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Appendix RTC2-G  
**“January 2012  
‘Site D’ Specific Plan” Alternative  
Traffic Impact Analysis**  
(January 11, 2012)

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# **SASAKI TRANSPORTATION SERVICES, INC.**

January 11, 2012

Mr. Peter Lewandowski  
Environmental Impact Sciences  
26051 Via Concha  
Mission Viejo, CA 92691-5614

**SUBJECT: WVUSD Site D, All Residential Alternative – City of Diamond Bar**

Dear Mr. Lewandowski:

This letter report provides traffic evaluations for a potential alternative land use being considered (“Alternative”) as a part of the response to comments (“Responses”) on the “WVUSD Site D Mixed-Use Development” (“Project”). The original Traffic Impact Analysis (“TIA”) prepared by Linscott, Law, and Greenspan Engineers (“LL&G”) dated April 23, 2009 is incorporated by reference. The Responses in this letter report will be included in the environmental documentation ultimately finalized and approved by the City of Diamond Bar. The City will also consider the traffic related mitigations and/or conditions, specific to the land use Alternative addressed in this letter report.

## **APPROACH**

From a traffic perspective the environmental evaluations for this Alternative Project are the result of the extensive environmental analyses already completed for other project alternatives, which led to the current evaluations. More specifically, the current evaluations stem from the original TIA, verbal/written public participation, technical responses, public hearings, and input from decision makers.

This letter report does not attempt to reiterate existing materials already in the public record, but instead focus on the new analyses for the current Project Alternative. The traffic engineering work contained in this letter report, have been performed based on the framework of the previously completed analyses presented and accepted, to date. This approach is consistent with the previous analyses of other WVUSD Site D Mixed-Use Development options.

A brief description of some pertinent considerations, are listed immediately below:

- In order to fully address the traffic requirements associated with the Project there is a need to satisfy CEQA requirements, City of Diamond Bar guidelines, and potential conditions of Project development.
- The draft Specific Plan for the Project site identifies a primary access at Diamond Bar Boulevard (“DBB”) (either the Cherrydale Dr./DBB or Crooked Creek/DBB intersection), and secondary access at Brea Canyon Road. With elimination of the commercial component for this Alternative, access could possibly occur at DBB only. In addition, the TIA alternatives (which included a commercial component) assumed Project access at the Cherrydale Dr./DBB intersection, but City staff indicated a Crooked Creek/DBB access was more likely for this all-residential Alternative.

Therefore, to address a “worst case” scenario the analyses contained within this report assume the Project would take access through a single point (does not preclude potential emergency accesses at Brea Canyon Rd. and/or Pasado Drive), what would become the south leg of the Crooked Creek/DBB intersection. The single access assumption is expected to yield the most conservative (greatest Project impacts) results, and the location at Crooked Creek/DBB provides analyses for the alternative Specific Plan location.

- The “Existing” and “Existing + Project” analyses evaluate potential “significant” Project impacts at the 20 study intersections, which serves to satisfy CEQA requirements. The Project is assumed to have a maximum of 200 residential dwelling units and a park.
- In addition to the “Existing + Project” analyses the City of Diamond Bar TIA guidelines require traffic analyses for future conditions. Year 2030 conditions are analyzed in this letter report as was done in the original TIA, both for with and without the Project.
- The City TIA guidelines require Project “Fair-Share Contributions” based on “ultimate” (year 2030) future improvement needs. The Fair Share contributions, therefore, address Year 2030 intersection impacts (as well as Existing + Project, and interim year conditions).
- It should be noted, that while CEQA requires mitigation of significant Project impacts, the Fair Share requirements in the City TIA Guidelines also serve to offset incremental Project impacts. This all-residential Project will be in compliance with City Guidelines by providing Fair Share contributions toward impacted study intersections (which in some cases do not exceed CEQA significant Project impact thresholds).

- The method for determining the TIA Fair-Share requirements (as outlined in the City of Diamond Bar TIA Guidelines) for development projects is consideration of project impacts at the study intersections, the future improvements required at the study locations, the benefit of the improvements, and the cost of those improvements.
- The required Fair Share contributions are based on current estimates of the costs to offset Project impacts (both CEQA significant and incremental). The Fair Share fees are expected to be reassessed at the time of a specific project approval, with consideration of factors such as; the actual project land uses and sizes, updated construction costs, any needed intersection improvement modifications, consideration of any more detailed engineering for the proposed improvements, etc.
- This letter report also provides recommendations for traffic related, Project “conditions of approval.” One potential condition involves the Project access, and anticipated intersection improvement needs (installation of a traffic signal, as well as street improvements, striping, and signing as needed). Since this improvement primarily and directly benefits the Project, it is recommended to be a Project condition of approval.
- Another recommended Project condition is the provision of right-of-way along the Project frontages (Brea Canyon Rd. & Diamond Bar Blvd.) to facilitate the future intersection improvement needs at the Brea Canyon/DBB intersection, which is consistent with engineering and City of Diamond Bar practices.
- It should be noted, the Project Alternative considered in this letter report has a significantly reduced trip generation potential when compared to the TIA project alternatives. Therefore, this Alternative should be (correctly) viewed as an Alternative Project that fits within the “envelope” of the previously considered projects. Analyses for all 20 study locations, however, were performed to assure full disclosure of potential Project impacts.
- In a similar way, the access assumptions used in this report serve to create a “worst case” envelope, and other alternative (Specific Plan) access scenarios are anticipated to “fit within” the mitigations, improvements, and Project conditions identified in through the analyses presented in this report.
- Given there is no specific project proposed at this time added traffic evaluations will be required in the future to address any specific traffic operational issues, and/or to refine the traffic analyses as needed. The future traffic analysis needs/requirements shall be determined by the City of Diamond Bar, Director of Public Works.

## **ALTERNATIVE PROJECT DESCRIPTION**

The Alternative Project would allow a maximum of 200 dwelling units, with no retail/commercial component, and also provides an approximate two acre “passive” park. No specific Project is currently proposed, so for consistency purposes the residential units have been analyzed using the LL&G TIA assumptions. The City of Diamond Bar has concluded any potential, future “density-bonus” options should not be a part of these evaluations, and would be considered at a later date if appropriate.

The previous TIA had assumed access for the Project site at both Diamond Bar Boulevard and Brea Canyon Road. The Brea Canyon Road driveway in the TIA was in part, related to the retail/commercial component of the previous project. With the absence of retail/commercial uses in this Alternative, it is possible one public access at Diamond Bar Boulevard may be desired by a future Project (which would not preclude emergency/fire department access being provided at Brea Canon and/or Pasado Drive per the Specific Plan).

As described above in the “Approach” section, analyzing this Project under the assumption of a single access point at Diamond Bar Boulevard, serves to create a “worst case envelope.” If a future specific project plans access at both Diamond Bar Boulevard and (with secondary access) at Brea Canyon Road that scenario has also been addressed by these “worst case” analyses.

The Project access for the Alternative in this letter report is proposed to become the south intersection leg of the Diamond Bar Boulevard / Crooked Creek Drive (“DBB/Crooked Creek”) intersection. In the previous TIA the Diamond Bar Boulevard access is located at DBB/Cherrydale. Analysis of DBB/Crooked Creek in this report and DBB/Cherrydale in the previously completed TIA, serves to provide evaluation of both potential Diamond Bar Boulevard access points identified in the Project Specific Plan.

## **EXISTING CONDITIONS**

Full descriptions of existing conditions are contained in the TIA. This letter report focuses on the pertinent traffic analyses of “Existing” and “Existing + Project” conditions.

Based upon City of Diamond Bar TIA Guidelines, the 20 study intersections were analyzed for the current all-residential Project Alternative. The study locations are listed in **Table 1**. If an intersection is signalized (there are various requirements including City of Diamond Bar and Los Angeles County CMP to apply) the Intersection Capacity Utilization (“ICU”) methodology was applied. Analyses referenced from the Highway Capacity Manual (HCM) were used at the non-signalized intersections.

**TABLE 1  
INTERSECTION ANALYSES SUMMARY  
SIGNIFICANT IMPACT EVALUATION**

| INTERSECTION  | ICU - Delay / LOS     |                        |                        |                        | ICU - Delay INCREASE |                | SIGNIFICANT IMPACT |     |
|---|-----------------------|------------------------|------------------------|------------------------|----------------------|----------------|--------------------|-----|
|   | EXISTING              |                        | EXISTING + PROJECT     |                        | AM                   | PM             | AM                 | PM  |
|   | AM                    | PM                     | AM                     | PM                     |                      |                |                    |     |
| Brea Canyon Rd. / Pathfinder Rd.                                  | 0.751 / C             | 0.774 / C              | 0.751 / C              | 0.775 / C              | 0.000                | 0.001          | NO                 | NO  |
| SR-57 SB Ramps / Pathfinder Rd.                                   | 0.689 / B             | 0.568 / A              | 0.690 / B              | 0.570 / A              | 0.001                | 0.002          | NO                 | NO  |
| SR-57 NB Ramps / Pathfinder Rd.                                   | 0.719 / C             | 0.664 / B              | 0.719 / C              | 0.665 / B              | 0.000                | 0.001          | NO                 | NO  |
| Fern Hollow Dr. - Brea Canyon Rd.<br>/ Pathfinder Rd.             | 0.760 / C             | 0.648 / B              | 0.762 / C              | 0.648 / B              | 0.002                | 0.000          | NO                 | NO  |
| Diamond Bar Blvd. / Pathfinder Rd.                                | 0.786 / C             | 0.792 / C              | 0.787 / C              | 0.795 / C              | 0.001                | 0.003          | NO                 | NO  |
| Diamond Bar Blvd. / Shadow Canyon Dr.                             | 0.565 / A             | 0.603 / B              | 0.566 / A              | 0.605 / B              | 0.001                | 0.002          | NO                 | NO  |
| Brea Canyon Rd. / Fountain Springs Rd.                            | 16.0 / C              | 13.3 / B               | 16.1 / C               | 13.6 / B               | 0.100                | 0.300          | NO                 | NO  |
| Diamond Bar Blvd. / Fountain Springs Rd.                          | 0.579 / A             | 0.584 / A              | 0.580 / A              | 0.586 / A              | 0.001                | 0.002          | NO                 | NO  |
| Diamond Bar Blvd. / Sugar Pine Pl.                                | 0.496 / A             | 0.590 / A              | 0.497 / A              | 0.592 / B              | 0.001                | 0.002          | NO                 | NO  |
| Brea Canyon Rd. / Cold Spring Lane                                | 15.9 / C              | 12.5 / B               | 16.1 / C               | 12.6 / B               | 0.200                | 0.100          | NO                 | NO  |
| Diamond Bar Blvd. / Cold Spring Lane                              | 0.567 / B             | 0.674 / B              | 0.568 / A              | 0.676 / B              | 0.001                | 0.002          | NO                 | NO  |
| Pathfinder Road / Brea Canyon Cutoff Rd.                          | 0.789 / C             | 0.904 / E              | 0.791 / C              | 0.905 / E              | 0.002                | 0.001          | NO                 | NO  |
| Fallow Field Dr. - Diamond Canyon Rd.<br>/ Brea Canyon Cutoff Rd. | 0.515 / A             | 0.462 / A              | 0.516 / A              | 0.464 / A              | 0.001                | 0.002          | NO                 | NO  |
| SR-57 SB Ramps / Brea Canyon Cutoff Rd.<br>Improvements           | 48.1 / F<br>0.665 / B | 100.2 / F<br>0.586 / A | 203.5 / F<br>0.677 / B | 179.4 / F<br>0.612 / B | 155.40<br>0.012      | 79.20<br>0.026 | YES                | YES |
| SR-57 NB Ramps / Brea Canyon Cutoff Rd.                           | 0.543 / A             | 0.686 / B              | 0.552 / A              | 0.703 / C              | 0.009                | 0.017          | NO                 | NO  |
| Brea Canyon Rd. / Diamond Bar Blvd.                               | 0.814 / D             | 0.813 / D              | 0.820 / D              | 0.834 / D              | 0.006                | 0.021          | NO                 | NO  |
| Crooked Creek Dr. / Diamond Bar Blvd.<br>Improvements             | 15.4 / C<br>0.544 / A | 9.7 / A<br>0.610 / B   | 17.6 / C<br>0.582 / A  | 59.2 / F<br>0.629 / B  | 2.20<br>0.038        | 49.50<br>0.019 | NO                 | YES |
| Brea Canyon Rd. / Silver Bullet Dr.<br>Improvements               | 1.052 / F             | 1.021 / F              | 1.055 / F<br>0.605 / B | 1.023 / F<br>0.569 / A | 0.00                 | 0.002          | NO                 | NO  |
| Diamond Bar Blvd. / Grand Ave. (CMP Int.)                         | 0.748 / C             | 0.862 / D              | 0.750 / C              | 0.864 / D              | 0.002                | 0.002          | NO                 | NO  |
| Colima Rd. /<br>Fairway Dr. - Brea Canyon Cutoff Rd.              | 0.843 / D             | 0.854 / D              | 0.843 / D              | 0.856 / D              | 0.000                | 0.002          | NO                 | NO  |

