon Falls Rd
2(4)
5(3)
5(3)
Malcolm Dixon Rd
3(13)
NOT TO SCALE
11
Silva Valley Pkwy
2(1)
Charter Wy
Appian Wy
1(2)
12
Silva Valley Pkwy
2(1)
Harvard Wy
1(2)
13
Silva Valley Pkwy
1(1)
Golden Eagle Ln
Walker Dr
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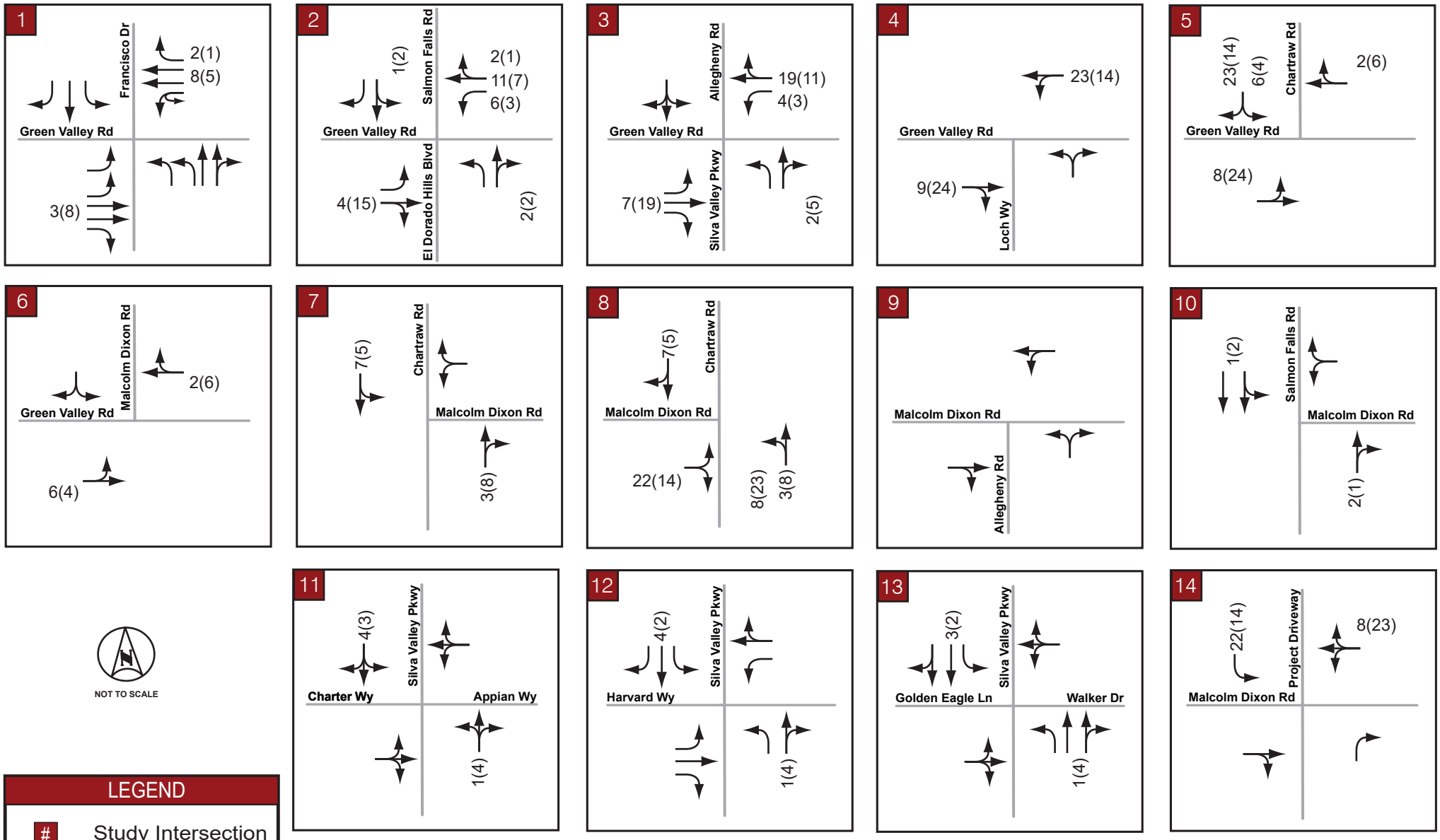
14
Project Driveway
19(12)
4(3)
Malcolm Dixon Rd
8(23)
LEGEND
Study Intersection
XX(YY) AM(PM) Peak Period Traffic Volumes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Green Valley Rd
El Dorado Hills Blvd
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2(2)
3
Allegheny Rd
19(11)
4(3)
Green Valley Rd
Silva Valley Pkwy
7(19)
2(5)
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Green Valley Rd
9(24)
Loch Wy
5
23(14)
6(4)
Chartraw Rd
2(6)
Green Valley Rd
8(24)
6
Malcolm Dixon Rd
Green Valley Rd
2(6)
6(4)
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7(5)
Chartraw Rd
Malcolm Dixon Rd
3(8)
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7(5)
Chartraw Rd
Malcolm Dixon Rd
22(14)
8(23)
3(8)
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Malcolm Dixon Rd
Allegheny Rd
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Salmon Falls Rd
Malcolm Dixon Rd
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4(3)
Silva Valley Pkwy
Charter Wy
Appian Wy
1(4)
12
4(2)
Silva Valley Pkwy
Harvard Wy
1(4)
13
3(2)
Silva Valley Pkwy
Golden Eagle Ln
Walker Dr
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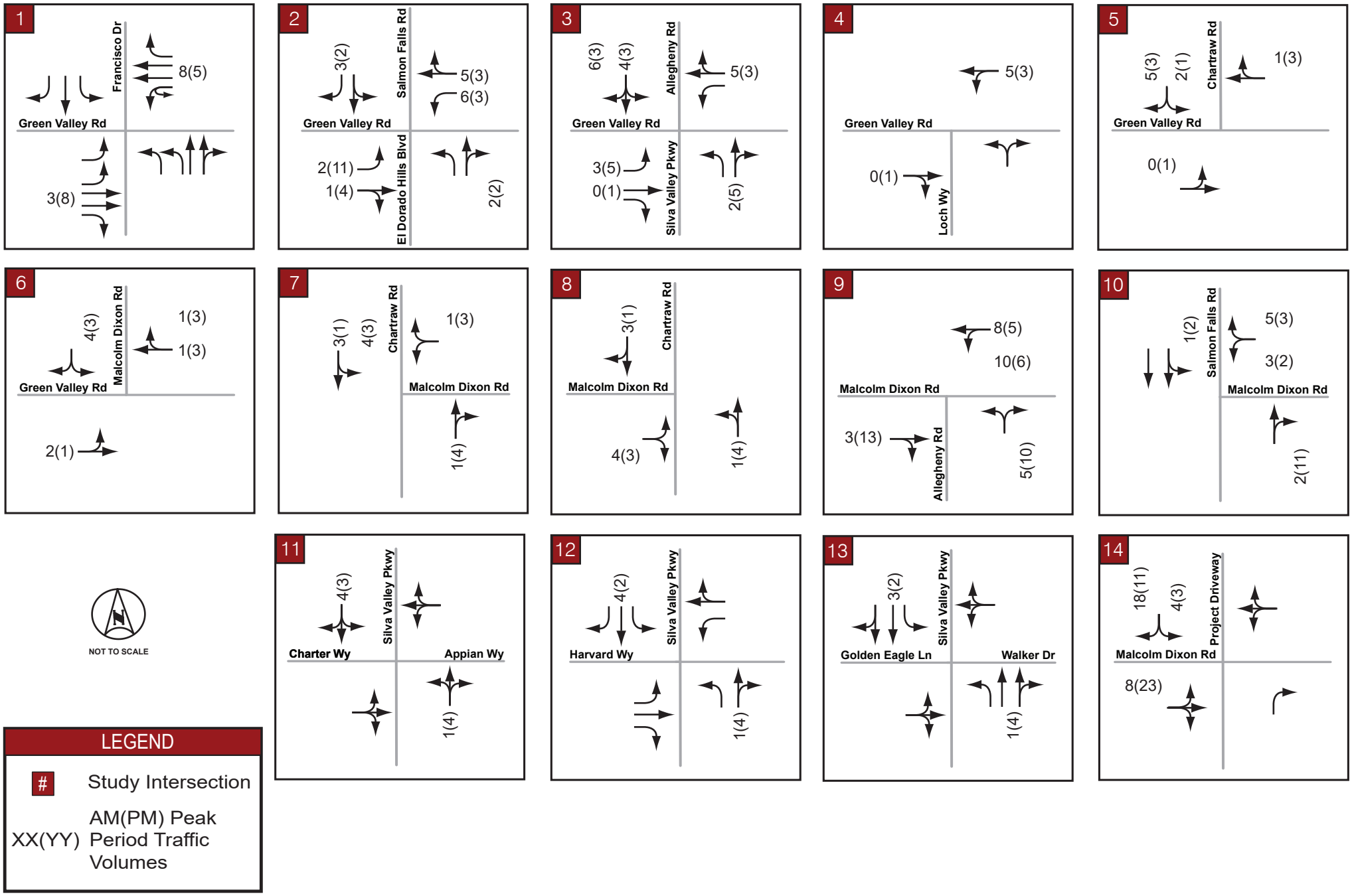
14
22(14)
Project Driveway
8(23)
Malcolm Dixon Rd
NOT TO SCALE
LEGEND
Study Intersection
XX(YY) AM(PM) Peak Period Traffic Volumes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Green Valley Rd
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3(8)
2
Salmon Falls Rd
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5(3)
6(3)
Green Valley Rd
El Dorado Hills Blvd
2(11)
1(4)
2(2)
3
Allegheny Rd
6(3)
4(3)
5(3)
Green Valley Rd
Silva Valley Pkwy
3(5)
0(1)
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4
5(3)
Green Valley Rd
0(1)
Loch Wy
5
Chartraw Rd
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2(1)
1(3)
Green Valley Rd
0(1)
6
Malcolm Dixon Rd
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Green Valley Rd
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7
Chartraw Rd
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1(3)
Malcolm Dixon Rd
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Chartraw Rd
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Malcolm Dixon Rd
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8(5)
10(6)
Malcolm Dixon Rd
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Allegheny Rd
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10
Salmon Falls Rd
1(2)
5(3)
3(2)
Malcolm Dixon Rd
2(11)
NOT TO SCALE
11
4(3)
Silva Valley Pkwy
Charter Wy
Appian Wy
1(4)
12
4(2)
Silva Valley Pkwy
Harvard Wy
1(4)
13
3(2)
Silva Valley Pkwy
Golden Eagle Ln
Walker Dr
1(4)
14
18(11)
4(3)
Project Driveway
Malcolm Dixon Rd
8(23)
LEGEND
Study Intersection
XX(YY) AM(PM) Peak Period Traffic Volumes

Appendix A

Analysis Worksheets for Existing (2015) plus Proposed Project Conditions with Project Trip Redistribution

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	223	216	57	839	108	312	184	6	124	294	374
Future Volume (veh/h)	165	223	216	57	839	108	312	184	6	124	294	374
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	204	275	267	66	964	124	371	219	7	161	382	486
Adj No. of Lanes	2	2	1	1	2	1	2	2	0	1	1	1
Peak Hour Factor	0.81	0.81	0.81	0.87	0.87	0.87	0.84	0.84	0.84	0.77	0.77	0.77
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	221	1166	522	85	1108	495	438	1115	36	136	498	423
Arrive On Green	0.06	0.33	0.33	0.05	0.31	0.31	0.13	0.32	0.32	0.08	0.27	0.27
Sat Flow, veh/h	3476	3574	1599	1792	3574	1599	3442	3501	112	1774	1863	1583
Grp Volume(v), veh/h	204	275	267	66	964	124	371	110	116	161	382	486
Grp Sat Flow(s),veh/h/ln	1738	1787	1599	1792	1787	1599	1721	1770	1843	1774	1863	1583
Q Serve(g_s), s	4.6	4.4	10.6	2.9	20.0	4.6	8.3	3.6	3.6	6.0	14.8	21.0
Cycle Q Clear(g_c), s	4.6	4.4	10.6	2.9	20.0	4.6	8.3	3.6	3.6	6.0	14.8	21.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	221	1166	522	85	1108	495	438	563	587	136	498	423
V/C Ratio(X)	0.92	0.24	0.51	0.78	0.87	0.25	0.85	0.20	0.20	1.19	0.77	1.15
Avail Cap(c_a), veh/h	221	1174	525	114	1174	525	438	563	587	136	498	423
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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	19.3	21.4	37.0	25.6	20.3	33.5	19.5	19.5	36.3	26.5	28.8
Incr Delay (d2), s/veh	39.6	0.1	0.8	21.1	7.0	0.3	14.3	0.2	0.2	136.5	7.1	90.8
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(50%),veh/ln	3.4	2.2	4.8	1.9	10.9	2.0	4.8	1.8	1.9	8.0	8.6	19.8
LnGrp Delay(d),s/veh	76.2	19.4	22.2	58.1	32.6	20.5	47.8	19.6	19.6	172.8	33.6	119.5
LnGrp LOS	E	B	C	E	C	C	D	B	B	F	C	F
Approach Vol, veh/h		746			1154			597			1029	
Approach Delay, s/veh		35.9			32.8			37.1			96.0	
Approach LOS		D			C			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	31.3	14.0	25.5	9.0	30.0	10.0	29.5
Change Period (Y+Rc), s	4.0	5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	5.0	25.8	10.0	21.0	5.0	25.8	6.0	25.0
Max Q Clear Time (g_c+I1), s	4.9	12.6	10.3	23.0	6.6	22.0	8.0	5.6
Green Ext Time (p_c), s	0.0	2.3	0.0	0.0	0.0	2.3	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	52.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	334	12	78	793	43	46	58	42	96	214	158
Future Volume (veh/h)	30	334	12	78	793	43	46	58	42	96	214	158
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	37	407	15	90	911	49	66	83	60	113	252	186
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	1
Peak Hour Factor	0.82	0.82	0.82	0.87	0.87	0.87	0.70	0.70	0.70	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	47	816	30	114	867	47	193	110	79	116	260	325
Arrive On Green	0.03	0.45	0.45	0.06	0.49	0.49	0.11	0.11	0.11	0.21	0.21	0.21
Sat Flow, veh/h	1792	1803	66	1792	1769	95	1774	1007	728	568	1266	1583
Grp Volume(v), veh/h	37	0	422	90	0	960	66	0	143	365	0	186
Grp Sat Flow(s),veh/h/ln	1792	0	1869	1792	0	1864	1774	0	1734	1834	0	1583
Q Serve(g_s), s	2.3	0.0	17.9	5.6	0.0	55.0	3.9	0.0	9.0	22.2	0.0	11.9
Cycle Q Clear(g_c), s	2.3	0.0	17.9	5.6	0.0	55.0	3.9	0.0	9.0	22.2	0.0	11.9
Prop In Lane	1.00		0.04	1.00		0.05	1.00		0.42	0.31		1.00
Lane Grp Cap(c), veh/h	47	0	846	114	0	914	193	0	189	376	0	325
V/C Ratio(X)	0.78	0.00	0.50	0.79	0.00	1.05	0.34	0.00	0.76	0.97	0.00	0.57
Avail Cap(c_a), veh/h	240	0	916	240	0	914	387	0	379	376	0	325
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(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.3	0.0	21.7	51.8	0.0	28.6	46.3	0.0	48.5	44.3	0.0	40.2
Incr Delay (d2), s/veh	18.4	0.0	1.0	8.5	0.0	43.9	1.8	0.0	10.0	38.7	0.0	3.4
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(50%),veh/ln	1.4	0.0	9.5	3.0	0.0	39.3	2.0	0.0	4.8	15.3	0.0	5.5
LnGrp Delay(d),s/veh	72.7	0.0	22.7	60.3	0.0	72.5	48.0	0.0	58.6	83.0	0.0	43.6
LnGrp LOS	E		C	E		F	D		E	F		D
Approach Vol, veh/h		459			1050			209			551	
Approach Delay, s/veh		26.7			71.4			55.2			69.7	
Approach LOS		C			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	61.0		16.2	10.7	56.8		28.5
Change Period (Y+Rc), s	3.5	6.0		4.0	3.5	6.0		5.5
Max Green Setting (Gmax), s	15.0	55.0		24.5	15.0	55.0		23.0
Max Q Clear Time (g_c+I1), s	4.3	57.0		11.0	7.6	19.9		24.2
Green Ext Time (p_c), s	0.0	0.0		1.3	0.1	5.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	60.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	260	206	77	640	11	275	54	57	6	32	2
Future Volume (veh/h)	6	260	206	77	640	11	275	54	57	6	32	2
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	8	325	258	88	727	12	367	72	76	8	43	3
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.80	0.80	0.80	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	87	820	697	114	832	14	424	198	209	11	57	4
Arrive On Green	0.05	0.44	0.44	0.06	0.45	0.45	0.24	0.24	0.24	0.04	0.04	0.04
Sat Flow, veh/h	1792	1881	1599	1792	1845	30	1774	831	877	271	1458	102
Grp Volume(v), veh/h	8	325	258	88	0	739	367	0	148	54	0	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	0	1876	1774	0	1708	1831	0	0
Q Serve(g_s), s	0.4	9.7	8.9	4.0	0.0	29.4	16.3	0.0	5.9	2.4	0.0	0.0
Cycle Q Clear(g_c), s	0.4	9.7	8.9	4.0	0.0	29.4	16.3	0.0	5.9	2.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.51	0.15		0.06
Lane Grp Cap(c), veh/h	87	820	697	114	0	846	424	0	408	72	0	0
V/C Ratio(X)	0.09	0.40	0.37	0.77	0.00	0.87	0.87	0.00	0.36	0.75	0.00	0.00
Avail Cap(c_a), veh/h	348	1281	1088	348	0	1277	668	0	644	490	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(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.4	15.8	15.6	37.9	0.0	20.5	30.0	0.0	26.1	39.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.3	7.8	0.0	4.6	6.1	0.0	0.4	11.2	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(50%),veh/ln	0.2	5.1	4.0	2.2	0.0	16.1	8.7	0.0	2.8	1.4	0.0	0.0
LnGrp Delay(d),s/veh	37.7	16.1	15.9	45.7	0.0	25.1	36.1	0.0	26.5	50.3	0.0	0.0
LnGrp LOS	D	B	B	D		C	D		C	D		
Approach Vol, veh/h		591			827			515			54	
Approach Delay, s/veh		16.3			27.3			33.3			50.3	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	42.8		7.2	9.3	41.5		24.2
Change Period (Y+Rc), s	4.0	5.7		4.0	4.0	5.7		4.6
Max Green Setting (Gmax), s	16.0	56.0		22.0	16.0	56.0		31.0
Max Q Clear Time (g_c+I1), s	2.4	31.4		4.4	6.0	11.7		18.3
Green Ext Time (p_c), s	0.0	5.7		0.1	0.1	3.1		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	299	18	8	688	30	8
Future Vol, veh/h	299	18	8	688	30	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	87	87	77	77
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	340	20	9	791	39	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	360	0	1159	350
Stage 1	-	-	-	-	350	-
Stage 2	-	-	-	-	809	-
Critical Hdwy	-	-	4.11	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.209	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1204	-	216	693
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	438	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1204	-	213	693
Mov Cap-2 Maneuver	-	-	-	-	213	-
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	432	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	23
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	249	-	-	1204	-
HCM Lane V/C Ratio	0.198	-	-	0.008	-
HCM Control Delay (s)	23	-	-	8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	292	659	3	10	36
Future Vol, veh/h	15	292	659	3	10	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	16	317	716	3	11	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	719	0	-	0	1067	718
Stage 1	-	-	-	-	718	-
Stage 2	-	-	-	-	349	-
Critical Hdwy	4.11	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.209	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	887	-	-	-	246	429
Stage 1	-	-	-	-	483	-
Stage 2	-	-	-	-	714	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	887	-	-	-	241	429
Mov Cap-2 Maneuver	-	-	-	-	241	-
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	714	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	887	-	-	-	241	429
HCM Lane V/C Ratio	0.018	-	-	-	0.045	0.091
HCM Control Delay (s)	9.1	0	-	-	20.6	14.2
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.3

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	298	579	3	5	3
Future Vol, veh/h	2	298	579	3	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	92	92	72	72
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	2	339	629	3	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	632	0	-	0	974	631
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	343	-
Critical Hdwy	4.11	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.209	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	956	-	-	-	279	481
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	719	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	956	-	-	-	278	481
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	719	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	956	-	-	-	330
HCM Lane V/C Ratio	0.002	-	-	-	0.034
HCM Control Delay (s)	8.8	0	-	-	16.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	76	1	1	26	3	3
Future Vol, veh/h	76	1	1	26	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	1	1	28	3	3

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	15	29
Stage 1	-	-	0	0
Stage 2	-	-	15	29
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	1004	864
Stage 1	-	-	-	-
Stage 2	-	-	1008	871
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	1004	0
Mov Cap-2 Maneuver	-	-	1004	0
Stage 1	-	-	-	0
Stage 2	-	-	1008	0