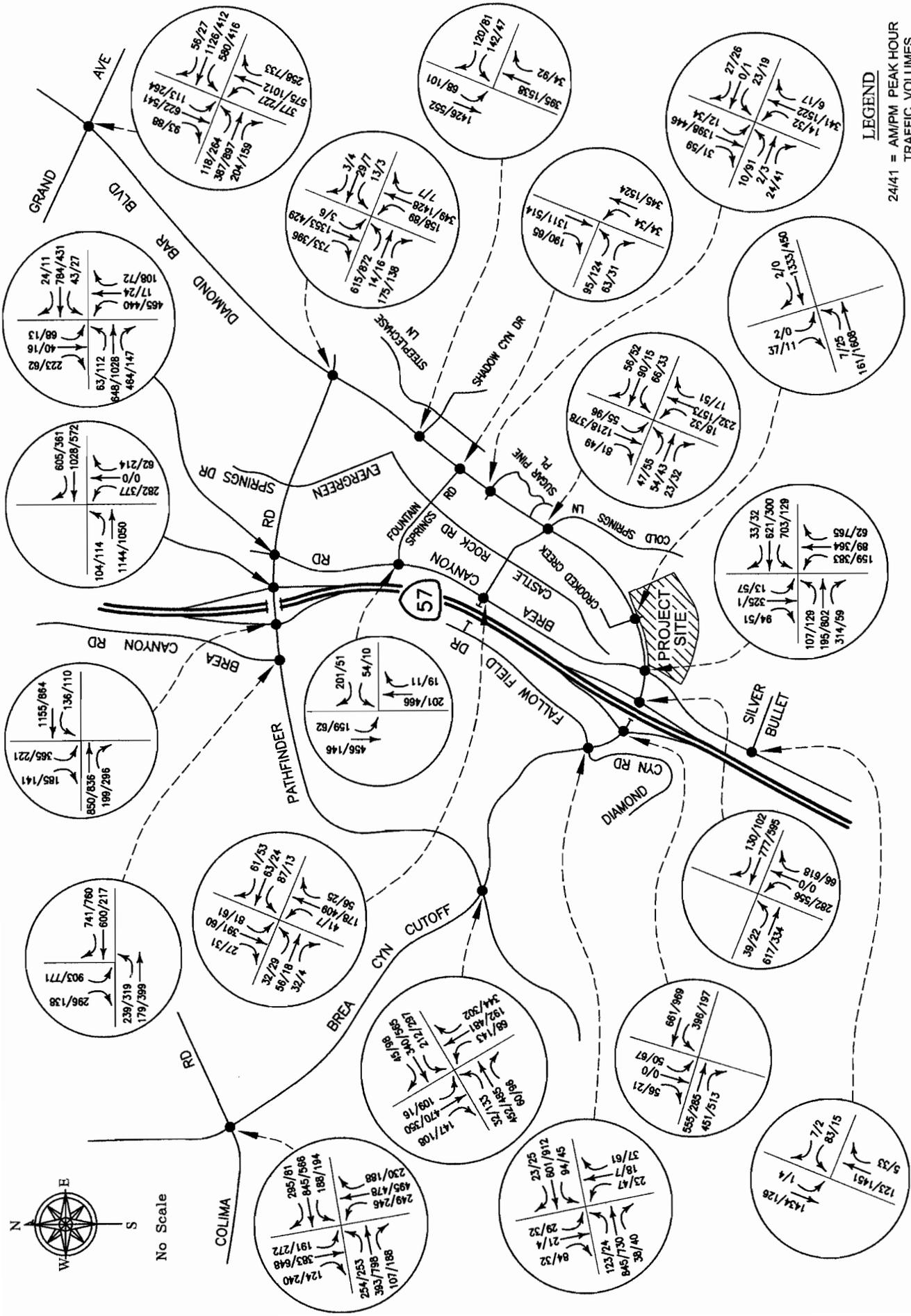
Turning movement traffic counts were referenced from the TIA. These counts were conducted during the AM and PM peak periods to determine the peak hours, for use in the intersection analyses. Current AM and PM counts were taken at one location (DBB/Crooked Creek, year 2011) since the access for this Alternative is planned to become the fourth leg of this intersection (“DBB/Crooked Creek”). DBB/Crooked Creek replaces DBB/Cherrydale as a study location, due to the change in the proposed access location. The “Existing” AM and PM peak hour volumes at the study intersections are shown in **Figure 1**. The lane geometries at the study intersections can be referenced from the intersection analyses data sheets provided in the **Appendix**. The worksheet also contains the intersection volumes.

The Intersection Capacity Utilization (“ICU”) methodology of intersection analysis was utilized to evaluate the signalized intersections, and is the accepted procedure in the City Guidelines. The ICU methodology requires comparison of traffic volumes to intersection lane capacities for the critical intersection movements. This volume to capacity comparison combined with consideration of “lost time” due to signal phasing and other factors, results in an ICU value. The ICU values are then related to Levels of Service (LOS), which are descriptions of intersection operations and range from “A” (the best) to “F” (the worst). It is generally recognized that LOS D or better represents acceptable intersection operations, while LOS E and F are considered over capacity.

It should be noted, in the ICU analyses worksheet (in the **Appendix**) there are cases where the ICU spreadsheet could not “automatically” reflect accurate results. Some manual adjustments were required denoted by an “8” in the lanes column and inclusion of adjustment factors, also noted on the worksheets. The adjustment factors included signal timing considerations (when appropriate) consistent with the assumptions utilized in the original TIA.

The non-signalized intersections were analyzed using the 2000 Highway Capacity Manual (“HCM”) methodology. This methodology is similar to the ICU procedure, but is based upon vehicle delay. The projected intersection delay is associated with the Level of Service (LOS) descriptions to determine the operations of a particular location. Even though the basis is different (associated with vehicle delay time) the end results are essentially the same, whereby “A” is considered the best and “F” is over capacity. For this methodology, it is also generally recognized that LOS A through D represent acceptable operations, while LOS E and F indicate an over capacity situation.

**Table 1** summarizes the results of the ICU/Delay and LOS analyses under Existing conditions. 17 of the study intersections currently operate at acceptable Levels of Service during both the AM and PM peak hours, while three of the study locations have over capacity operations during at least one peak hour (AM or PM).



# Existing Volumes

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FIGURE 1

## **PROJECT CONDITIONS**

The proposed Project would allow development of up to 200 residential units and an approximate two-acre park. Since a specific development is not currently known, residential traffic generators were referenced from the previous TIA and applied in these evaluation.

### **Trip Generation**

The trip generation potential for the proposed Project is based upon an assumption of condominium/townhouse type residential units and a park use, as shown in **Table 2**. Residential trip generation rates used in the LL&G study were referenced for these analyses, and are based on Institute of Transportation Engineers (“ITE”) trip rates contained in Trip Generation<sup>1</sup>. Trip generation rates for “Condominium/Townhouse” provide representative traffic assumption for the proposed residential units.

For the Project park use, ITE trip rates for both City and County (more conservative) parks were referenced. “Worst case” assumptions were applied to the proposed park for use in the traffic analyses. **Table 2** shows a total of 1,182 daily trip ends are assumed to be generated by the Project, of which 90 (15 In, 75 Out) would occurring during the AM peak hour and 106 (71 In, 35 Out) during the PM peak hour.

### **Trip Assignment**

Trip distribution patterns were developed based upon the assumptions used for the residential portion of the project, in the original TIA. Separate geographical trip distribution patterns were provided for the residential and commercial uses in the previous TIA. The analyses in this letter report, examines the inbound/outbound Project peak hour traffic volumes in **Table 2**, and their paths through the study intersections. These trip assignment totals resulting from the trip generation and Project distribution percentage are illustrated in **Figure 2** for each of the 20 study location.

### **Proposed Project Impacts and Mitigations**

The Project trips shown in **Figure 2** were added to the Existing conditions, so the intersection analyses could be recalculated for “With Project” conditions. **Figure 3** provides the Existing + Project traffic volumes at each of the 20 study locations, which were used in the intersection analyses.

Based on the AM and PM peak hour volumes shown in **Figure 3**, intersection analyses were completed for Existing + Project conditions. As shown in **Table 1**, 16 of the 17 “acceptable” and the three “over capacity” study intersections maintain their same pre-project Levels of

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<sup>1</sup> **Trip Generation, Eighth Edition; Institute of Transportation Engineers (“ITE”); 2008.**

**TABLE 2  
TRIP GENERATION  
SITE D, RESIDENTIAL ONLY ALTERNATIVE**

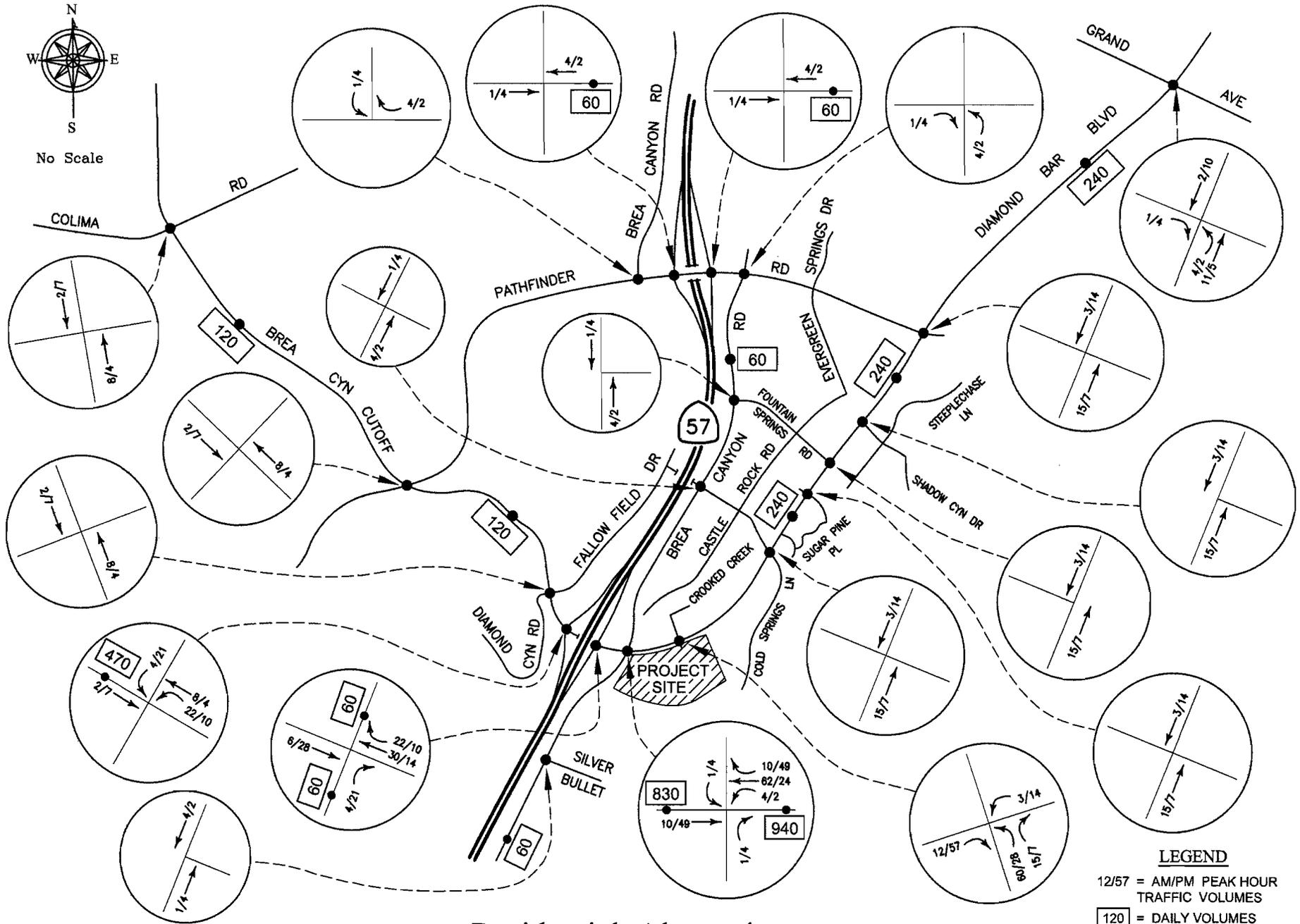
| LAND USE                             | UNITS       | Daily        | AM PEAK HOUR |           | PM PEAK HOUR |           |
|--------------------------------------|-------------|--------------|--------------|-----------|--------------|-----------|
|                                      |             |              | In           | Out       | In           | Out       |
| <b>Trip Rates:</b>                   |             |              |              |           |              |           |
| - Residentail<br>▪ Condo / Townhouse | TE Per DU   | 5.86         | 0.07         | 0.37      | 0.35         | 0.17      |
| - Park                               |             |              |              |           |              |           |
| ▪ City                               | TE Per Acre | 1.59         |              |           |              |           |
| ▪ County                             | TE Per Acre | 2.28         | 0.008        | 0.002     | 0.02         | 0.04      |
| <b>Trip Generation (Trip Ends)</b>   |             |              |              |           |              |           |
| Residential                          | 200 DU      | <b>1,172</b> | <b>14</b>    | <b>74</b> | <b>70</b>    | <b>34</b> |
| Park:                                |             |              |              |           |              |           |
| - City                               | 2 Acres     | 3            | Nom          | Nom       | Nom          | Nom       |
| - County, "Worst Case"               |             | <u>10</u>    | <u>1</u>     | <u>1</u>  | <u>1</u>     | <u>1</u>  |
| Total                                |             | <b>1,182</b> | <b>15</b>    | <b>75</b> | <b>71</b>    | <b>35</b> |