Approach	NB	SB
HCM Control Delay, s	0	8.6
HCM LOS		A

Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	1004
HCM Lane V/C Ratio	-	-	0.006
HCM Control Delay (s)	-	-	8.6
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	28	12	5	18	61
Future Vol, veh/h	22	28	12	5	18	61
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	30	13	5	20	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	84	53	86	0	-	0
Stage 1	53	-	-	-	-	-
Stage 2	31	-	-	-	-	-
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	918	1014	1510	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	910	1014	1510	-	-	-
Mov Cap-2 Maneuver	910	-	-	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	992	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	5.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1510	-	965	-	-
HCM Lane V/C Ratio	0.009	-	0.056	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	33	18	41	59	7
Future Vol, veh/h	14	33	18	41	59	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	73	73	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	40	25	56	84	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	57	0	143	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	106	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1547	-	850	1035
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1547	-	836	1035
Mov Cap-2 Maneuver	-	-	-	-	836	-
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	902	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.2	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	853	-	-	1547	-
HCM Lane V/C Ratio	0.111	-	-	0.016	-
HCM Control Delay (s)	9.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	75	125	6	39	443
Future Vol, veh/h	27	75	125	6	39	443
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	70	70	70	70	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	107	179	9	48	540

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	550	184	0	0	188	0
Stage 1	184	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	480	858	-	-	1385	-
Stage 1	847	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	456	858	-	-	1385	-
Mov Cap-2 Maneuver	456	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	696	1385	-
HCM Lane V/C Ratio	-	-	0.209	0.034	-
HCM Control Delay (s)	-	-	11.5	7.7	0.2
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1	-

Intersection	
Intersection Delay, s/veh	24.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	32	2	83	0	158	5	60	0	22	217	59
Future Vol, veh/h	0	32	2	83	0	158	5	60	0	22	217	59
Peak Hour Factor	0.92	0.70	0.70	0.70	0.92	0.75	0.75	0.75	0.92	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	46	3	119	0	211	7	80	0	31	310	84
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	14.1	20.2	28.7
HCM LOS	B	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	27%	71%	8%
Vol Thru, %	73%	2%	2%	88%
Vol Right, %	20%	71%	27%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	298	117	223	304
LT Vol	22	32	158	24
Through Vol	217	2	5	268
RT Vol	59	83	60	12
Lane Flow Rate	426	167	297	411
Geometry Grp	1	1	1	1
Degree of Util (X)	0.775	0.339	0.592	0.761
Departure Headway (Hd)	6.552	7.31	7.163	6.67
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	553	490	502	542
Service Time	4.604	5.379	5.219	4.722
HCM Lane V/C Ratio	0.77	0.341	0.592	0.758
HCM Control Delay	28.7	14.1	20.2	28
HCM Lane LOS	D	B	C	D
HCM 95th-tile Q	7.1	1.5	3.8	6.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	24	268	12
Future Vol, veh/h	0	24	268	12
Peak Hour Factor	0.92	0.74	0.74	0.74
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	32	362	16
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	28
HCM LOS	D

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	73	86	222	96	69	13	170	295	252	30	58	214
Future Volume (vph)	73	86	222	96	69	13	170	295	252	30	58	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.0	4.0			4.0	5.3		4.0	5.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98			1.00	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1818			1770	1833		1770	1863
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1818			1770	1833		1770	1863
Peak-hour factor, PHF	0.70	0.70	0.70	0.81	0.81	0.81	0.92	0.89	0.89	0.89	0.90	0.90
Adj. Flow (vph)	104	123	317	119	85	16	185	331	283	34	64	238
RTOR Reduction (vph)	0	0	280	0	6	0	0	0	3	0	0	0
Lane Group Flow (vph)	104	123	37	119	95	0	0	516	314	0	64	238
Turn Type	Split	NA	Perm	Split	NA		Prot	Prot	NA		Prot	NA
Protected Phases	4	4		8	8		5	5	2		1	6
Permitted Phases			4									
Actuated Green, G (s)	11.2	11.2	11.2	11.9	11.9			35.5	46.9		6.8	18.2
Effective Green, g (s)	11.2	11.2	11.2	11.9	11.9			35.5	46.9		6.8	18.2
Actuated g/C Ratio	0.12	0.12	0.12	0.13	0.13			0.37	0.50		0.07	0.19
Clearance Time (s)	4.6	4.6	4.6	4.0	4.0			4.0	5.3		4.0	5.3
Vehicle Extension (s)	2.0	2.0	2.0	3.0	3.0			2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	209	220	187	222	228			663	907		127	358
v/s Ratio Prot	0.06	c0.07		c0.07	0.05			c0.29	0.17		0.04	c0.13
v/s Ratio Perm			0.02									
v/c Ratio	0.50	0.56	0.20	0.54	0.42			0.78	0.35		0.50	0.66
Uniform Delay, d1	39.1	39.4	37.7	38.8	38.2			26.1	14.6		42.3	35.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.7	1.7	0.2	2.5	1.2			5.5	0.2		2.3	4.2
Delay (s)	39.8	41.2	37.9	41.3	39.4			31.7	14.7		44.6	39.6
Level of Service	D	D	D	D	D			C	B		D	D
Approach Delay (s)		39.0			40.4				25.2			36.6
Approach LOS		D			D				C			D

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	94.7	Sum of lost time (s)	17.9
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	250
Future Volume (vph)	250
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.3
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1583
Flt Permitted	1.00
Satd. Flow (perm)	1583
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	278
RTOR Reduction (vph)	225
Lane Group Flow (vph)	53
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	18.2
Effective Green, g (s)	18.2
Actuated g/C Ratio	0.19
Clearance Time (s)	5.3
Vehicle Extension (s)	2.5
Lane Grp Cap (vph)	304
v/s Ratio Prot	
v/s Ratio Perm	0.03
v/c Ratio	0.18
Uniform Delay, d1	32.0
Progression Factor	1.00
Incremental Delay, d2	0.2
Delay (s)	32.2
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Intersection Delay, s/veh	44.2
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	99	3	108	0	61	12	22	0	96	647	51
Future Vol, veh/h	0	99	3	108	0	61	12	22	0	96	647	51
Peak Hour Factor	0.92	0.70	0.70	0.70	0.92	0.70	0.70	0.70	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	141	4	154	0	87	17	31	0	119	799	63
Number of Lanes	0	0	1	0	0	0	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	1
HCM Control Delay	33.9	18.3	51
HCM LOS	D	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	47%	64%	100%	0%	0%
Vol Thru, %	0%	100%	81%	1%	13%	0%	100%	56%
Vol Right, %	0%	0%	19%	51%	23%	0%	0%	44%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	431	267	210	95	20	331	297
LT Vol	96	0	0	99	61	20	0	0
Through Vol	0	431	216	3	12	0	331	166
RT Vol	0	0	51	108	22	0	0	131
Lane Flow Rate	119	533	329	300	136	24	404	362
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.287	1	0.737	0.746	0.371	0.059	0.92	0.793
Departure Headway (Hd)	8.716	8.194	8.054	8.951	9.837	8.705	8.201	7.89
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	412	442	448	405	365	411	440	459
Service Time	6.476	5.954	5.814	6.704	7.599	6.456	5.952	5.64
HCM Lane V/C Ratio	0.289	1.206	0.734	0.741	0.373	0.058	0.918	0.789
HCM Control Delay	15	71.9	30.3	33.9	18.3	12	54.1	34.8
HCM Lane LOS	B	F	D	D	C	B	F	D
HCM 95th-tile Q	1.2	12.8	6	6	1.7	0.2	10.3	7.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	20	497	131
Future Vol, veh/h	0	20	497	131
Peak Hour Factor	0.92	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	24	606	160
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	44
HCM LOS	E

Lane

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	46	73	0	4	19
Future Vol, veh/h	8	46	73	0	4	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	50	79	0	4	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	79	0	-	0	147	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1519	-	-	-	845	981
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	955	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1519	-	-	-	840	981
Mov Cap-2 Maneuver	-	-	-	-	840	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	955	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1519	-	-	-	953
HCM Lane V/C Ratio	0.006	-	-	-	0.026
HCM Control Delay (s)	7.4	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	454	831	301	140	519	95	304	248	22	115	191	207
Future Volume (veh/h)	454	831	301	140	519	95	304	248	22	115	191	207
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	478	875	317	159	590	108	330	270	24	134	222	241
Adj No. of Lanes	2	2	1	1	2	1	2	2	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.88	0.88	0.88	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	360	1156	517	159	1104	494	437	853	75	105	357	303
Arrive On Green	0.10	0.32	0.32	0.09	0.31	0.31	0.13	0.26	0.26	0.06	0.19	0.19
Sat Flow, veh/h	3476	3574	1599	1792	3574	1599	3442	3291	290	1774	1863	1583
Grp Volume(v), veh/h	478	875	317	159	590	108	330	144	150	134	222	241
Grp Sat Flow(s),veh/h/ln	1738	1787	1599	1792	1787	1599	1721	1770	1811	1774	1863	1583
Q Serve(g_s), s	7.0	14.8	11.3	6.0	9.2	3.4	6.3	4.4	4.5	4.0	7.4	9.8
Cycle Q Clear(g_c), s	7.0	14.8	11.3	6.0	9.2	3.4	6.3	4.4	4.5	4.0	7.4	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	360	1156	517	159	1104	494	437	459	470	105	357	303
V/C Ratio(X)	1.33	0.76	0.61	1.00	0.53	0.22	0.76	0.31	0.32	1.28	0.62	0.79
Avail Cap(c_a), veh/h	360	1417	634	159	1364	610	560	654	670	105	496	422
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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	20.5	19.3	30.8	19.3	17.3	28.5	20.2	20.2	31.8	25.1	26.1
Incr Delay (d2), s/veh	165.8	1.9	1.2	71.4	0.4	0.2	4.4	0.4	0.4	179.4	1.8	7.0
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(50%),veh/ln	11.6	7.6	5.2	6.1	4.6	1.5	3.2	2.2	2.3	7.2	3.9	4.8
LnGrp Delay(d),s/veh	196.1	22.4	20.5	102.2	19.8	17.5	32.9	20.6	20.6	211.2	26.8	33.0
LnGrp LOS	F	C	C	F	B	B	C	C	C	F	C	C
Approach Vol, veh/h		1670			857			624			597	
Approach Delay, s/veh		71.7			34.8			27.1			70.7	
Approach LOS		E			C			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	27.6	12.6	17.5	11.0	26.6	8.0	22.0
Change Period (Y+Rc), s	4.0	5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	6.0	26.8	11.0	18.0	7.0	25.8	4.0	25.0
Max Q Clear Time (g_c+I1), s	8.0	16.8	8.3	11.8	9.0	11.2	6.0	6.5
Green Ext Time (p_c), s	0.0	5.0	0.3	1.1	0.0	3.8	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	55.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	844	21	41	577	92	52	121	63	66	92	83
Future Volume (veh/h)	139	844	21	41	577	92	52	121	63	66	92	83
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	149	908	23	47	656	105	58	136	71	71	99	89
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.89	0.89	0.89	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	169	934	24	60	714	114	253	165	86	95	132	196
Arrive On Green	0.09	0.51	0.51	0.03	0.45	0.45	0.14	0.14	0.14	0.12	0.12	0.12
Sat Flow, veh/h	1792	1827	46	1792	1583	253	1774	1154	602	762	1063	1583
Grp Volume(v), veh/h	149	0	931	47	0	761	58	0	207	170	0	89
Grp Sat Flow(s),veh/h/ln	1792	0	1873	1792	0	1836	1774	0	1756	1825	0	1583
Q Serve(g_s), s	8.3	0.0	48.8	2.6	0.0	39.2	2.9	0.0	11.6	9.1	0.0	5.3
Cycle Q Clear(g_c), s	8.3	0.0	48.8	2.6	0.0	39.2	2.9	0.0	11.6	9.1	0.0	5.3
Prop In Lane	1.00		0.02	1.00		0.14	1.00		0.34	0.42		1.00
Lane Grp Cap(c), veh/h	169	0	958	60	0	828	253	0	251	226	0	196
V/C Ratio(X)	0.88	0.00	0.97	0.78	0.00	0.92	0.23	0.00	0.82	0.75	0.00	0.45
Avail Cap(c_a), veh/h	169	0	961	62	0	833	327	0	324	400	0	347
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(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.2	0.0	24.0	48.4	0.0	26.0	38.3	0.0	42.0	42.7	0.0	41.0
Incr Delay (d2), s/veh	37.9	0.0	22.6	43.8	0.0	15.7	0.8	0.0	15.4	8.3	0.0	2.8
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(50%),veh/ln	5.9	0.0	31.1	2.0	0.0	23.5	1.5	0.0	6.7	5.1	0.0	2.5
LnGrp Delay(d),s/veh	83.0	0.0	46.6	92.2	0.0	41.7	39.1	0.0	57.5	51.0	0.0	43.8
LnGrp LOS	F		D	F		D	D		E	D		D
Approach Vol, veh/h		1080			808			265			259	
Approach Delay, s/veh		51.6			44.6			53.4			48.5	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	51.5		18.4	6.9	57.6		18.0
Change Period (Y+Rc), s	3.5	6.0		4.0	3.5	6.0		5.5
Max Green Setting (Gmax), s	9.5	45.8		18.6	3.5	51.8		22.1
Max Q Clear Time (g_c+I1), s	10.3	41.2		13.6	4.6	50.8		11.1
Green Ext Time (p_c), s	0.0	3.0		0.9	0.0	0.9		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	49.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	666	296	38	439	7	263	22	68	0	10	7
Future Volume (veh/h)	7	666	296	38	439	7	263	22	68	0	10	7
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	8	716	318	48	549	9	306	26	79	0	14	10
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.93	0.93	0.93	0.80	0.80	0.80	0.86	0.86	0.86	0.70	0.70	0.70
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	105	874	743	63	814	13	373	86	260	0	22	15
Arrive On Green	0.06	0.46	0.46	0.04	0.44	0.44	0.21	0.21	0.21	0.00	0.02	0.02
Sat Flow, veh/h	1792	1881	1599	1792	1846	30	1774	407	1237	0	1012	723
Grp Volume(v), veh/h	8	716	318	48	0	558	306	0	105	0	0	24
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	0	1876	1774	0	1644	0	0	1735
Q Serve(g_s), s	0.3	22.4	9.0	1.8	0.0	16.1	11.2	0.0	3.7	0.0	0.0	0.9
Cycle Q Clear(g_c), s	0.3	22.4	9.0	1.8	0.0	16.1	11.2	0.0	3.7	0.0	0.0	0.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.75	0.00		0.42
Lane Grp Cap(c), veh/h	105	874	743	63	0	827	373	0	345	0	0	37
V/C Ratio(X)	0.08	0.82	0.43	0.76	0.00	0.67	0.82	0.00	0.30	0.00	0.00	0.65
Avail Cap(c_a), veh/h	421	1548	1315	421	0	1543	808	0	749	0	0	561
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(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	30.3	15.8	12.2	32.6	0.0	15.1	25.7	0.0	22.7	0.0	0.0	33.0
Incr Delay (d2), s/veh	0.2	2.0	0.4	13.2	0.0	1.0	3.4	0.0	0.4	0.0	0.0	13.0
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(50%),veh/ln	0.1	12.0	4.1	1.1	0.0	8.4	5.8	0.0	1.7	0.0	0.0	0.6
LnGrp Delay(d),s/veh	30.5	17.7	12.6	45.8	0.0	16.1	29.1	0.0	23.0	0.0	0.0	46.1
LnGrp LOS	C	B	B	D		B	C		C			D
Approach Vol, veh/h		1042			606			411			24	
Approach Delay, s/veh		16.2			18.5			27.5			46.1	
Approach LOS		B			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	35.7		5.5	6.4	37.3		18.9
Change Period (Y+Rc), s	4.0	5.7		4.0	4.0	5.7		4.6
Max Green Setting (Gmax), s	16.0	56.0		22.0	16.0	56.0		31.0
Max Q Clear Time (g_c+I1), s	2.3	18.1		2.9	3.8	24.4		13.2
Green Ext Time (p_c), s	0.0	4.2		0.0	0.0	7.2		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	702	33	9	464	20	4
Future Vol, veh/h	702	33	9	464	20	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	81	81	81	81
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	780	37	11	573	25	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	817	0	1394	799
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	595	-
Critical Hdwy	-	-	4.11	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.209	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	815	-	156	386
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	551	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	815	-	153	386
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	540	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	30.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	170	-	-	815	-
HCM Lane V/C Ratio	0.174	-	-	0.014	-
HCM Control Delay (s)	30.6	-	-	9.5	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	670	457	7	12	16
Future Vol, veh/h	35	670	457	7	12	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	38	728	497	8	13	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	505	0	-	0	1305	501
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	804	-
Critical Hdwy	4.11	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.209	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1065	-	-	-	177	570
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	440	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	1065	-	-	-	166	570
Mov Cap-2 Maneuver	-	-	-	-	166	-
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	440	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1065	-	-	-	166	570
HCM Lane V/C Ratio	0.036	-	-	-	0.079	0.031
HCM Control Delay (s)	8.5	0	-	-	28.5	11.5
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	688	423	9	5	4
Future Vol, veh/h	2	688	423	9	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	77	77	70	70
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	2	748	549	12	7	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	561	0	-	0	1307	555
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	752	-
Critical Hdwy	4.11	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.209	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1015	-	-	-	176	531
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	466	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	1015	-	-	-	175	531
Mov Cap-2 Maneuver	-	-	-	-	175	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	466	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1015	-	-	-	249
HCM Lane V/C Ratio	0.002	-	-	-	0.052
HCM Control Delay (s)	8.6	0	-	-	20.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	2	5	71	2	1
Future Vol, veh/h	41	2	5	71	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	2	5	77	2	1

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	44	82
Stage 1	-	-	0	0
Stage 2	-	-	44	82
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	967	808
Stage 1	-	-	-	-
Stage 2	-	-	978	827
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	967	0
Mov Cap-2 Maneuver	-	-	967	0
Stage 1	-	-	-	0
Stage 2	-	-	978	0

Approach	NB	SB
HCM Control Delay, s	0	8.7
HCM LOS		A

Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	967
HCM Lane V/C Ratio	-	-	0.003
HCM Control Delay (s)	-	-	8.7
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	12	18	24	16	26
Future Vol, veh/h	52	12	18	24	16	26
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	13	20	26	17	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	97	31	45	0	-	0
Stage 1	31	-	-	-	-	-
Stage 2	66	-	-	-	-	-
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	902	1043	1563	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	890	1043	1563	-	-	-
Mov Cap-2 Maneuver	890	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	957	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	3.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1563	-	915	-	-
HCM Lane V/C Ratio	0.013	-	0.076	-	-
HCM Control Delay (s)	7.3	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	46	5	13	25	27	12
Future Vol, veh/h	46	5	13	25	27	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	7	19	36	39	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	70	0	141	67
Stage 1	-	-	-	-	67	-
Stage 2	-	-	-	-	74	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1531	-	852	997
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1531	-	841	997
Mov Cap-2 Maneuver	-	-	-	-	841	-
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	937	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.5	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	884	-	-	1531	-
HCM Lane V/C Ratio	0.063	-	-	0.012	-
HCM Control Delay (s)	9.3	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	36	325	26	27	233
Future Vol, veh/h	9	36	325	26	27	233
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	72	72	82	82	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	50	396	32	31	265

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	607	412	0	0	428	0
Stage 1	412	-	-	-	-	-
Stage 2	195	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	443	639	-	-	1130	-
Stage 1	668	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	429	639	-	-	1130	-
Mov Cap-2 Maneuver	429	-	-	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	793	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	582	1130	-
HCM Lane V/C Ratio	-	-	0.107	0.027	-
HCM Control Delay (s)	-	-	11.9	8.3	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection	
Intersection Delay, s/veh	22.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	18	3	45	0	67	2	46	0	88	284	102
Future Vol, veh/h	0	18	3	45	0	67	2	46	0	88	284	102
Peak Hour Factor	0.92	0.75	0.75	0.75	0.92	0.74	0.74	0.74	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	4	60	0	91	3	62	0	113	364	131
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	10.6	11.8	31.5
HCM LOS	B	B	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	27%	58%	18%
Vol Thru, %	60%	5%	2%	71%
Vol Right, %	22%	68%	40%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	474	66	115	265
LT Vol	88	18	67	49
Through Vol	284	3	2	188
RT Vol	102	45	46	28
Lane Flow Rate	608	88	155	308
Geometry Grp	1	1	1	1
Degree of Util (X)	0.862	0.154	0.274	0.476
Departure Headway (Hd)	5.105	6.311	6.343	5.565
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	563	563	644
Service Time	3.156	4.406	4.426	3.631
HCM Lane V/C Ratio	0.862	0.156	0.275	0.478
HCM Control Delay	31.5	10.6	11.8	13.6
HCM Lane LOS	D	B	B	B
HCM 95th-tile Q	10.2	0.5	1.1	2.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	49	188	28
Future Vol, veh/h	0	49	188	28
Peak Hour Factor	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	57	219	33
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	13.6
HCM LOS	B