Trip Rate, Source: Trip Generation, 8th Edition; Institute of Transportation Engineers ("ITE"); 2008

TE = Trip ends, DU = Dwelling units; Park "Worst Case" results in fraction of vehicle so "1" used as minimum.



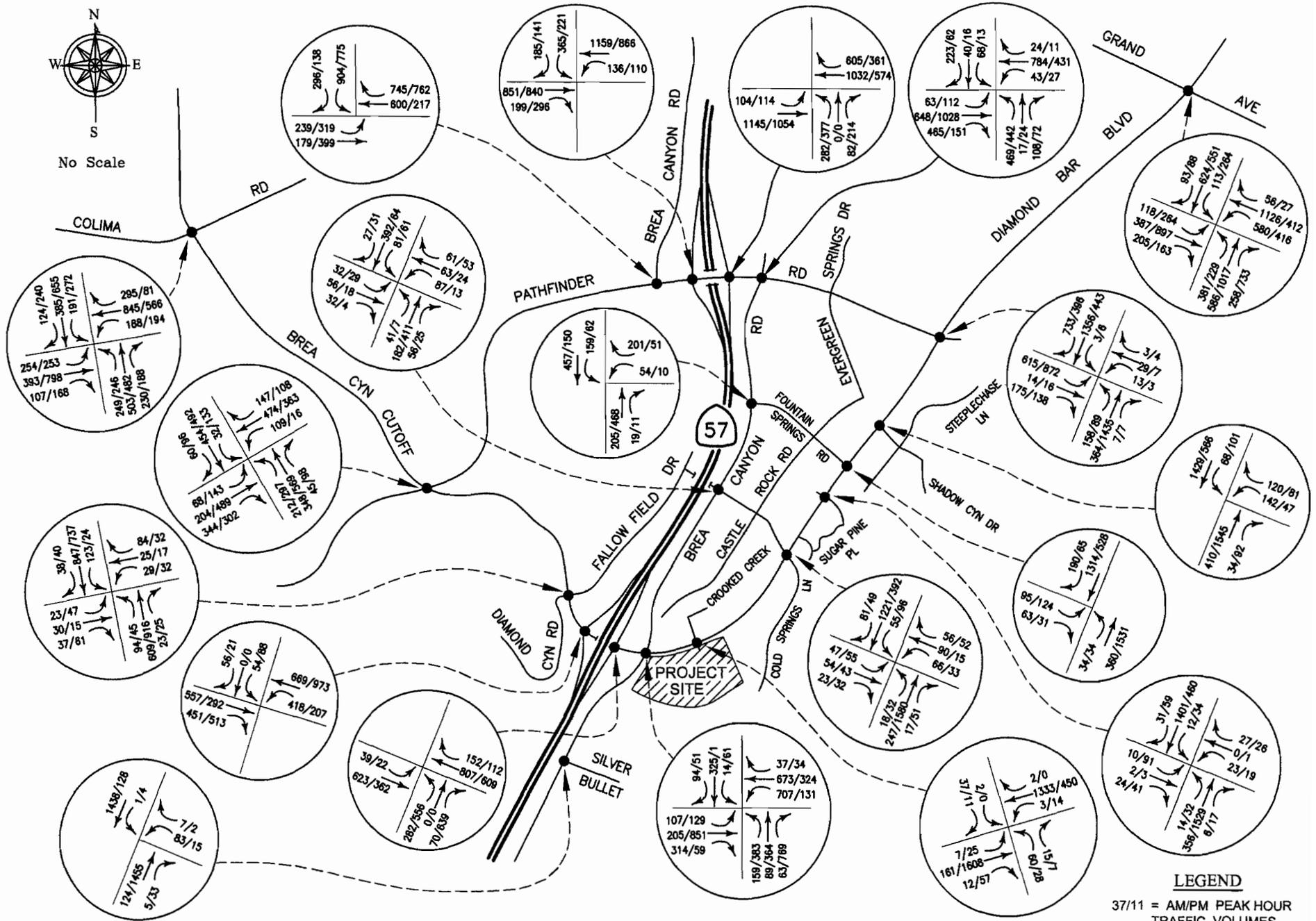
No Scale



Residential Alternative  
Project Only Traffic Volumes



No Scale



## Existing + Project Volumes

FIGURE 3

Services (“LOS”) conditions. Only the proposed Project access intersection of DBB/Crooked Creek changes from acceptable to over capacity operations.

Since the proposed Project would cause this intersection to change from acceptable to unacceptable operations, mitigation is required. In addition, since this intersection serves as the Project access and there are other related traffic operational issues, the improvements are suggested to become “Conditions” of the Project (to be completed before Project occupancy).

As shown in **Table 1** and the worksheets in the **Appendix**, the northbound approach at the DBB/Crooked Creek intersection is impacted to LOS F with assumption of the proposed Project. The recommended (Project “Condition of Approval”) improvement measures, which would fully mitigate the Project impacts, are:

- Installation of a traffic signal and associated roadway improvements.
- Widen and re-stripe the EB approach and departure to accommodate a third through lane, and a separate right turn lane, as well as modification of any needed signing/associated measures.

For purposes of these analyses the total (“worst case”) cost of the improvement is estimated to be \$454,875 based on previous construction assumptions for the DBB/Cherrydale intersection, in the TIA. The two intersections are in close proximity along Diamond Bar Boulevard and either location could serve as the Project access per the Specific Plan. This conservative cost estimate is therefore utilized in these analyses, but is expected to be further refined when a specific land use, size, etc. is brought forward.

One added intersection, SR-57 SB Ramps / Brea Canyon Cutoff Rd. (“SR-57 SB Ramps/BCC”), continues to have over capacity operations and is also found to be “significantly” impacted by the Project. Mitigation is required at this study intersection. The significant impact is to be addressed through Fair Share contribution toward this location. The intersection is already over capacity and the Project only represents a portion of the improvement needs. In addition, Caltrans has jurisdiction over this intersection, so the City does not have direct control/ability to implement the improvement measures. The supporting ICU and HCM worksheets are provided in the **Appendix**.

### **Improvement Measures**

The TIA details the improvement measures assumed at various over capacity study locations. For the CEQA impacted intersection, SR-57 Ramps/BCC, the anticipated improvements are:

- Installation of a traffic signal, as well as associated signing and striping modifications, as necessary.

The total costs for these improvements are estimated to be \$228,125, as detailed in the TIA. The Project would be responsible for its Fair Share contribution toward these improvement measures.

As mentioned earlier in this letter report, the Project will be responsible for mitigation of significant Project impacts to satisfy CEQA, but will also be subject to added Fair Share responsibilities in order to satisfy City of Diamond Bar TIA Guideline requirements. These added responsibilities will be detailed further in the year 2030 analyses.

### **YEAR 2030 CONDITIONS**

Year 2030 conditions include consideration of ambient traffic growth and cumulative future projects within the study vicinity. Ambient growth can include both general traffic growth and potential projects not specifically included within the cumulative project list. The methodologies and assumptions for the year 2030 ambient growth and cumulative projects can be referenced in the original TIA. **Figure 4** illustrates the peak hour traffic volumes at the 20 study intersections, for year 2030 conditions, including ambient growth and cumulative projects, but without the Alternative Project.

#### **Year 2030 Without Project Analysis**

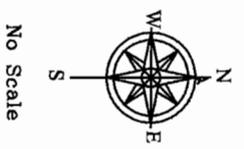
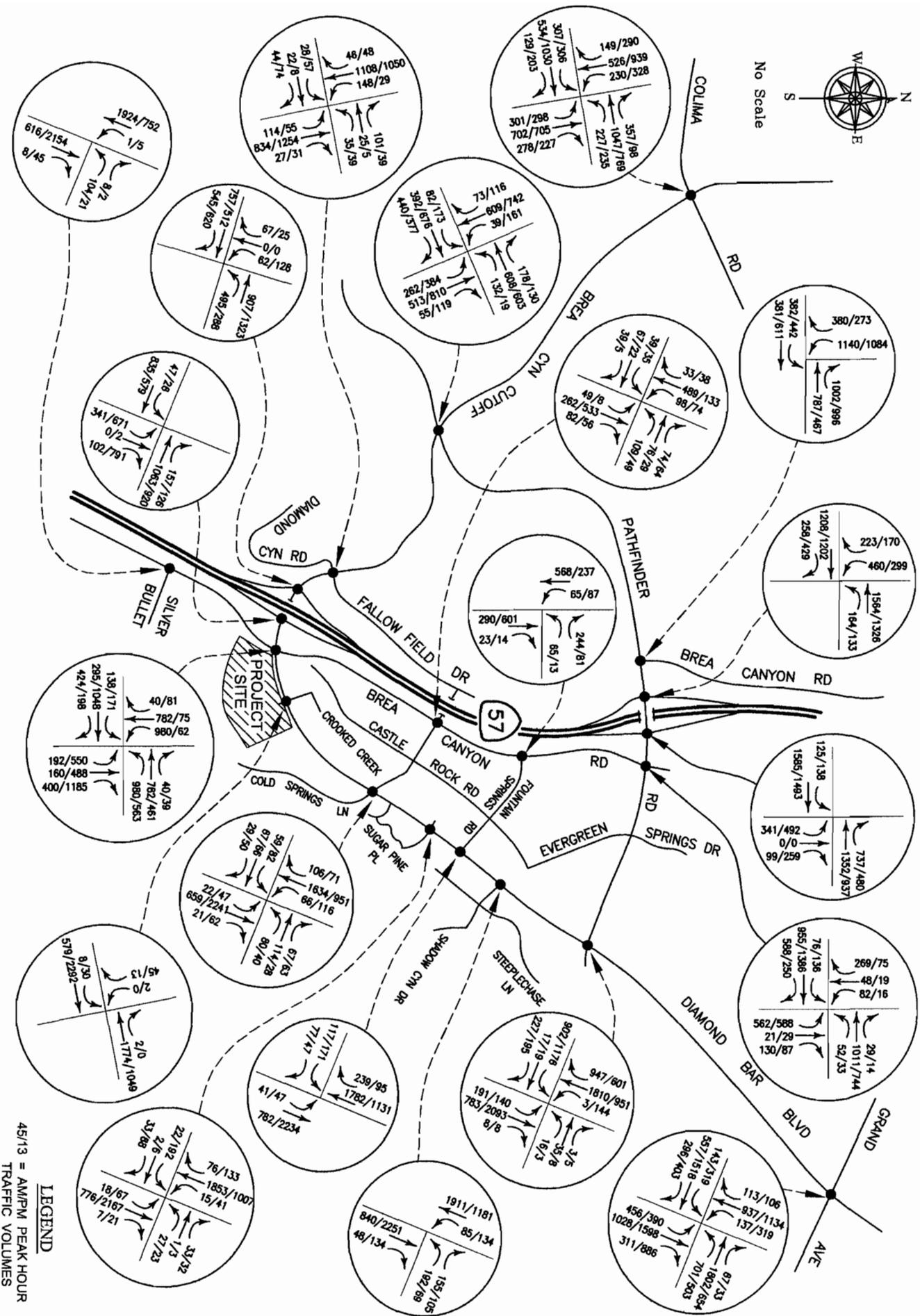
The ambient growth was applied to all of the intersection movements at each of the study intersections. The amount of ambient growth is included in the volumes in **Figure 4** and the intersection analyses worksheets contained in the **Appendix**.

The list of cumulative projects included in this study is a collection of potential developments that have been provided through a number of sources as described in the TIA. Trip generation analyses were performed so the impacts of the cumulative projects on the study intersections could be evaluated. The trip generation totals were distributed and assigned to the surrounding street study locations. The sum of the cumulative projects volumes was combined with the ambient growth so the study intersections could be analyzed. As indicated above, the peak hour intersection volume totals are presented in **Figure 4**.

Year 2030, without Project volumes are also documented in the intersection analyses worksheets contained in the **Appendix**. These ICU and HCM analyses were calculated for these “Without Project” conditions so “baseline” conditions could be identified. The results of these analyses are summarized in **Table 3**. As shown in **Table 3**, eleven of the study intersections would operate at acceptable Levels of Service, while nine are projected to be over capacity for year 2030 conditions.

#### **Year 2030 With Project Analyses**

The Project trips shown in **Figure 2** were added to the year 2030, without Project conditions (**Figure 4**), which results in the AM and PM peak hour volumes shown in **Figure 5**. The



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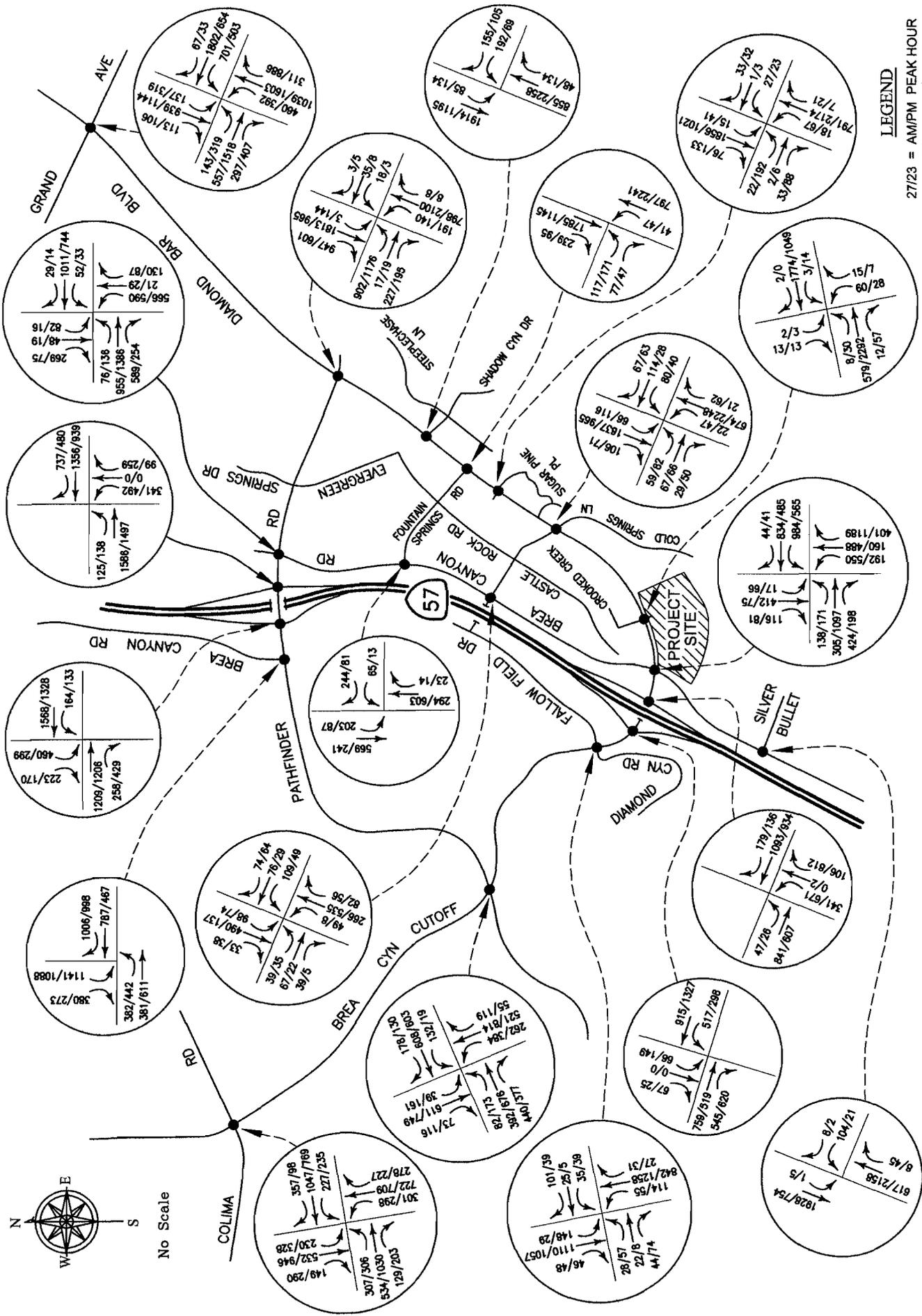
# Year 2030 Volumes

**LEGEND**  
 45/13 = AM/PM PEAK HOUR  
 TRAFFIC VOLUMES

FIGURE 4

**TABLE 3  
INTERSECTION ANALYSES SUMMARY  
YEAR 2030 EVALUATIONS**

| INTERSECTION  | YEAR 2030<br>W/O PROJECT         |           | YEAR 2030<br>W/PROJECT |           | YEAR 2030<br>W/PROJECT<br>W/IMPROV. |           | ICU - Delay<br>INCREASE |       | ICU - Delay<br>BENEFIT OF<br>IMPROVEMENTS |           |
|---|----------------------------------|-----------|------------------------|-----------|-------------------------------------|-----------|-------------------------|-------|---|-----------|
|   | AM                               | PM        | AM                     | PM        | AM                                  | PM        | AM                      | PM    | AM  | PM        |
|   | Brea Canyon Rd. / Pathfinder Rd. | 0.981 / E | 0.999 / E              | 0.981 / E | 1.001 / F                           | 0.775 / C | 0.778 / C               | 0.000 | 0.002                                     | 0.206     |
| SR-57 SB Ramps / Pathfinder Rd.                                   | 0.877 / D                        | 0.746 / C | 0.878 / D              | 0.747 / C |                                     |           |                         |       |   |           |
| SR-57 NB Ramps / Pathfinder Rd.                                   | 0.852 / D                        | 0.875 / D | 0.852 / D              | 0.876 / D |                                     |           |                         |       |   |           |
| Fern Hollow Dr. - Brea Canyon Rd.<br>/ Pathfinder Rd.             | 0.866 / D                        | 0.827 / D | 0.868 / D              | 0.828 / D |                                     |           |                         |       |   |           |
| Diamond Bar Blvd. / Pathfinder Rd.                                | 1.052 / F                        | 1.193 / F | 1.053 / F              | 1.195 / F | 0.787 / C                           | 0.874 / C | 0.001                   | 0.002 | 0.266                                     | 0.321     |
| Diamond Bar Blvd. / Shadow Canyon Rd.                             | 0.747 / C                        | 0.860 / D | 0.748 / C              | 0.863 / D |                                     |           |                         |       |   |           |
| Brea Canyon Rd. / Fountain Springs Rd.                            | 33.5 / D                         | 24.0 / C  | 34.0 / D               | 25.3 / D  |                                     |           |                         |       |   |           |
| Diamond Bar Blvd. / Fountain Springs Rd.                          | 0.761 / C                        | 0.835 / D | 0.762 / C              | 0.837 / D |                                     |           |                         |       |   |           |
| Diamond Bar Blvd. / Sugar Pine Pl.                                | 0.647 / B                        | 0.862 / D | 0.648 / B              | 0.864 / D |                                     |           |                         |       |   |           |
| Brea Canyon Rd. / Cold Spring Lane                                | 32.7 / D                         | 19.3 / C  | 33.1 / D               | 19.5 / C  | 27.6 / D                            | 19.3 / C  | 0.4                     | 0.2   | 5.5                                       | 0.2       |
| Diamond Bar Blvd. / Cold Spring Lane                              | 0.738 / C                        | 0.931 / E | 0.739 / C              | 0.933 / E | 0.557 / A                           | 0.692 / B | 0.001                   | 0.002 | 0.182                                     | 0.241     |
| Pathfinder Road / Brea Canyon Cutoff Rd.                          | 1.033 / F                        | 1.217 / F | 1.036 / F              | 1.218 / F | 0.696 / B                           | 0.871 / D | 0.003                   | 0.001 | 0.34                                      | 0.347     |
| Fallow Field Dr. - Diamond Canyon Rd.<br>/ Brea Canyon Cutoff Rd. | 0.651 / B                        | 0.608 / B | 0.651 / B              | 0.610 / B |                                     |           |                         |       |   |           |
| SR-57 SB Ramps / Brea Canyon Cutoff Rd.                           | - / F                            | 1725 / F  | 1457 / F               | 2271 / F  |                                     |           |                         |       | (LOS Imp)                                 | (LOS Imp) |
|   | 0.789 / C                        | 0.748 / C | 0.805 / D              | 0.774 / C | 0.805 / D                           | 0.774 / C | 0.016                   | 0.026 | 0.25                                      | 0.35      |
| SR-57 NB Ramps / Brea Canyon Cutoff Rd.                           | 0.674 / B                        | 0.823 / D | 0.684 / B              | 0.827 / D | 0.589 / A                           | 0.743 / C | 0.01                    | 0.004 | 0.095                                     | 0.084     |
| Brea Canyon Rd. / Diamond Bar Blvd.                               | 1.100 / F                        | 1.199 / F | 1.105 / F              | 1.220 / F | 0.756 / C                           | 0.842 / D | 0.005                   | 0.021 | 0.349                                     | 0.378     |
| Crooked Creek / Diamond Bar Blvd.                                 | 21.1 / C                         | 12.3 / B  | 31.8 / D               | 323.0 / F | 0.725 / C                           | 0.613 / B |                         |       |   |           |
| Brea Canyon Rd. / Silver Bullet Dr.                               | 1.373 / F                        | 1.463 / F | 1.375 / F              | 1.466 / F | 0.773 / C                           | 0.791 / C | 0.002                   | 0.003 | 0.602                                     | 0.675     |
| Diamond Bar Blvd. / Grand Ave. (CMP Int.)                         | 1.164 / F                        | 1.359 / F | 1.166 / F              | 1.361 / F | 0.881 / D                           | 0.957 / E | 0.002                   | 0.002 | 0.285                                     | 0.404     |
| Colima Rd. / Fairway Dr. -<br>Brea Canyon Cutoff Rd.              | 1.039 / F                        | 1.074 / F | 1.042 / F              | 1.076 / F | 0.731 / C                           | 0.796 / C | 0.003                   | 0.002 | 0.311                                     | 0.28      |



Year 2030 + Project Volumes

SASAKI TRANSPORTATION SERVICES, INC.

FIGURE 5

appropriate intersection analyses methodologies were applied to the “Year 2030 + Project” volumes so the intersection analyses could be recalculated.