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	23	234	36	22	22	233	317	22	16	195	99
Future Volume (veh/h)	124	23	234	36	22	22	233	317	22	16	195	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	168	31	316	51	31	31	243	330	23	19	235	119
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.74	0.74	0.74	0.70	0.70	0.70	0.96	0.96	0.96	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	465	395	74	157	157	267	595	41	33	398	339
Arrive On Green	0.11	0.25	0.25	0.04	0.18	0.18	0.15	0.35	0.35	0.02	0.21	0.21
Sat Flow, veh/h	1774	1863	1583	1774	856	856	1774	1722	120	1774	1863	1583
Grp Volume(v), veh/h	168	31	316	51	0	62	243	0	353	19	235	119
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1712	1774	0	1842	1774	1863	1583
Q Serve(g_s), s	4.3	0.6	8.7	1.3	0.0	1.4	6.3	0.0	7.2	0.5	5.3	3.0
Cycle Q Clear(g_c), s	4.3	0.6	8.7	1.3	0.0	1.4	6.3	0.0	7.2	0.5	5.3	3.0
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	191	465	395	74	0	314	267	0	637	33	398	339
V/C Ratio(X)	0.88	0.07	0.80	0.69	0.00	0.20	0.91	0.00	0.55	0.57	0.59	0.35
Avail Cap(c_a), veh/h	191	682	579	153	0	589	267	0	753	153	642	545
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(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	13.3	16.3	22.0	0.0	16.1	19.4	0.0	12.3	22.6	16.4	15.5
Incr Delay (d2), s/veh	34.3	0.1	5.0	11.0	0.0	0.3	32.3	0.0	0.8	14.6	1.4	0.6
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(50%),veh/ln	3.9	0.3	4.3	0.9	0.0	0.7	5.4	0.0	3.8	0.4	2.8	1.3
LnGrp Delay(d),s/veh	54.7	13.4	21.3	33.0	0.0	16.4	51.7	0.0	13.1	37.2	17.8	16.1
LnGrp LOS	D	B	C	C		B	D		B	D	B	B
Approach Vol, veh/h		515			113			596			373	
Approach Delay, s/veh		31.7			23.9			28.8			18.3	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	20.1	5.9	15.6	11.0	13.9	9.0	12.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	4.0	17.0	7.0	16.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	9.2	3.3	10.7	8.3	7.3	6.3	3.4
Green Ext Time (p_c), s	0.0	2.9	0.0	0.9	0.0	2.7	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	37	2	30	0	25	1	21	0	29	514	52
Future Vol, veh/h	0	37	2	30	0	25	1	21	0	29	514	52
Peak Hour Factor	0.92	0.82	0.82	0.82	0.92	0.78	0.78	0.78	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	45	2	37	0	32	1	27	0	34	605	61
Number of Lanes	0	0	1	0	0	0	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	1
HCM Control Delay	11.6	11.2	15.7
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	54%	53%	100%	0%	0%
Vol Thru, %	0%	100%	77%	3%	2%	0%	100%	76%
Vol Right, %	0%	0%	23%	43%	45%	0%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	343	223	69	47	18	271	178
LT Vol	29	0	0	37	25	18	0	0
Through Vol	0	343	171	2	1	0	271	135
RT Vol	0	0	52	30	21	0	0	43
Lane Flow Rate	34	403	263	84	60	22	326	215
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.06	0.647	0.41	0.171	0.124	0.039	0.538	0.344
Departure Headway (Hd)	6.286	5.78	5.615	7.332	7.397	6.439	5.934	5.763
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	569	625	641	488	483	555	607	623
Service Time	4.028	3.522	3.357	5.093	5.161	4.185	3.679	3.508
HCM Lane V/C Ratio	0.06	0.645	0.41	0.172	0.124	0.04	0.537	0.345
HCM Control Delay	9.4	18.6	12.2	11.6	11.2	9.4	15.4	11.5
HCM Lane LOS	A	C	B	B	B	A	C	B
HCM 95th-tile Q	0.2	4.7	2	0.6	0.4	0.1	3.2	1.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	18	406	43
Future Vol, veh/h	0	18	406	43
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	22	489	52
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	13.7
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	61	44	0	17	12
Future Vol, veh/h	23	61	44	0	17	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	66	48	0	18	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	48	0	-	0	164	48
Stage 1	-	-	-	-	48	-
Stage 2	-	-	-	-	116	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1559	-	-	-	827	1021
Stage 1	-	-	-	-	974	-
Stage 2	-	-	-	-	909	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1559	-	-	-	813	1021
Mov Cap-2 Maneuver	-	-	-	-	813	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	909	-

Approach	EB	WB	SB
HCM Control Delay, s	2	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1559	-	-	-	888
HCM Lane V/C Ratio	0.016	-	-	-	0.035
HCM Control Delay (s)	7.3	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Appendix B

Analysis Worksheets for Near-Term (2025) plus Proposed Project Conditions with Project Trip Redistribution

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	160	313	180	20	90	848	120	250	220	20	131	350
Future Volume (veh/h)	160	313	180	20	90	848	120	250	220	20	131	350
Number	5	2	12		1	6	16	3	8	18	7	4
Initial Q (Qb), veh	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
Adj Sat Flow, veh/h/ln	1881	1881	1881		1878	1881	1881	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	174	340	196		98	922	130	272	239	22	142	380
Adj No. of Lanes	2	2	1		1	2	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1		1	1	1	2	2	2	2	2
Cap, veh/h	233	1109	496		120	1109	496	365	978	89	143	507
Arrive On Green	0.07	0.31	0.31		0.07	0.31	0.31	0.11	0.30	0.30	0.08	0.27
Sat Flow, veh/h	3476	3574	1599		1788	3574	1599	3442	3280	299	1774	1863
Grp Volume(v), veh/h	174	340	196		98	922	130	272	128	133	142	380
Grp Sat Flow(s),veh/h/ln	1738	1787	1599		1788	1787	1599	1721	1770	1810	1774	1863
Q Serve(g_s), s	3.7	5.4	7.2		4.0	17.9	4.6	5.7	4.1	4.2	6.0	13.9
Cycle Q Clear(g_c), s	3.7	5.4	7.2		4.0	17.9	4.6	5.7	4.1	4.2	6.0	13.9
Prop In Lane	1.00		1.00		1.00		1.00	1.00		0.17	1.00	
Lane Grp Cap(c), veh/h	233	1109	496		120	1109	496	365	527	539	143	507
V/C Ratio(X)	0.75	0.31	0.39		0.82	0.83	0.26	0.75	0.24	0.25	0.99	0.75
Avail Cap(c_a), veh/h	233	1237	553		120	1237	553	462	593	607	143	525
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
Upstream Filter(I)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	19.6	20.2		34.3	23.9	19.3	32.3	19.8	19.8	34.3	24.8
Incr Delay (d2), s/veh	12.4	0.2	0.5		33.9	4.5	0.3	4.9	0.2	0.2	73.7	5.7
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
%ile BackOfQ(50%),veh/ln	2.2	2.7	3.3		3.1	9.5	2.0	3.0	2.0	2.1	5.8	7.9
LnGrp Delay(d),s/veh	46.5	19.8	20.7		68.2	28.4	19.6	37.3	20.0	20.1	107.9	30.5
LnGrp LOS	D	B	C		E	C	B	D	C	C	F	C
Approach Vol, veh/h		710				1150			533			913
Approach Delay, s/veh		26.6				30.8			28.8			49.9
Approach LOS		C				C			C			D

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	28.8	11.9	24.8	9.0	28.8	10.0	26.7
Change Period (Y+Rc), s	4.0	5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	5.0	25.8	10.0	21.0	5.0	25.8	6.0	25.0
Max Q Clear Time (g_c+I1), s	6.0	9.2	7.7	19.8	5.7	19.9	8.0	6.2
Green Ext Time (p_c), s	0.0	2.6	0.2	0.5	0.0	3.3	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Notes

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	360
Future Volume (veh/h)	360
Number	14
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1863
Adj Flow Rate, veh/h	391
Adj No. of Lanes	1
Peak Hour Factor	0.92
Percent Heavy Veh, %	2
Cap, veh/h	431
Arrive On Green	0.27
Sat Flow, veh/h	1583
Grp Volume(v), veh/h	391
Grp Sat Flow(s),veh/h/ln	1583
Q Serve(g_s), s	17.8
Cycle Q Clear(g_c), s	17.8
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	431
V/C Ratio(X)	0.91
Avail Cap(c_a), veh/h	446
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	26.2
Incr Delay (d2), s/veh	21.6
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	10.3
LnGrp Delay(d),s/veh	47.8
LnGrp LOS	D
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	421	20	86	915	100	50	70	72	130	280	143
Future Volume (veh/h)	23	421	20	86	915	100	50	70	72	130	280	143
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	25	458	22	93	995	109	54	76	78	141	304	155
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	31	788	38	118	819	90	206	98	101	119	257	325
Arrive On Green	0.02	0.44	0.44	0.07	0.49	0.49	0.12	0.12	0.12	0.21	0.21	0.21
Sat Flow, veh/h	1792	1781	86	1792	1666	183	1774	844	866	581	1253	1583
Grp Volume(v), veh/h	25	0	480	93	0	1104	54	0	154	445	0	155
Grp Sat Flow(s),veh/h/ln	1792	0	1866	1792	0	1849	1774	0	1710	1834	0	1583
Q Serve(g_s), s	1.6	0.0	21.6	5.7	0.0	55.0	3.1	0.0	9.8	23.0	0.0	9.7
Cycle Q Clear(g_c), s	1.6	0.0	21.6	5.7	0.0	55.0	3.1	0.0	9.8	23.0	0.0	9.7
Prop In Lane	1.00		0.05	1.00		0.10	1.00		0.51	0.32		1.00
Lane Grp Cap(c), veh/h	31	0	826	118	0	908	206	0	199	377	0	325
V/C Ratio(X)	0.81	0.00	0.58	0.79	0.00	1.22	0.26	0.00	0.77	1.18	0.00	0.48
Avail Cap(c_a), veh/h	240	0	917	240	0	908	388	0	374	377	0	325
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(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.8	0.0	23.4	51.5	0.0	28.5	45.1	0.0	48.0	44.5	0.0	39.2
Incr Delay (d2), s/veh	29.5	0.0	1.5	8.4	0.0	107.1	1.1	0.0	10.4	105.6	0.0	1.9
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(50%),veh/ln	1.0	0.0	11.4	3.1	0.0	55.0	1.6	0.0	5.2	22.7	0.0	4.4
LnGrp Delay(d),s/veh	84.4	0.0	24.9	59.9	0.0	135.5	46.2	0.0	58.5	150.1	0.0	41.0
LnGrp LOS	F		C	E		F	D		E	F		D
Approach Vol, veh/h		505			1197			208			600	
Approach Delay, s/veh		27.8			129.7			55.3			121.9	
Approach LOS		C			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	61.0		17.0	10.9	55.6		28.5
Change Period (Y+Rc), s	3.5	6.0		4.0	3.5	6.0		5.5
Max Green Setting (Gmax), s	15.0	55.0		24.5	15.0	55.0		23.0
Max Q Clear Time (g_c+I1), s	3.6	57.0		11.8	7.7	23.6		25.0
Green Ext Time (p_c), s	0.0	0.0		1.3	0.1	6.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	370	220	180	825	10	250	62	60	10	44	26
Future Volume (veh/h)	33	370	220	180	825	10	250	62	60	10	44	26
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	36	402	239	196	897	11	272	67	65	11	48	28
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	75	819	696	230	968	12	320	157	152	14	63	37
Arrive On Green	0.04	0.44	0.44	0.13	0.52	0.52	0.18	0.18	0.18	0.07	0.07	0.07
Sat Flow, veh/h	1792	1881	1599	1792	1854	23	1774	870	844	222	967	564
Grp Volume(v), veh/h	36	402	239	196	0	908	272	0	132	87	0	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	0	1877	1774	0	1714	1752	0	0
Q Serve(g_s), s	1.9	14.7	9.5	10.3	0.0	43.0	14.2	0.0	6.6	4.7	0.0	0.0
Cycle Q Clear(g_c), s	1.9	14.7	9.5	10.3	0.0	43.0	14.2	0.0	6.6	4.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.49	0.13		0.32
Lane Grp Cap(c), veh/h	75	819	696	230	0	980	320	0	309	114	0	0
V/C Ratio(X)	0.48	0.49	0.34	0.85	0.00	0.93	0.85	0.00	0.43	0.76	0.00	0.00
Avail Cap(c_a), veh/h	299	1097	933	299	0	1095	573	0	553	402	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(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.0	19.5	18.0	40.9	0.0	21.2	38.1	0.0	34.9	44.1	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.5	0.3	15.3	0.0	12.4	4.8	0.0	0.7	7.5	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(50%),veh/ln	1.0	7.7	4.2	6.0	0.0	25.3	7.4	0.0	3.2	2.5	0.0	0.0
LnGrp Delay(d),s/veh	48.5	19.9	18.3	56.2	0.0	33.6	42.9	0.0	35.6	51.6	0.0	0.0
LnGrp LOS	D	B	B	E		C	D		D	D		
Approach Vol, veh/h		677			1104			404			87	
Approach Delay, s/veh		20.9			37.6			40.5			51.6	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	55.8		10.3	16.3	47.5		21.9
Change Period (Y+Rc), s	4.0	5.7		4.0	4.0	5.7		4.6
Max Green Setting (Gmax), s	16.0	56.0		22.0	16.0	56.0		31.0
Max Q Clear Time (g_c+I1), s	3.9	45.0		6.7	12.3	16.7		16.2
Green Ext Time (p_c), s	0.0	5.1		0.3	0.1	3.6		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	420	20	10	975	40	10
Future Vol, veh/h	420	20	10	975	40	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	457	22	11	1060	43	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	479	0	1550	468
Stage 1	-	-	-	-	468	-
Stage 2	-	-	-	-	1082	-
Critical Hdwy	-	-	4.11	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.209	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1089	-	125	595
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	325	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1089	-	122	595
Mov Cap-2 Maneuver	-	-	-	-	122	-
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	325	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	44
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	145	-	-	1089	-
HCM Lane V/C Ratio	0.375	-	-	0.01	-
HCM Control Delay (s)	44	-	-	8.3	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	1.6	-	-	0	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	410	920	21	32	105
Future Vol, veh/h	40	410	920	21	32	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	43	446	1000	23	35	114