As shown in **Table 3**, of the eleven intersections with acceptable operations for “Without Project” conditions, one (DBB / Crooked Creek) intersection is impacted to unacceptable operations with addition of the Project. If the previously recommended “conditions of approval” are implemented in conjunction with the Project, this intersection will have acceptable operations.

The other nine intersections that were found to be over capacity for “Without Project” conditions would remain over capacity, although the earlier mitigation for the SR-57 SB Ramps/BCC intersection would provide acceptable operations at this location.

As shown in **Table 3**, the Project impacts at the other over capacity locations would not be at a significant level, except at the Brea Canyon Rd. / Diamond Bar Blvd. (“Brea Canyon/DBB”) intersection. At this intersection a significant Project impact is shown and mitigation is required. The supporting ICU and HCM worksheets are provided in the **Appendix**.

#### **Mitigation Measures and Improvements**

The mitigation measure for the Brea Canyon/DBB intersection is based on the intersection improvement recommendations identified in the TIA. The Fair Share contribution toward these improvements would serve as the Project mitigation for the significant Project impacts at this location. The amount of Fair Share responsibility is proportional to the impacts created by this Alternative Project.

The improvements assumed for Brea Canyon/DBB to serve as the basis for the mitigation measure are:

- NB on Brea Canyon; add a second right turn lane.
- EB on DBB; add a third through lane.
- WB on DBB; add a second left turn lane.
- Modify the traffic signal, and any signing/stripping as required.
- Current TIA improvement assumptions may require termination of the existing bicycle lane.

In addition to the Fair Share requirements, a Project “Condition of Approval” is recommend, whereby right-of-way along the Diamond Bar Boulevard and Brea Canyon Road Project frontages would be dedicated to accommodate the future Brea Canyon/DBB intersection improvements.

Given there is no specific project proposed at this time added traffic evaluations will be required in the future to address any specific traffic operational issues, and/or refine the traffic analyses as needed. The future traffic analysis needs/requirements shall be determined by the City of Diamond Bar, Director of Public Works. For example, per the Specific Plan the driveway could be at a different location, the Project right-of-way requirement assumptions could change based on more detailed engineering analyses, the designs for the intersection improvements could be modified to provide alternative but equally beneficial improvements (i.e., maintenance of the bicycle lanes and providing needed traffic mitigations), the actual size and type of residential will need to be specifically addressed, etc.

Overall, at Brea Canyon/DBB Fair Share is needed as a CEQA mitigation measure for Year 2030 conditions. CEQA mitigation is also required at SR-57 SB Ramps/BCC for Existing + Project conditions. In addition, Project “condition of approval” improvements are recommended for the Crooked Creek/DBB intersection, and to dedicated right-of-way along the Project frontages.

In addition to the CEQA mitigations and “Project Conditions,” there are nine other intersections where Fair Share contributions will be required to satisfy City of Diamond Bar TIA Guideline requirements. These locations had improvement measures identified in the TIA, are impacted by the proposed Project (but not to a significant level), and are included in the Fair Share calculations. **Table 4** presents a summary of the Fair Share calculations for the Alternative Project, which includes the mitigations mentioned above.

The proposed Project impacts at the study intersections are listed under the “Project ICU Increase” in **Table 4**, and the “ICU Benefit” results from the improvements identified in the TIA. This “Project Percentage” identifies the Project responsibility toward the total intersection improvement costs, which are also listed. By combining the Project percentage and total cost, the result is the Project’s Fair Share responsibility, which totals \$102,605.

## **SUMMARY**

The proposed “All-Residential” Project Alternative would have a maximum of 200 residential dwelling units and “passive” park. This Project was analyzed by examined Existing conditions and projected year 2030 conditions. Both conditions were evaluated for “Without Project,” then “With Project” conditions so the potential Project impacts could be quantified. The principal findings of this study are listed below.

- 1) Under Existing conditions, three of the 17 study intersections are currently operating over capacity during either the AM or PM peak hour, or both periods. The remaining 17 locations are at acceptable Levels of Service (LOS).

**TABLE 4  
FAIR SHARE CALCULATIONS  
YEAR 2030**

| INTERSECTION                         | TOTAL<br>PROJECT<br>ICU<br>INCREASE | TOTAL<br>ICU<br>BENEFIT OF<br>IMPROVEMENTS | PROJECT<br>PERCENTAGE | TOTAL<br>IMPROVEMENT<br>COSTS | PROJECT<br>FAIR SHARE<br>CONTRIBUTION |
|--------------------------------------|-------------------------------------|--|-----------------------|-------------------------------|---------------------------------------|
| Brea Canyon Rd. / Pathfinder Rd.     | 0.002                               | 0.429                                      | 0.50%                 | \$280,750                     | \$1,405                               |
| Diamond Bar Blvd. / Pathfinder Rd.   | 0.003                               | 0.587                                      | 0.60%                 | \$591,135                     | \$3,545                               |
| Brea Canyon Rd. / Cold Springs Ln.   | 0.6                                 | 5.7  | 10.53%                | \$9,375                       | \$985                                 |
| Cold Springs Ln. / Diamond Bar Blvd. | 0.003                               | 0.423                                      | 0.71%                 | \$18,750                      | \$135                                 |
| Pathfinder Rd. / Brea Canyon Cutoff  | 0.004                               | 0.687                                      | 0.58%                 | \$729,688                     | \$4,230                               |
| SR-57 SB Ramps / Brea Canyon Cutoff  | 0.042                               | 0.6  | 7.00%                 | \$228,125                     | \$15,970                              |
| SR-57 NB Ramps / Brea Canyon Cutoff  | 0.014                               | 0.179                                      | 7.83%                 | \$355,000                     | \$27,795                              |
| Brea Canyon Rd. / Diamond Bar Blvd.  | 0.026                               | 0.727                                      | 3.58%                 | \$684,125                     | \$24,490                              |
| Crooked Creek / Diamond Bar Blvd.    | NA                                  | NA   | NA                    | \$454,875                     | Project Condition                     |
| Brea Canyon Rd. / Silver Bullet Dr.  | 0.005                               | 1.277                                      | 0.40%                 | \$37,500                      | \$150                                 |
| Diamond Bar Blvd. / Grand Ave.       | 0.004                               | 0.689                                      | 0.58%                 | \$2,216,500                   | \$12,855                              |
| Colima Rd. / Brea Canyon Cutoff      | 0.005                               | 0.591                                      | 0.85%                 | \$1,299,375                   | \$11,045                              |
|                                      |                                     |  |                       | <b>TOTAL</b>                  | <b>\$102,605</b>                      |

*Note: In accordance with City of Diamond Bar "Guidelines for the Preparation of Traffic Impact Analysis Report"; July, 2005.*

- 2) The trip generation potential for the proposed Project is based upon “worst case” assumptions. The Project is estimated to generate 1,182 daily trip ends, of which 90 (15 In, 75 Out) would occur during the AM peak hour, and 106 (71 In, 35 Out) PM peak hour trip ends.
- 3) For Existing + Project conditions the proposed Project access at DBB/Crooked Creek would be impacted. It is recommended that installation of a traffic signal be required as a “Condition” of the Project in order to fully mitigate the Project impacts. The Project also has a significant impact at SR-57 SB Ramps / Brea Canyon Cutoff Rd. Mitigation for this impact is recommended to occur through Fair Share contributions at this location.
- 4) Year 2030 without Project analyses show nine of the 20 study intersections would operate over capacity during at least one of the peak hours, while the other eleven locations would have acceptable LOS.
- 5) Under Year 2030 + Project conditions the Project access intersection (DBB/Crooked Creek) would maintain acceptable operations, assuming the Existing + Project “Conditions of Approval” have been implemented. The Brea Canyon/DBB intersection would be significantly impacted by the Project, and Fair Share contributions toward improvements at this location would serve as mitigation of Project impacts.
- 6) A second “Condition of Approval” is recommended, whereby the Project would be required to dedicate right-of-way along its Diamond Bar Boulevard and Brea Canyon Road frontages to accommodate the Brea Canyon/DBB intersection improvements.
- 7) In addition, for Year 2030 + Project conditions, the Project would be responsible for Fair Share contributions toward the other improvement locations identified in the TIA. The Project would have less than significant impacts at these intersections, but would pay Fair Share contributions to offset incremental Project impacts, per the City of Diamond Bar TIA Guidelines.
- 8) The proposed Project Fair Share responsibilities would total **\$102,605.00**. Of that total, **\$40,460.00** would serve to mitigate significant CEQA Project impacts. In addition, the Project is recommended to be subject to “Conditions of Approval” to 1) install a traffic signal and associated improvements at the DBB/Crooked Creek intersection (“worst case” costs of **\$454,875**), and 2) dedicate right-of-way along the Diamond Bar Boulevard and Brea Canyon Road Project frontages, to accommodate the Brea Canyon/DBB intersection improvements.
- 9) It is expected that added traffic analyses will be required when a specific project is

proposed in the future. Any added traffic analyses are recommended to be subject to approval of the City of Diamond Bar, Director of Public Works.

We trust that these analyses will be of assistance to you and the City of Diamond Bar. If you have any questions or comments, please do not hesitate to contact us.

Respectfully submitted,

**SASAKI TRANSPORTATION SERVICES, INC.**



Steven S. Sasaki, P.E., PTOE  
Principal  
Registered Professional Engineer  
State of California, Civil and Traffic  
C52768 & TR1462



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# APPENDIX

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**INTERSECTION ANALYSIS  
WORKSHEETS**

**EXISTING CONDITIONS**

**(With & Without Project)**

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## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Brea Canyon Rd. & Pathfinder Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           | EXISTING + PROJECT |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| NB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| SB Left            | 2        | 2880     | 903    | 0.314 *   | 2                  | 2880     | 1          | 904       | 0.314 *   | 2                  | 2880     | 0          | 904       | 0.314 *   |
| SB Thru            | 8        | 6400     | 0      | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     |
| SB Right           | 1        | 1600     | 296    | 0.185     | 1                  | 1600     | 0          | 296       | 0.185     | 1                  | 1600     | 0          | 296       | 0.185     |
| EB Left            | 1        | 1600     | 239    | 0.149 *   | 1                  | 1600     | 0          | 239       | 0.149 *   | 1                  | 1600     | 0          | 239       | 0.149 *   |
| EB Thru            | 3        | 4800     | 179    | 0.037     | 3                  | 4800     | 0          | 179       | 0.037     | 3                  | 4800     | 0          | 179       | 0.037     |
| EB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| WB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 2        | 3200     | 600    | 0.188 *   | 2                  | 3200     | 0          | 600       | 0.188 *   | 2                  | 3200     | 0          | 600       | 0.188 *   |
| WB Right           | 1        | 1600     | 741    | 0.463     | 1                  | 1600     | 4          | 745       | 0.466     | 1                  | 1600     | 0          | 745       | 0.466     |
| N/S Critical Sum = |          |          |        | 0.314     | N/S Critical Sum = |          |            |           | 0.314     | N/S Critical Sum = |          |            |           | 0.314     |
| E/W Critical Sum = |          |          |        | 0.337     | E/W Critical Sum = |          |            |           | 0.337     | E/W Critical Sum = |          |            |           | 0.337     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.751     | Total ICU =        |          |            |           | 0.751     | Total ICU =        |          |            |           | 0.751     |
| LOS =              |          |          |        | C         | LOS =              |          |            |           | C         | LOS =              |          |            |           | C         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Brea Canyon Rd. & Pathfinder Rd.