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1023	0	-	0	1544	1012
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	532	-
Critical Hdwy	4.11	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.209	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	682	-	-	-	126	290
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	589	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	682	-	-	-	115	290
Mov Cap-2 Maneuver	-	-	-	-	115	-
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	589	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	30.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	682	-	-	-	115	290
HCM Lane V/C Ratio	0.064	-	-	-	0.302	0.394
HCM Control Delay (s)	10.6	0	-	-	49.3	25.2
HCM Lane LOS	B	A	-	-	E	D
HCM 95th %tile Q(veh)	0.2	-	-	-	1.2	1.8

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	422	791	11	14	10
Future Vol, veh/h	10	422	791	11	14	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	11	459	860	12	15	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	872	0	-	0	1347	866
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	481	-
Critical Hdwy	4.11	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.209	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	778	-	-	-	167	353
Stage 1	-	-	-	-	412	-
Stage 2	-	-	-	-	622	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	778	-	-	-	164	353
Mov Cap-2 Maneuver	-	-	-	-	164	-
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	24.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	778	-	-	-	211
HCM Lane V/C Ratio	0.014	-	-	-	0.124
HCM Control Delay (s)	9.7	0	-	-	24.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	5.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	1	21	10	4	53
Future Vol, veh/h	30	1	21	10	4	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	1	23	11	4	58

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	29	34
Stage 1	-	-	0	0
Stage 2	-	-	29	34
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	986	859
Stage 1	-	-	-	-
Stage 2	-	-	994	867
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	986	0
Mov Cap-2 Maneuver	-	-	986	0
Stage 1	-	-	-	0
Stage 2	-	-	994	0

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

Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	986
HCM Lane V/C Ratio	-	-	0.063
HCM Control Delay (s)	-	-	8.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.2

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	54	30	31	83	0
Future Vol, veh/h	0	54	30	31	83	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	59	33	34	90	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	190	90	90	0	-	0
Stage 1	90	-	-	-	-	-
Stage 2	100	-	-	-	-	-
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	968	1505	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	924	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	781	968	1505	-	-	-
Mov Cap-2 Maneuver	781	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	924	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	3.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1505	-	968	-	-
HCM Lane V/C Ratio	0.022	-	0.061	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	6.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	40	40	18	70	35
Future Vol, veh/h	13	40	40	18	70	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	43	43	20	76	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	57	0	142	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	106	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1547	-	851	1037
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1547	-	827	1037
Mov Cap-2 Maneuver	-	-	-	-	827	-
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	887	-	-	1547	-
HCM Lane V/C Ratio	0.129	-	-	0.028	-
HCM Control Delay (s)	9.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	75	180	12	41	540
Future Vol, veh/h	13	75	180	12	41	540
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	82	196	13	45	587

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	587	203	0	0	209	0
Stage 1	203	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	456	837	-	-	1360	-
Stage 1	830	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	434	837	-	-	1360	-
Mov Cap-2 Maneuver	434	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	659	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	736	1360	-
HCM Lane V/C Ratio	-	-	0.13	0.033	-
HCM Control Delay (s)	-	-	10.6	7.7	0.2
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection	
Intersection Delay, s/veh	23.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	30	0	100	0	160	10	60	0	30	231	60
Future Vol, veh/h	0	30	0	100	0	160	10	60	0	30	231	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	33	0	109	0	174	11	65	0	33	251	65
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	12.4	16.1	18.4
HCM LOS	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	23%	70%	6%
Vol Thru, %	72%	0%	4%	91%
Vol Right, %	19%	77%	26%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	321	130	230	464
LT Vol	30	30	160	30
Through Vol	231	0	10	424
RT Vol	60	100	60	10
Lane Flow Rate	349	141	250	504
Geometry Grp	1	1	1	1
Degree of Util (X)	0.603	0.268	0.476	0.843
Departure Headway (Hd)	6.217	6.828	6.848	6.014
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	579	523	525	600
Service Time	4.288	4.918	4.923	4.077
HCM Lane V/C Ratio	0.603	0.27	0.476	0.84
HCM Control Delay	18.4	12.4	16.1	33.4
HCM Lane LOS	C	B	C	D
HCM 95th-tile Q	4	1.1	2.5	9.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	30	424	10
Future Vol, veh/h	0	30	424	10
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	33	461	11
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	33.4
HCM LOS	D

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	70	90	300	100	70	10	170	430	271	50	60	384
Future Volume (vph)	70	90	300	100	70	10	170	430	271	50	60	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	4.6	4.0	4.0			4.5	5.3		4.0	5.3
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98			1.00	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1827			1770	1820		1770	1863
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1827			1770	1820		1770	1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	98	326	109	76	11	185	467	295	54	65	417
RTOR Reduction (vph)	0	0	293	0	4	0	0	0	3	0	0	0
Lane Group Flow (vph)	76	98	33	109	83	0	0	652	346	0	65	417
Turn Type	Split	NA	Perm	Split	NA		Prot	Prot	NA		Prot	NA
Protected Phases	4	4		8	8		5	5	2		1	6
Permitted Phases			4									
Actuated Green, G (s)	10.0	10.0	10.0	11.3	11.3			30.6	51.3		6.9	27.1
Effective Green, g (s)	10.0	10.0	10.0	11.3	11.3			30.6	51.3		6.9	27.1
Actuated g/C Ratio	0.10	0.10	0.10	0.12	0.12			0.31	0.53		0.07	0.28
Clearance Time (s)	4.6	4.6	4.6	4.0	4.0			4.5	5.3		4.0	5.3
Vehicle Extension (s)	2.0	2.0	2.0	3.0	3.0			2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	181	191	162	205	211			556	958		125	518
v/s Ratio Prot	0.04	c0.05		c0.06	0.05			c0.37	0.19		0.04	c0.22
v/s Ratio Perm			0.02									
v/c Ratio	0.42	0.51	0.21	0.53	0.39			1.17	0.36		0.52	0.81
Uniform Delay, d1	41.0	41.4	40.1	40.6	39.9			33.4	13.5		43.7	32.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	1.0	0.2	2.6	1.2			95.6	0.2		3.0	8.6
Delay (s)	41.6	42.4	40.3	43.2	41.1			129.0	13.6		46.6	41.3
Level of Service	D	D	D	D	D			F	B		D	D
Approach Delay (s)		40.9			42.3				88.8			37.2
Approach LOS		D			D				F			D

Intersection Summary			
HCM 2000 Control Delay	59.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	97.4	Sum of lost time (s)	18.4
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	240
Future Volume (vph)	240
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.3
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1583
Flt Permitted	1.00
Satd. Flow (perm)	1583
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	261
RTOR Reduction (vph)	120
Lane Group Flow (vph)	141
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	27.1
Effective Green, g (s)	27.1
Actuated g/C Ratio	0.28
Clearance Time (s)	5.3
Vehicle Extension (s)	2.5
Lane Grp Cap (vph)	440
v/s Ratio Prot	
v/s Ratio Perm	0.09
v/c Ratio	0.32
Uniform Delay, d1	27.9
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	28.2
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Intersection	
Intersection Delay, s/veh	48.6
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	90	0	140	0	90	10	20	0	140	701	90
Future Vol, veh/h	0	90	0	140	0	90	10	20	0	140	701	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	98	0	152	0	98	11	22	0	152	762	98
Number of Lanes	0	0	1	0	0	0	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	1
HCM Control Delay	26	18.2	48.3
HCM LOS	D	C	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	39%	75%	100%	0%	0%
Vol Thru, %	0%	100%	72%	0%	8%	0%	100%	66%
Vol Right, %	0%	0%	28%	61%	17%	0%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	467	324	230	120	30	495	378
LT Vol	140	0	0	90	90	30	0	0
Through Vol	0	467	234	0	10	0	495	248
RT Vol	0	0	90	140	20	0	0	130
Lane Flow Rate	152	508	352	250	130	33	538	411
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.355	1	0.753	0.629	0.361	0.077	1	0.886
Departure Headway (Hd)	8.403	7.899	7.704	9.054	9.968	8.52	8.017	7.774
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	429	462	471	400	361	421	458	468
Service Time	6.132	5.629	5.433	6.781	7.704	6.253	5.749	5.507
HCM Lane V/C Ratio	0.354	1.1	0.747	0.625	0.36	0.078	1.175	0.878
HCM Control Delay	15.7	70.4	30.4	26	18.2	12	70.9	46.3
HCM Lane LOS	C	F	D	D	C	B	F	E
HCM 95th-tile Q	1.6	13	6.3	4.1	1.6	0.2	13	9.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	30	743	130
Future Vol, veh/h	0	30	743	130
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	33	808	141
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	58.7
HCM LOS	F