| Movement           | EXISTING |          |        |              | EXISTING + PROJECT |          |            |           |              | EXISTING + PROJECT |          |            |           |              |
|--------------------|----------|----------|--------|--------------|--------------------|----------|------------|-----------|--------------|--------------------|----------|------------|-----------|--------------|
|                    | Lanes    | Capacity | Volume | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    |
| NB Left            | 8        | 2880     | 0      | 0.000        | 8                  | 2880     | 0          | 0         | 0.000        | 8                  | 2880     | 0          | 0         | 0.000        |
| NB Thru            | 8        | 6400     | 0      | 0.000 *      | 8                  | 6400     | 0          | 0         | 0.000 *      | 8                  | 6400     | 0          | 0         | 0.000 *      |
| NB Right           | 0        | 0        | 0      |              | 0                  | 0        | 0          | 0         |              | 0                  | 0        | 0          | 0         |              |
| SB Left            | 2        | 2880     | 771    | 0.268 *      | 2                  | 2880     | 4          | 775       | 0.269 *      | 2                  | 2880     | 0          | 775       | 0.269 *      |
| SB Thru            | 8        | 6400     | 0      | 0.000        | 8                  | 6400     | 0          | 0         | 0.000        | 8                  | 6400     | 0          | 0         | 0.000        |
| SB Right           | 1        | 1600     | 138    | 0.086        | 1                  | 1600     | 0          | 138       | 0.086        | 1                  | 1600     | 0          | 138       | 0.086        |
| EB Left            | 1        | 1600     | 319    | 0.199 *      | 1                  | 1600     | 0          | 319       | 0.199 *      | 1                  | 1600     | 0          | 319       | 0.199 *      |
| EB Thru            | 3        | 4800     | 399    | 0.083        | 3                  | 4800     | 0          | 399       | 0.083        | 3                  | 4800     | 0          | 399       | 0.083        |
| EB Right           | 0        | 0        | 0      |              | 0                  | 0        | 0          | 0         |              | 0                  | 0        | 0          | 0         |              |
| WB Left            | 8        | 2880     | 0      | 0.000        | 8                  | 2880     | 0          | 0         | 0.000        | 8                  | 2880     | 0          | 0         | 0.000        |
| WB Thru            | 2        | 3200     | 217    | 0.068 *      | 2                  | 3200     | 0          | 217       | 0.068 *      | 2                  | 3200     | 0          | 217       | 0.068 *      |
| WB Right           | 1        | 1600     | 760    | 0.475        | 1                  | 1600     | 2          | 762       | 0.476        | 1                  | 1600     | 0          | 762       | 0.476        |
| N/S Critical Sum = |          |          |        | 0.268        | N/S Critical Sum = |          |            |           | 0.269        | N/S Critical Sum = |          |            |           | 0.269        |
| E/W Critical Sum = |          |          |        | 0.267        | E/W Critical Sum = |          |            |           | 0.267        | E/W Critical Sum = |          |            |           | 0.267        |
| [RT Adjustment] =  |          |          |        | 0.139        | [RT Adjustment] =  |          |            |           | 0.139        | [RT Adjustment] =  |          |            |           | 0.139        |
| Clearance =        |          |          |        | 0.100        | Clearance =        |          |            |           | 0.100        | Clearance =        |          |            |           | 0.100        |
| <b>Total ICU =</b> |          |          |        | <b>0.774</b> | <b>Total ICU =</b> |          |            |           | <b>0.775</b> | <b>Total ICU =</b> |          |            |           | <b>0.775</b> |
| <b>LOS =</b>       |          |          |        | <b>C</b>     | <b>LOS =</b>       |          |            |           | <b>C</b>     | <b>LOS =</b>       |          |            |           | <b>C</b>     |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
SR-57 SB Ramps & Pathfinder Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| NB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| SB Left            | 1        | 1600     | 365    | 0.228 *   | 1                  | 1600     | 0          | 365       | 0.228 *   | 1                  | 1600     | 0          | 365       | 0.228 *   |
| SB Thru            | 8        | 6400     | 0      | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     |
| SB Right           | 1        | 1600     | 185    | 0.116     | 1                  | 1600     | 0          | 185       | 0.116     | 1                  | 1600     | 0          | 185       | 0.116     |
| EB Left            | 8        | 2880     | 0      | 0.000 *   | 8                  | 2880     | 0          | 0         | 0.000 *   | 8                  | 2880     | 0          | 0         | 0.000 *   |
| EB Thru            | 2        | 3200     | 850    | 0.266     | 2                  | 3200     | 1          | 851       | 0.266     | 2                  | 3200     | 0          | 851       | 0.266     |
| EB Right           | 1        | 1600     | 199    | 0.124     | 1                  | 1600     | 0          | 199       | 0.124     | 1                  | 1600     | 0          | 199       | 0.124     |
| WB Left            | 1        | 1600     | 136    | 0.085     | 1                  | 1600     | 0          | 136       | 0.085     | 1                  | 1600     | 0          | 136       | 0.085     |
| WB Thru            | 2        | 3200     | 1155   | 0.361 *   | 2                  | 3200     | 4          | 1159      | 0.362 *   | 2                  | 3200     | 0          | 1159      | 0.362 *   |
| WB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| N/S Critical Sum = |          |          |        | 0.228     | N/S Critical Sum = |          |            |           | 0.228     | N/S Critical Sum = |          |            |           | 0.228     |
| E/W Critical Sum = |          |          |        | 0.361     | E/W Critical Sum = |          |            |           | 0.362     | E/W Critical Sum = |          |            |           | 0.362     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.689     | Total ICU =        |          |            |           | 0.690     | Total ICU =        |          |            |           | 0.690     |
| LOS =              |          |          |        | <b>B</b>  | LOS =              |          |            |           | <b>B</b>  | LOS =              |          |            |           | <b>B</b>  |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 SR-57 SB Ramps & Pathfinder Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| NB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| SB Left            | 1        | 1600     | 221    | 0.138 *   | 1                  | 1600     | 0          | 221       | 0.138 *   | 1                  | 1600     | 0          | 221       | 0.138 *   |
| SB Thru            | 8        | 6400     | 0      | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     |
| SB Right           | 1        | 1600     | 141    | 0.088     | 1                  | 1600     | 0          | 141       | 0.088     | 1                  | 1600     | 0          | 141       | 0.088     |
| EB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| EB Thru            | 2        | 3200     | 836    | 0.261 *   | 2                  | 3200     | 4          | 840       | 0.263 *   | 2                  | 3200     | 0          | 840       | 0.263 *   |
| EB Right           | 1        | 1600     | 296    | 0.185     | 1                  | 1600     | 0          | 296       | 0.185     | 1                  | 1600     | 0          | 296       | 0.185     |
| WB Left            | 1        | 1600     | 110    | 0.069 *   | 1                  | 1600     | 0          | 110       | 0.069 *   | 1                  | 1600     | 0          | 110       | 0.069 *   |
| WB Thru            | 2        | 3200     | 864    | 0.270     | 2                  | 3200     | 2          | 866       | 0.271     | 2                  | 3200     | 0          | 866       | 0.271     |
| WB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| N/S Critical Sum = |          |          |        | 0.138     | N/S Critical Sum = |          |            |           | 0.138     | N/S Critical Sum = |          |            |           | 0.138     |
| E/W Critical Sum = |          |          |        | 0.330     | E/W Critical Sum = |          |            |           | 0.332     | E/W Critical Sum = |          |            |           | 0.332     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.568     | Total ICU =        |          |            |           | 0.570     | Total ICU =        |          |            |           | 0.570     |
| LOS =              |          |          |        | A         | LOS =              |          |            |           | A         | LOS =              |          |            |           | A         |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 SR-57 NB Ramps & Pathfinder Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 282    | 0.176 *   | 1                  | 1600     | 0          | 282       | 0.176 *   | 1                  | 1600     | 0          | 282       | 0.176 *   |
| NB Thru            | 8        | 6400     | 0      | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     |
| NB Right           | 1        | 1600     | 82     | 0.051     | 1                  | 1600     | 0          | 82        | 0.051     | 1                  | 1600     | 0          | 82        | 0.051     |
| SB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| SB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| EB Left            | 1        | 1600     | 104    | 0.065 *   | 1                  | 1600     | 0          | 104       | 0.065 *   | 1                  | 1600     | 0          | 104       | 0.065 *   |
| EB Thru            | 2        | 3200     | 1144   | 0.358     | 2                  | 3200     | 1          | 1145      | 0.358     | 2                  | 3200     | 0          | 1145      | 0.358     |
| EB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| WB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 2        | 3200     | 1028   | 0.321 *   | 2                  | 3200     | 4          | 1032      | 0.323 *   | 2                  | 3200     | 0          | 1032      | 0.323 *   |
| WB Right           | 1        | 1600     | 605    | 0.378     | 1                  | 1600     | 0          | 605       | 0.378     | 1                  | 1600     | 0          | 605       | 0.378     |
| N/S Critical Sum = |          |          |        | 0.176     | N/S Critical Sum = |          |            |           | 0.176     | N/S Critical Sum = |          |            |           | 0.176     |
| E/W Critical Sum = |          |          |        | 0.386     | E/W Critical Sum = |          |            |           | 0.388     | E/W Critical Sum = |          |            |           | 0.388     |
| [RT Adjustment] =  |          |          |        | 0.057     | [RT Adjustment] =  |          |            |           | 0.055     | [RT Adjustment] =  |          |            |           | 0.055     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.719     | Total ICU =        |          |            |           | 0.719     | Total ICU =        |          |            |           | 0.719     |
| LOS =              |          |          |        | C         | LOS =              |          |            |           | C         | LOS =              |          |            |           | C         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 SR-57 NB Ramps & Pathfinder Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 377    | 0.236 *   | 1                  | 1600     | 0          | 377       | 0.236 *   | 1                  | 1600     | 0          | 377       | 0.236 *   |
| NB Thru            | 8        | 6400     | 0      | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     |
| NB Right           | 1        | 1600     | 214    | 0.134     | 1                  | 1600     | 0          | 214       | 0.134     | 1                  | 1600     | 0          | 214       | 0.134     |
| SB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| SB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| EB Left            | 1        | 1600     | 114    | 0.071     | 1                  | 1600     | 0          | 114       | 0.071     | 1                  | 1600     | 0          | 114       | 0.071     |
| EB Thru            | 2        | 3200     | 1050   | 0.328 *   | 2                  | 3200     | 4          | 1054      | 0.329 *   | 2                  | 3200     | 0          | 1054      | 0.329 *   |
| EB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| WB Left            | 8        | 2880     | 0      | 0.000 *   | 8                  | 2880     | 0          | 0         | 0.000 *   | 8                  | 2880     | 0          | 0         | 0.000 *   |
| WB Thru            | 2        | 3200     | 572    | 0.179     | 2                  | 3200     | 2          | 574       | 0.179     | 2                  | 3200     | 0          | 574       | 0.179     |
| WB Right           | 1        | 1600     | 361    | 0.226     | 1                  | 1600     | 0          | 361       | 0.226     | 1                  | 1600     | 0          | 361       | 0.226     |
| N/S Critical Sum = |          |          |        | 0.236     | N/S Critical Sum = |          |            |           | 0.236     | N/S Critical Sum = |          |            |           | 0.236     |
| E/W Critical Sum = |          |          |        | 0.328     | E/W Critical Sum = |          |            |           | 0.329     | E/W Critical Sum = |          |            |           | 0.329     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.664     | Total ICU =        |          |            |           | 0.665     | Total ICU =        |          |            |           | 0.665     |
| LOS =              |          |          |        | <b>B</b>  | LOS =              |          |            |           | <b>B</b>  | LOS =              |          |            |           | <b>B</b>  |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Fern Hollow Dr.-Brea Canyon Rd. & Pathfinder Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 2        | 2880     | 465    | 0.161 *   | 2                  | 2880     | 4          | 469       | 0.163 *   | 2                  | 2880     | 0          | 469       | 0.163 *   |
| NB Thru            | 8        | 6400     | 17     | 0.003     | 8                  | 6400     | 0          | 17        | 0.003     | 8                  | 6400     | 0          | 17        | 0.003     |
| NB Right           | 1        | 1600     | 108    | 0.068     | 1                  | 1600     | 0          | 108       | 0.068     | 1                  | 1600     | 0          | 108       | 0.068     |
| SB Left            | 8        | 2880     | 68     | 0.024     | 8                  | 2880     | 0          | 68        | 0.024     | 8                  | 2880     | 0          | 68        | 0.024     |
| SB Thru            | 1        | 1600     | 40     | 0.164 *   | 1                  | 1600     | 0          | 40        | 0.164 *   | 1                  | 1600     | 0          | 40        | 0.164 *   |
| SB Right           | 0        | 0        | 223    |           | 0                  | 0        | 0          | 223       |           | 0                  | 0        | 0          | 223       |           |
| EB Left            | 1        | 1600     | 63     | 0.039 *   | 1                  | 1600     | 0          | 63        | 0.039 *   | 1                  | 1600     | 0          | 63        | 0.039 *   |
| EB Thru            | 2        | 3200     | 648    | 0.203     | 2                  | 3200     | 0          | 648       | 0.203     | 2                  | 3200     | 0          | 648       | 0.203     |
| EB Right           | 1        | 1600     | 464    | 0.290     | 1                  | 1600     | 1          | 465       | 0.291     | 1                  | 1600     | 0          | 465       | 0.291     |
| WB Left            | 1        | 1600     | 43     | 0.027     | 1                  | 1600     | 0          | 43        | 0.027     | 1                  | 1600     | 0          | 43        | 0.027     |
| WB Thru            | 2        | 3200     | 784    | 0.253 *   | 2                  | 3200     | 0          | 784       | 0.253 *   | 2                  | 3200     | 0          | 784       | 0.253 *   |
| WB Right           | 0        | 0        | 24     |           | 0                  | 0        | 0          | 24        |           | 0                  | 0        | 0          | 24        |           |
| N/S Critical Sum = |          |          |        | 0.325     | N/S Critical Sum = |          |            |           | 0.327     | N/S Critical Sum = |          |            |           | 0.327     |
| E/W Critical Sum = |          |          |        | 0.292     | E/W Critical Sum = |          |            |           | 0.292     | E/W Critical Sum = |          |            |           | 0.292     |
| [SB Adjustment] =  |          |          |        | 0.043     | [SB Adjustment] =  |          |            |           | 0.043     | [SB Adjustment] =  |          |            |           | 0.043     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.760     | Total ICU =        |          |            |           | 0.762     | Total ICU =        |          |            |           | 0.762     |
| LOS =              |          |          |        | C         | LOS =              |          |            |           | C         | LOS =              |          |            |           | C         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Fern Hollow Dr.-Brea Canyon Rd. & Pathfinder Rd.