Lane

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↱			↕	
Traffic Vol, veh/h	8	30	0	10	20	0	0	0	20	4	0	18
Future Vol, veh/h	8	30	0	10	20	0	0	0	20	4	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	33	0	11	22	0	0	0	22	4	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	22	0	0	33	0	0	-	95	33	106	95	22
Stage 1	-	-	-	-	-	-	-	51	-	44	44	-
Stage 2	-	-	-	-	-	-	-	44	-	62	51	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1593	-	-	1579	-	-	0	795	1041	873	795	1055
Stage 1	-	-	-	-	-	-	0	852	-	970	858	-
Stage 2	-	-	-	-	-	-	0	858	-	949	852	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1593	-	-	1579	-	-	-	785	1041	846	785	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	785	-	846	785	-
Stage 1	-	-	-	-	-	-	-	847	-	964	852	-
Stage 2	-	-	-	-	-	-	-	852	-	924	847	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	2.4	8.5	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1041	1593	-	-	1579	-	-	1010
HCM Lane V/C Ratio	0.021	0.005	-	-	0.007	-	-	0.024
HCM Control Delay (s)	8.5	7.3	0	-	7.3	0	-	8.7
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	410	938	270	30	160	555	100	290	320	40	132	230
Future Volume (veh/h)	410	938	270	30	160	555	100	290	320	40	132	230
Number	5	2	12		1	6	16	3	8	18	7	4
Initial Q (Qb), veh	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
Adj Sat Flow, veh/h/ln	1881	1881	1881		1878	1881	1881	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	446	1020	293		174	603	109	315	348	43	143	250
Adj No. of Lanes	2	2	1		1	2	1	2	2	0	1	1
Peak Hour Factor	0.92	0.92	0.92		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1		1	1	1	2	2	2	2	2
Cap, veh/h	354	1254	561		156	1202	538	420	760	93	103	327
Arrive On Green	0.10	0.35	0.35		0.09	0.34	0.34	0.12	0.24	0.24	0.06	0.18
Sat Flow, veh/h	3476	3574	1599		1789	3574	1599	3442	3174	389	1774	1863
Grp Volume(v), veh/h	446	1020	293		174	603	109	315	193	198	143	250
Grp Sat Flow(s),veh/h/ln	1738	1787	1599		1789	1787	1599	1721	1770	1794	1774	1863
Q Serve(g_s), s	7.0	17.8	10.0		6.0	9.3	3.3	6.1	6.4	6.5	4.0	8.8
Cycle Q Clear(g_c), s	7.0	17.8	10.0		6.0	9.3	3.3	6.1	6.4	6.5	4.0	8.8
Prop In Lane	1.00		1.00		1.00		1.00	1.00		0.22	1.00	
Lane Grp Cap(c), veh/h	354	1254	561		156	1202	538	420	424	430	103	327
V/C Ratio(X)	1.26	0.81	0.52		1.12	0.50	0.20	0.75	0.46	0.46	1.39	0.76
Avail Cap(c_a), veh/h	354	1392	623		156	1340	599	550	643	652	103	487
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
Upstream Filter(I)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	20.3	17.8		31.4	18.2	16.3	29.2	22.3	22.4	32.4	27.0
Incr Delay (d2), s/veh	138.6	3.5	0.8		106.5	0.3	0.2	4.1	0.8	0.8	222.9	4.1
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
%ile BackOfQ(50%),veh/ln	10.1	9.4	4.5		7.5	4.6	1.5	3.1	3.2	3.3	8.3	4.9
LnGrp Delay(d),s/veh	169.5	23.8	18.5		137.9	18.6	16.5	33.3	23.1	23.1	255.3	31.1
LnGrp LOS	F	C	B		F	B	B	C	C	C	F	C
Approach Vol, veh/h		1759				886			706			600
Approach Delay, s/veh		59.9				41.7			27.7			84.4
Approach LOS		E				D			C			F

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	29.8	12.4	16.6	11.0	28.8	8.0	21.0
Change Period (Y+Rc), s	4.0	5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	6.0	26.8	11.0	18.0	7.0	25.8	4.0	25.0
Max Q Clear Time (g_c+I1), s	8.0	19.8	8.1	10.8	9.0	11.3	6.0	8.5
Green Ext Time (p_c), s	0.0	4.3	0.3	1.3	0.0	3.9	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	53.8
HCM 2010 LOS	D

Notes

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	190
Future Volume (veh/h)	190
Number	14
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1863
Adj Flow Rate, veh/h	207
Adj No. of Lanes	1
Peak Hour Factor	0.92
Percent Heavy Veh, %	2
Cap, veh/h	278
Arrive On Green	0.18
Sat Flow, veh/h	1583
Grp Volume(v), veh/h	207
Grp Sat Flow(s),veh/h/ln	1583
Q Serve(g_s), s	8.5
Cycle Q Clear(g_c), s	8.5
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	278
V/C Ratio(X)	0.74
Avail Cap(c_a), veh/h	414
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	26.9
Incr Delay (d2), s/veh	3.9
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	4.0
LnGrp Delay(d),s/veh	30.8
LnGrp LOS	C
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	1004	20	63	673	120	50	130	72	120	90	92
Future Volume (veh/h)	121	1004	20	63	673	120	50	130	72	120	90	92
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	132	1091	22	68	732	130	54	141	78	130	98	100
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	160	895	18	59	670	119	261	166	92	159	120	244
Arrive On Green	0.09	0.49	0.49	0.03	0.43	0.43	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1792	1838	37	1792	1556	276	1774	1128	624	1033	778	1583
Grp Volume(v), veh/h	132	0	1113	68	0	862	54	0	219	228	0	100
Grp Sat Flow(s),veh/h/ln	1792	0	1875	1792	0	1832	1774	0	1753	1811	0	1583
Q Serve(g_s), s	7.7	0.0	51.8	3.5	0.0	45.8	2.8	0.0	13.0	13.0	0.0	6.1
Cycle Q Clear(g_c), s	7.7	0.0	51.8	3.5	0.0	45.8	2.8	0.0	13.0	13.0	0.0	6.1
Prop In Lane	1.00		0.02	1.00		0.15	1.00		0.36	0.57		1.00
Lane Grp Cap(c), veh/h	160	0	913	59	0	789	261	0	258	279	0	244
V/C Ratio(X)	0.82	0.00	1.22	1.15	0.00	1.09	0.21	0.00	0.85	0.82	0.00	0.41
Avail Cap(c_a), veh/h	160	0	913	59	0	789	310	0	307	376	0	329
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(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.6	0.0	27.3	51.4	0.0	30.3	39.9	0.0	44.2	43.5	0.0	40.6
Incr Delay (d2), s/veh	27.7	0.0	108.5	165.0	0.0	60.2	0.7	0.0	19.6	12.5	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	54.1	4.4	0.0	36.2	1.4	0.0	7.7	7.4	0.0	2.8
LnGrp Delay(d),s/veh	75.3	0.0	135.7	216.5	0.0	90.4	40.6	0.0	63.8	56.0	0.0	42.5
LnGrp LOS	E		F	F		F	D		E	E		D
Approach Vol, veh/h		1245			930			273			328	
Approach Delay, s/veh		129.3			99.6			59.2			51.9	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	51.8		19.6	7.0	57.8		21.9
Change Period (Y+Rc), s	3.5	6.0		4.0	3.5	6.0		5.5
Max Green Setting (Gmax), s	9.5	45.8		18.6	3.5	51.8		22.1
Max Q Clear Time (g_c+I1), s	9.7	47.8		15.0	5.5	53.8		15.0
Green Ext Time (p_c), s	0.0	0.0		0.7	0.0	0.0		1.4

Intersection Summary			
HCM 2010 Ctrl Delay		103.3	
HCM 2010 LOS		F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	851	310	60	553	10	270	45	150	10	23	33
Future Volume (veh/h)	35	851	310	60	553	10	270	45	150	10	23	33
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	38	925	337	65	601	11	293	49	163	11	25	36
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	73	986	838	84	977	18	343	73	244	14	33	47
Arrive On Green	0.04	0.52	0.52	0.05	0.53	0.53	0.19	0.19	0.19	0.06	0.06	0.06
Sat Flow, veh/h	1792	1881	1599	1792	1842	34	1774	379	1261	260	590	850
Grp Volume(v), veh/h	38	925	337	65	0	612	293	0	212	72	0	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	0	1875	1774	0	1640	1700	0	0
Q Serve(g_s), s	2.1	46.8	12.9	3.6	0.0	23.1	16.2	0.0	12.2	4.2	0.0	0.0
Cycle Q Clear(g_c), s	2.1	46.8	12.9	3.6	0.0	23.1	16.2	0.0	12.2	4.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.77	0.15		0.50
Lane Grp Cap(c), veh/h	73	986	838	84	0	994	343	0	318	94	0	0
V/C Ratio(X)	0.52	0.94	0.40	0.77	0.00	0.62	0.85	0.00	0.67	0.77	0.00	0.00
Avail Cap(c_a), veh/h	282	1037	882	282	0	1034	541	0	501	368	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(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.7	22.6	14.6	47.8	0.0	16.6	39.6	0.0	37.9	47.3	0.0	0.0
Incr Delay (d2), s/veh	4.2	15.0	0.3	10.4	0.0	1.0	6.4	0.0	1.8	9.3	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(50%),veh/ln	1.1	28.3	5.8	2.0	0.0	12.2	8.6	0.0	5.7	2.2	0.0	0.0
LnGrp Delay(d),s/veh	52.0	37.7	14.9	58.2	0.0	17.7	45.9	0.0	39.7	56.7	0.0	0.0
LnGrp LOS	D	D	B	E		B	D		D	E		
Approach Vol, veh/h		1300			677			505			72	
Approach Delay, s/veh		32.2			21.6			43.3			56.7	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	59.6		9.6	8.8	58.9		24.3
Change Period (Y+Rc), s	4.0	5.7		4.0	4.0	5.7		4.6
Max Green Setting (Gmax), s	16.0	56.0		22.0	16.0	56.0		31.0
Max Q Clear Time (g_c+I1), s	4.1	25.1		6.2	5.6	48.8		18.2
Green Ext Time (p_c), s	0.0	4.6		0.2	0.1	4.4		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	981	30	20	603	20	10
Future Vol, veh/h	981	30	20	603	20	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	1066	33	22	655	22	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1099	0	1782	1083
Stage 1	-	-	-	-	1083	-
Stage 2	-	-	-	-	699	-
Critical Hdwy	-	-	4.11	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.209	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	639	-	90	264
Stage 1	-	-	-	-	325	-
Stage 2	-	-	-	-	493	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	639	-	85	264
Mov Cap-2 Maneuver	-	-	-	-	85	-
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	493	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	51
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	110	-	-	639	-
HCM Lane V/C Ratio	0.296	-	-	0.034	-
HCM Control Delay (s)	51	-	-	10.8	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	1.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	91	920	570	23	11	73
Future Vol, veh/h	91	920	570	23	11	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	99	1000	620	25	12	79