| Movement | EXISTING |                    |        |           | EXISTING + PROJECT |                    |            |           |           |                    |          |            |           |           |
|----------|----------|--------------------|--------|-----------|--------------------|--------------------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|          | Lanes    | Capacity           | Volume | V/C Ratio | Lanes              | Capacity           | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left  | 2        | 2880               | 440    | 0.153 *   | 2                  | 2880               | 2          | 442       | 0.153 *   | 2                  | 2880     | 0          | 442       | 0.153 *   |
| NB Thru  | 8        | 6400               | 24     | 0.004     | 8                  | 6400               | 0          | 24        | 0.004     | 8                  | 6400     | 0          | 24        | 0.004     |
| NB Right | 1        | 1600               | 72     | 0.045     | 1                  | 1600               | 0          | 72        | 0.045     | 1                  | 1600     | 0          | 72        | 0.045     |
| SB Left  | 8        | 2880               | 13     | 0.005     | 8                  | 2880               | 0          | 13        | 0.005     | 8                  | 2880     | 0          | 13        | 0.005     |
| SB Thru  | 1        | 1600               | 16     | 0.049 *   | 1                  | 1600               | 0          | 16        | 0.049 *   | 1                  | 1600     | 0          | 16        | 0.049 *   |
| SB Right | 0        | 0                  | 62     |           | 0                  | 0                  | 0          | 62        |           | 0                  | 0        | 0          | 62        |           |
| EB Left  | 1        | 1600               | 112    | 0.070     | 1                  | 1600               | 0          | 112       | 0.070     | 1                  | 1600     | 0          | 112       | 0.070     |
| EB Thru  | 2        | 3200               | 1028   | 0.321 *   | 2                  | 3200               | 0          | 1028      | 0.321 *   | 2                  | 3200     | 0          | 1028      | 0.321 *   |
| EB Right | 1        | 1600               | 147    | 0.092     | 1                  | 1600               | 4          | 151       | 0.094     | 1                  | 1600     | 0          | 151       | 0.094     |
| WB Left  | 1        | 1600               | 27     | 0.017 *   | 1                  | 1600               | 0          | 27        | 0.017 *   | 1                  | 1600     | 0          | 27        | 0.017 *   |
| WB Thru  | 2        | 3200               | 431    | 0.138     | 2                  | 3200               | 0          | 431       | 0.138     | 2                  | 3200     | 0          | 431       | 0.138     |
| WB Right | 0        | 0                  | 11     |           | 0                  | 0                  | 0          | 11        |           | 0                  | 0        | 0          | 11        |           |
|          |          | N/S Critical Sum = |        | 0.202     |                    | N/S Critical Sum = |            | 0.202     |           | N/S Critical Sum = |          | 0.202      |           |           |
|          |          | E/W Critical Sum = |        | 0.338     |                    | E/W Critical Sum = |            | 0.338     |           | E/W Critical Sum = |          | 0.338      |           |           |
|          |          | [SB Adjustment] =  |        | 0.008     |                    | [SB Adjustment] =  |            | 0.008     |           | [SB Adjustment] =  |          | 0.008      |           |           |
|          |          | Clearance =        |        | 0.100     |                    | Clearance =        |            | 0.100     |           | Clearance =        |          | 0.100      |           |           |
|          |          | Total ICU =        |        | 0.648     |                    | Total ICU =        |            | 0.648     |           | Total ICU =        |          | 0.648      |           |           |
|          |          | LOS =              |        | <b>B</b>  |                    | LOS =              |            | <b>B</b>  |           | LOS =              |          | <b>B</b>   |           |           |

# Table X

## AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Pathfinder Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           | EXISTING + PROJECT |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 158    | 0.099 *   | 1                  | 1600     | 0          | 158       | 0.099 *   | 1                  | 1600     | 0          | 158       | 0.099 *   |
| NB Thru            | 2        | 3200     | 349    | 0.111     | 2                  | 3200     | 15         | 364       | 0.116     | 2                  | 3200     | 0          | 364       | 0.116     |
| NB Right           | 0        | 0        | 7      |           | 0                  | 0        | 0          | 7         |           | 0                  | 0        | 0          | 7         |           |
| SB Left            | 1        | 1600     | 3      | 0.002     | 1                  | 1600     | 0          | 3         | 0.002     | 1                  | 1600     | 0          | 3         | 0.002     |
| SB Thru            | 2        | 3200     | 1353   | 0.423 *   | 2                  | 3200     | 3          | 1356      | 0.424 *   | 2                  | 3200     | 0          | 1356      | 0.424 *   |
| SB Right           | 1        | 1600     | 733    | 0.458     | 1                  | 1600     | 0          | 733       | 0.458     | 1                  | 1600     | 0          | 733       | 0.458     |
| EB Left            | 2        | 2880     | 615    | 0.214 *   | 2                  | 2880     | 0          | 615       | 0.214 *   | 2                  | 2880     | 0          | 615       | 0.214 *   |
| EB Thru            | 1        | 1600     | 14     | 0.009     | 1                  | 1600     | 0          | 14        | 0.009     | 1                  | 1600     | 0          | 14        | 0.009     |
| EB Right           | 1        | 1600     | 175    | 0.109     | 1                  | 1600     | 0          | 175       | 0.109     | 1                  | 1600     | 0          | 175       | 0.109     |
| WB Left            | 1        | 1600     | 13     | 0.008     | 1                  | 1600     | 0          | 13        | 0.008     | 1                  | 1600     | 0          | 13        | 0.008     |
| WB Thru            | 1        | 1600     | 29     | 0.020 *   | 1                  | 1600     | 0          | 29        | 0.020 *   | 1                  | 1600     | 0          | 29        | 0.020 *   |
| WB Right           | 0        | 0        | 3      |           | 0                  | 0        | 0          | 3         |           | 0                  | 0        | 0          | 3         |           |
| N/S Critical Sum = |          |          |        | 0.522     | N/S Critical Sum = |          |            |           | 0.523     | N/S Critical Sum = |          |            |           | 0.523     |
| E/W Critical Sum = |          |          |        | 0.234     | E/W Critical Sum = |          |            |           | 0.234     | E/W Critical Sum = |          |            |           | 0.234     |
| [Sig Adjustment] = |          |          |        | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.786     | Total ICU =        |          |            |           | 0.787     | Total ICU =        |          |            |           | 0.787     |
| LOS =              |          |          |        | C         | LOS =              |          |            |           | C         | LOS =              |          |            |           | C         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Pathfinder Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 89     | 0.056     | 1                  | 1600     | 0          | 89        | 0.056     | 1                  | 1600     | 0          | 89        | 0.056     |
| NB Thru            | 2        | 3200     | 1428   | 0.448 *   | 2                  | 3200     | 7          | 1435      | 0.451 *   | 2                  | 3200     | 0          | 1435      | 0.451 *   |
| NB Right           | 0        | 0        | 7      |           | 0                  | 0        | 0          | 7         |           | 0                  | 0        | 0          | 7         |           |
| SB Left            | 1        | 1600     | 6      | 0.004 *   | 1                  | 1600     | 0          | 6         | 0.004 *   | 1                  | 1600     | 0          | 6         | 0.004 *   |
| SB Thru            | 2        | 3200     | 429    | 0.134     | 2                  | 3200     | 14         | 443       | 0.138     | 2                  | 3200     | 0          | 443       | 0.138     |
| SB Right           | 1        | 1600     | 396    | 0.248     | 1                  | 1600     | 0          | 396       | 0.248     | 1                  | 1600     | 0          | 396       | 0.248     |
| EB Left            | 2        | 2880     | 872    | 0.303 *   | 2                  | 2880     | 0          | 872       | 0.303 *   | 2                  | 2880     | 0          | 872       | 0.303 *   |
| EB Thru            | 1        | 1600     | 16     | 0.010     | 1                  | 1600     | 0          | 16        | 0.010     | 1                  | 1600     | 0          | 16        | 0.010     |
| EB Right           | 1        | 1600     | 138    | 0.086     | 1                  | 1600     | 0          | 138       | 0.086     | 1                  | 1600     | 0          | 138       | 0.086     |
| WB Left            | 1        | 1600     | 3      | 0.002     | 1                  | 1600     | 0          | 3         | 0.002     | 1                  | 1600     | 0          | 3         | 0.002     |
| WB Thru            | 1        | 1600     | 7      | 0.007 *   | 1                  | 1600     | 0          | 7         | 0.007 *   | 1                  | 1600     | 0          | 7         | 0.007 *   |
| WB Right           | 0        | 0        | 4      |           | 0                  | 0        | 0          | 4         |           | 0                  | 0        | 0          | 4         |           |
| N/S Critical Sum = |          |          |        | 0.452     | N/S Critical Sum = |          |            |           | 0.455     | N/S Critical Sum = |          |            |           | 0.455     |
| E/W Critical Sum = |          |          |        | 0.310     | E/W Critical Sum = |          |            |           | 0.310     | E/W Critical Sum = |          |            |           | 0.310     |
| [Sig Adjustment] = |          |          |        | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.792     | Total ICU =        |          |            |           | 0.795     | Total ICU =        |          |            |           | 0.795     |
| LOS =              |          |          |        | C         | LOS =              |          |            |           | C         | LOS =              |          |            |           | C         |