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	645	0	-	0	1831	633
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	1198	-
Critical Hdwy	4.11	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.209	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	945	-	-	-	84	480
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	286	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	945	-	-	-	64	480
Mov Cap-2 Maneuver	-	-	-	-	64	-
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	286	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	21.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	945	-	-	-	64	480
HCM Lane V/C Ratio	0.105	-	-	-	0.187	0.165
HCM Control Delay (s)	9.3	0	-	-	73.7	14
HCM Lane LOS	A	A	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6	0.6

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	921	553	13	3	10
Future Vol, veh/h	10	921	553	13	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	11	1001	601	14	3	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	615	0	-	0	1631	608
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	1023	-
Critical Hdwy	4.11	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.209	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	970	-	-	-	112	496
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	347	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	970	-	-	-	109	496
Mov Cap-2 Maneuver	-	-	-	-	109	-
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	347	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	18.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	970	-	-	-	273
HCM Lane V/C Ratio	0.011	-	-	-	0.052
HCM Control Delay (s)	8.8	0	-	-	18.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	3	64	10	3	31
Future Vol, veh/h	20	3	64	10	3	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	3	70	11	3	34

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	76	81
Stage 1	-	-	0	0
Stage 2	-	-	76	81
Critical Hdwy	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	5.52
Follow-up Hdwy	-	-	3.518	4.018
Pot Cap-1 Maneuver	-	-	927	809
Stage 1	-	-	-	-
Stage 2	-	-	947	828
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	927	0
Mov Cap-2 Maneuver	-	-	927	0
Stage 1	-	-	-	0
Stage 2	-	-	947	0

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

Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	927
HCM Lane V/C Ratio	-	-	0.04
HCM Control Delay (s)	-	-	9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	40	74	51	0
Future Vol, veh/h	0	33	40	74	51	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	36	43	80	55	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	221	55	55	0	-	0
Stage 1	55	-	-	-	-	-
Stage 2	166	-	-	-	-	-
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	767	1012	1550	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	745	1012	1550	-	-	-
Mov Cap-2 Maneuver	745	-	-	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	863	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1550	-	1012	-	-
HCM Lane V/C Ratio	0.028	-	0.035	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	23	20	46	25	40	50
Future Vol, veh/h	23	20	46	25	40	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	22	50	27	43	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	47	0	163	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	127	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1560	-	828	1037
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	899	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1560	-	801	1037
Mov Cap-2 Maneuver	-	-	-	-	801	-
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	899	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.8	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	917	-	-	1560	-
HCM Lane V/C Ratio	0.107	-	-	0.032	-
HCM Control Delay (s)	9.4	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	53	350	21	22	290
Future Vol, veh/h	12	53	350	21	22	290
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	58	380	23	24	315

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	598	392	0	0	403	0
Stage 1	392	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	449	656	-	-	1154	-
Stage 1	682	-	-	-	-	-
Stage 2	809	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	438	656	-	-	1154	-
Mov Cap-2 Maneuver	438	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	809	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	601	1154	-
HCM Lane V/C Ratio	-	-	0.118	0.021	-
HCM Control Delay (s)	-	-	11.8	8.2	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Intersection	
Intersection Delay, s/veh	25
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	20	10	50	0	80	10	50	0	100	364	100
Future Vol, veh/h	0	20	10	50	0	80	10	50	0	100	364	100
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	11	54	0	87	11	54	0	109	396	109
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	10.9	12.2	35.7
HCM LOS	B	B	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	25%	57%	18%
Vol Thru, %	65%	12%	7%	70%
Vol Right, %	18%	62%	36%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	564	80	140	333
LT Vol	100	20	80	60
Through Vol	364	10	10	233
RT Vol	100	50	50	40
Lane Flow Rate	613	87	152	362
Geometry Grp	1	1	1	1
Degree of Util (X)	0.889	0.16	0.281	0.562
Departure Headway (Hd)	5.218	6.637	6.639	5.587
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	687	543	545	641
Service Time	3.296	4.646	4.643	3.681
HCM Lane V/C Ratio	0.892	0.16	0.279	0.565
HCM Control Delay	35.7	10.9	12.2	15.7
HCM Lane LOS	E	B	B	C
HCM 95th-tile Q	11.1	0.6	1.1	3.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	60	233	40
Future Vol, veh/h	0	60	233	40
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	65	253	43
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	15.7
HCM LOS	C

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	20	290	30	20	20	320	454	20	20	252	90
Future Volume (veh/h)	110	20	290	30	20	20	320	454	20	20	252	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	120	22	315	33	22	22	348	493	22	22	274	98
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	458	389	53	162	162	261	650	29	38	449	382
Arrive On Green	0.09	0.25	0.25	0.03	0.19	0.19	0.15	0.37	0.37	0.02	0.24	0.24
Sat Flow, veh/h	1774	1863	1583	1774	856	856	1774	1770	79	1774	1863	1583
Grp Volume(v), veh/h	120	22	315	33	0	44	348	0	515	22	274	98
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1712	1774	0	1849	1774	1863	1583
Q Serve(g_s), s	3.2	0.4	8.9	0.9	0.0	1.0	7.0	0.0	11.6	0.6	6.2	2.4
Cycle Q Clear(g_c), s	3.2	0.4	8.9	0.9	0.0	1.0	7.0	0.0	11.6	0.6	6.2	2.4
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	153	458	389	53	0	324	261	0	679	38	449	382
V/C Ratio(X)	0.79	0.05	0.81	0.63	0.00	0.14	1.33	0.00	0.76	0.58	0.61	0.26
Avail Cap(c_a), veh/h	186	666	566	149	0	576	261	0	738	149	626	532
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(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	13.7	16.9	22.8	0.0	16.0	20.3	0.0	13.2	23.1	16.1	14.6
Incr Delay (d2), s/veh	16.3	0.0	5.6	11.6	0.0	0.2	173.8	0.0	4.2	13.6	1.3	0.4
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(50%),veh/ln	2.2	0.2	4.4	0.6	0.0	0.5	15.9	0.0	6.7	0.4	3.4	1.1
LnGrp Delay(d),s/veh	37.6	13.7	22.5	34.4	0.0	16.2	194.1	0.0	17.4	36.6	17.4	15.0
LnGrp LOS	D	B	C	C		B	F		B	D	B	B
Approach Vol, veh/h		457			77			863			394	
Approach Delay, s/veh		26.1			24.0			88.7			17.9	
Approach LOS		C			C			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	21.5	5.4	15.7	11.0	15.5	8.1	13.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	4.0	17.0	7.0	16.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.6	13.6	2.9	10.9	9.0	8.2	5.2	3.0
Green Ext Time (p_c), s	0.0	2.5	0.0	0.8	0.0	3.2	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	54.3
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	24.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	30	0	50	0	50	0	20	0	50	744	80
Future Vol, veh/h	0	30	0	50	0	50	0	20	0	50	744	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	33	0	54	0	54	0	22	0	54	809	87
Number of Lanes	0	0	1	0	0	0	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	1
HCM Control Delay	12.4	12.7	31
HCM LOS	B	B	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	38%	71%	100%	0%	0%
Vol Thru, %	0%	100%	76%	0%	0%	0%	100%	81%
Vol Right, %	0%	0%	24%	62%	29%	0%	0%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	496	328	80	70	20	348	214
LT Vol	50	0	0	30	50	20	0	0
Through Vol	0	496	248	0	0	0	348	174
RT Vol	0	0	80	50	20	0	0	40
Lane Flow Rate	54	539	357	87	76	22	378	233
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.099	0.909	0.584	0.187	0.173	0.042	0.676	0.407
Departure Headway (Hd)	6.579	6.072	5.899	7.762	8.199	6.941	6.433	6.3
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	542	593	610	459	435	513	560	568
Service Time	4.345	3.838	3.665	5.557	5.997	4.717	4.209	4.076
HCM Lane V/C Ratio	0.1	0.909	0.585	0.19	0.175	0.043	0.675	0.41
HCM Control Delay	10.1	42.5	16.7	12.4	12.7	10	21.7	13.4
HCM Lane LOS	B	E	C	B	B	A	C	B
HCM 95th-tile Q	0.3	11.2	3.8	0.7	0.6	0.1	5.1	2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	20	522	40
Future Vol, veh/h	0	20	522	40
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	22	567	43
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	18.2
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↱			↕	
Traffic Vol, veh/h	23	20	0	20	20	0	0	0	10	3	0	11
Future Vol, veh/h	23	20	0	20	20	0	0	0	10	3	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	22	0	22	22	0	0	0	11	3	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	22	0	0	22	0	0	-	138	22	144	138	22
Stage 1	-	-	-	-	-	-	-	72	-	66	66	-
Stage 2	-	-	-	-	-	-	-	66	-	78	72	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1593	-	-	1593	-	-	0	753	1055	825	753	1055
Stage 1	-	-	-	-	-	-	0	835	-	945	840	-
Stage 2	-	-	-	-	-	-	0	840	-	931	835	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1593	-	-	1593	-	-	-	730	1055	798	730	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	730	-	798	730	-
Stage 1	-	-	-	-	-	-	-	822	-	930	828	-
Stage 2	-	-	-	-	-	-	-	828	-	907	822	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.9	3.6	8.4	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1055	1593	-	-	1593	-	-	987
HCM Lane V/C Ratio	0.01	0.016	-	-	0.014	-	-	0.015
HCM Control Delay (s)	8.4	7.3	0	-	7.3	0	-	8.7
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0