## Table X

### AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Shadow Canyon Dr.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8        | 2880     | 0      | 0.000 *   | 8                  | 2880     | 0          | 0         | 0.000 *   | 8                  | 2880     | 0          | 0         | 0.000 *   |
| NB Thru            | 2        | 3200     | 395    | 0.123     | 2                  | 3200     | 15         | 410       | 0.128     | 2                  | 3200     | 0          | 410       | 0.128     |
| NB Right           | 1        | 1600     | 34     | 0.021     | 1                  | 1600     | 0          | 34        | 0.021     | 1                  | 1600     | 0          | 34        | 0.021     |
| SB Left            | 1        | 1600     | 68     | 0.043     | 1                  | 1600     | 0          | 68        | 0.043     | 1                  | 1600     | 0          | 68        | 0.043     |
| SB Thru            | 2        | 3200     | 1426   | 0.446 *   | 2                  | 3200     | 3          | 1429      | 0.447 *   | 2                  | 3200     | 0          | 1429      | 0.447 *   |
| SB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| EB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| EB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| EB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| WB Left            | 1        | 1600     | 142    | 0.089 *   | 1                  | 1600     | 0          | 142       | 0.089 *   | 1                  | 1600     | 0          | 142       | 0.089 *   |
| WB Thru            | 2        | 3200     | 0      | 0.038     | 2                  | 3200     | 0          | 0         | 0.038     | 2                  | 3200     | 0          | 0         | 0.038     |
| WB Right           | 0        | 0        | 120    |           | 0                  | 0        | 0          | 120       |           | 0                  | 0        | 0          | 120       |           |
| N/S Critical Sum = |          |          |        | 0.446     | N/S Critical Sum = |          |            |           | 0.447     | N/S Critical Sum = |          |            |           | 0.447     |
| E/W Critical Sum = |          |          |        | 0.089     | E/W Critical Sum = |          |            |           | 0.089     | E/W Critical Sum = |          |            |           | 0.089     |
| [Sig Adjustment] = |          |          |        | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.565     | Total ICU =        |          |            |           | 0.566     | Total ICU =        |          |            |           | 0.566     |
| LOS =              |          |          |        | A         | LOS =              |          |            |           | A         | LOS =              |          |            |           | A         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Shadow Canyon Dr.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 2        | 3200     | 1538   | 0.481 *   | 2                  | 3200     | 7          | 1545      | 0.483 *   | 2                  | 3200     | 0          | 1545      | 0.483 *   |
| NB Right           | 1        | 1600     | 92     | 0.058     | 1                  | 1600     | 0          | 92        | 0.058     | 1                  | 1600     | 0          | 92        | 0.058     |
| SB Left            | 1        | 1600     | 101    | 0.063 *   | 1                  | 1600     | 0          | 101       | 0.063 *   | 1                  | 1600     | 0          | 101       | 0.063 *   |
| SB Thru            | 2        | 3200     | 552    | 0.173     | 2                  | 3200     | 14         | 566       | 0.177     | 2                  | 3200     | 0          | 566       | 0.177     |
| SB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| EB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| EB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| EB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| WB Left            | 1        | 1600     | 47     | 0.029 *   | 1                  | 1600     | 0          | 47        | 0.029 *   | 1                  | 1600     | 0          | 47        | 0.029 *   |
| WB Thru            | 2        | 3200     | 0      | 0.025     | 2                  | 3200     | 0          | 0         | 0.025     | 2                  | 3200     | 0          | 0         | 0.025     |
| WB Right           | 0        | 0        | 81     |           | 0                  | 0        | 0          | 81        |           | 0                  | 0        | 0          | 81        |           |
| N/S Critical Sum = |          |          |        | 0.544     | N/S Critical Sum = |          |            |           | 0.546     | N/S Critical Sum = |          |            |           | 0.546     |
| E/W Critical Sum = |          |          |        | 0.029     | E/W Critical Sum = |          |            |           | 0.029     | E/W Critical Sum = |          |            |           | 0.029     |
| [Sig Adjustment] = |          |          |        | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.603     | Total ICU =        |          |            |           | 0.605     | Total ICU =        |          |            |           | 0.605     |
| LOS =              |          |          |        | A         | LOS =              |          |            |           | A         | LOS =              |          |            |           | A         |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd & Fountain Sprg Ln |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Existing                       |
| Analysis Time Period | AM Peak Hr. |                  |                                |

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Project ID BCyn&FountS, Exist-AM      |                                     |
| East/West Street: Fountain Spring Ln. | North/South Street: Brea Canyon Rd. |

| Volume Adjustments and Site Characteristics |            |     |    |            |     |     |
|---|------------|-----|----|------------|-----|-----|
| Approach                                    | Eastbound  |     |    | Westbound  |     |     |
|   | L          | T   | R  | L          | T   | R   |
| Movement                                    |            |     |    |            |     |     |
| Volume (veh/h)                              | 0          | 0   | 0  | 54         | 0   | 201 |
| %Thrus Left Lane                            |            |     |    |            |     |     |
| Approach                                    | Northbound |     |    | Southbound |     |     |
|   | L          | T   | R  | L          | T   | R   |
| Movement                                    |            |     |    |            |     |     |
| Volume (veh/h)                              | 0          | 201 | 19 | 159        | 456 | 0   |
| %Thrus Left Lane                            |            |     |    |            |     |     |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     |           |    | LTR       |    | T          | R    | L          | T    |
| PHF               |           |    | 0.97      |    | 0.97       | 0.97 | 0.97       | 0.97 |
| Flow Rate (veh/h) |           |    | 262       |    | 207        | 19   | 163        | 470  |
| % Heavy Vehicles  |           |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 0         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    |           |    | 1         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

| Saturation Headway Adjustment Worksheet |  |  |      |      |      |      |      |      |
|---|--|--|------|------|------|------|------|------|
| Prop. Left-Turns                        |  |  | 0.2  |      | 0.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns                       |  |  | 0.8  |      | 0.0  | 1.0  | 0.0  | 0.0  |
| Prop. Heavy Vehicle                     |  |  | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj                                 |  |  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj                                 |  |  | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj                                 |  |  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed                          |  |  | -0.4 |      | 0.0  | -0.7 | 0.5  | 0.0  |

| Departure Headway and Service Time |  |  |      |  |      |      |      |      |
|------------------------------------|--|--|------|--|------|------|------|------|
| hd, initial value (s)              |  |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                         |  |  | 0.23 |  | 0.18 | 0.02 | 0.14 | 0.42 |
| hd, final value (s)                |  |  | 5.45 |  | 6.11 | 5.40 | 6.11 | 5.60 |
| x, final value                     |  |  | 0.40 |  | 0.35 | 0.03 | 0.28 | 0.73 |
| Move-up time, m (s)                |  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s)   |  |  | 3.4  |  | 3.8  | 3.1  | 3.8  | 3.3  |

| Capacity and Level of Service |           |    |           |    |            |      |            |       |
|-------------------------------|-----------|----|-----------|----|------------|------|------------|-------|
|                               | Eastbound |    | Westbound |    | Northbound |      | Southbound |       |
|                               | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2    |
| Capacity (veh/h)              |           |    | 512       |    | 457        | 269  | 413        | 635   |
| Delay (s/veh)                 |           |    | 11.97     |    | 12.08      | 8.26 | 11.13      | 22.00 |
| LOS                           |           |    | B         |    | B          | A    | B          | C     |
| Approach: Delay (s/veh)       |           |    | 11.97     |    | 11.76      |      | 19.20      |       |
| LOS                           |           |    | B         |    | B          |      | C          |       |
| Intersection Delay (s/veh)    | 16.01     |    |           |    |            |      |            |       |
| Intersection LOS              | C         |    |           |    |            |      |            |       |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd & Fountain Sprg Ln |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Existing                       |
| Analysis Time Period | PM Peak Hr. |                  |                                |

Project ID *BCyn&FountS, Exist-PM*East/West Street: *Fountain Spring Ln.*North/South Street: *Brea Canyon Rd.*

### Volume Adjustments and Site Characteristics

| Approach         | Eastbound |   |   | Westbound |   |    |
|------------------|-----------|---|---|-----------|---|----|
|                  | L         | T | R | L         | T | R  |
| Movement         |           |   |   |           |   |    |
| Volume (veh/h)   | 0         | 0 | 0 | 10        | 0 | 51 |
| %Thrus Left Lane |           |   |   |           |   |    |

| Approach         | Northbound |     |    | Southbound |     |   |
|------------------|------------|-----|----|------------|-----|---|
|                  | L          | T   | R  | L          | T   | R |
| Movement         |            |     |    |            |     |   |
| Volume (veh/h)   | 0          | 466 | 11 | 62         | 146 | 0 |
| %Thrus Left Lane |            |     |    |            |     |   |

|                   | Eastbound   |    | Westbound   |    | Northbound  |    | Southbound  |    |
|-------------------|-------------|----|-------------|----|-------------|----|-------------|----|
|                   | L1          | L2 | L1          | L2 | L1          | L2 | L1          | L2 |
| Configuration     |             |    | <i>LTR</i>  |    | <i>T</i>    |    | <i>L</i>    |    |
| PHF               |             |    | <i>0.97</i> |    | <i>0.97</i> |    | <i>0.97</i> |    |
| Flow Rate (veh/h) |             |    | <i>62</i>   |    | <i>480</i>  |    | <i>11</i>   |    |
| % Heavy Vehicles  |             |    | <i>0</i>    |    | <i>0</i>    |    | <i>0</i>    |    |
| No. Lanes         | <i>0</i>    |    | <i>1</i>    |    | <i>2</i>    |    | <i>2</i>    |    |
| Geometry Group    |             |    | <i>1</i>    |    | <i>5</i>    |    | <i>5</i>    |    |
| Duration, T       | <i>0.25</i> |    |             |    |             |    |             |    |

### Saturation Headway Adjustment Worksheet

|                     |  |  |             |             |             |             |             |             |
|---------------------|--|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Prop. Left-Turns    |  |  | <i>0.2</i>  |             | <i>0.0</i>  | <i>0.0</i>  | <i>1.0</i>  | <i>0.0</i>  |
| Prop. Right-Turns   |  |  | <i>0.8</i>  |             | <i>0.0</i>  | <i>1.0</i>  | <i>0.0</i>  | <i>0.0</i>  |
| Prop. Heavy Vehicle |  |  | <i>0.0</i>  |             | <i>0.0</i>  | <i>0.0</i>  | <i>0.0</i>  | <i>0.0</i>  |
| hLT-adj             |  |  | <i>0.2</i>  | <i>0.2</i>  | <i>0.5</i>  | <i>0.5</i>  | <i>0.5</i>  | <i>0.5</i>  |
| hRT-adj             |  |  | <i>-0.6</i> | <i>-0.6</i> | <i>-0.7</i> | <i>-0.7</i> | <i>-0.7</i> | <i>-0.7</i> |
| hHV-adj             |  |  | <i>1.7</i>  | <i>1.7</i>  | <i>1.7</i>  | <i>1.7</i>  | <i>1.7</i>  | <i>1.7</i>  |
| hadj, computed      |  |  | <i>-0.5</i> |             | <i>0.0</i>  | <i>-0.7</i> | <i>0.5</i>  | <i>0.0</i>  |

### Departure Headway and Service Time

|                                  |  |  |             |  |             |             |             |             |
|----------------------------------|--|--|-------------|--|-------------|-------------|-------------|-------------|
| hd, initial value (s)            |  |  | <i>3.20</i> |  | <i>3.20</i> | <i>3.20</i> | <i>3.20</i> | <i>3.20</i> |
| x, initial                       |  |  | <i>0.06</i> |  | <i>0.43</i> | <i>0.01</i> | <i>0.06</i> | <i>0.13</i> |
| hd, final value (s)              |  |  | <i>5.03</i> |  | <i>4.86</i> | <i>4.16</i> | <i>5.55</i> | <i>5.05</i> |
| x, final value                   |  |  | <i>0.09</i> |  | <i>0.65</i> | <i>0.01</i> | <i>0.10</i> | <i>0.21</i> |
| Move-up time, m (s)              |  |  | <i>2.0</i>  |  | <i>2.3</i>  |             | <i>2.3</i>  |             |
| Service Time, t <sub>s</sub> (s) |  |  | <i>3.0</i>  |  | <i>2.6</i>  | <i>1.9</i>  | <i>3.3</i>  | <i>2.7</i>  |

### Capacity and Level of Service

|                            | Eastbound    |    | Westbound   |    | Northbound   |    | Southbound  |    |
|----------------------------|--------------|----|-------------|----|--------------|----|-------------|----|
|                            | L1           | L2 | L1          | L2 | L1           | L2 | L1          | L2 |
| Capacity (veh/h)           |              |    | <i>312</i>  |    | <i>730</i>   |    | <i>261</i>  |    |
| Delay (s/veh)              |              |    | <i>8.51</i> |    | <i>16.03</i> |    | <i>6.91</i> |    |
| LOS                        |              |    | <i>A</i>    |    | <i>C</i>     |    | <i>A</i>    |    |
| Approach: Delay (s/veh)    |              |    | <i>8.51</i> |    | <i>15.83</i> |    | <i>9.02</i> |    |
| LOS                        |              |    | <i>A</i>    |    | <i>C</i>     |    | <i>A</i>    |    |
| Intersection Delay (s/veh) | <i>13.34</i> |    |             |    |              |    |             |    |
| Intersection LOS           | <i>B</i>     |    |             |    |              |    |             |    |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd & Fountain Sprg Ln |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Existing + Project             |
| Analysis Time Period | AM Peak Hr. |                  |                                |

Project ID BCyn&amp;FountS, E+P-AM

East/West Street: Fountain Spring Ln.

North/South Street: Brea Canyon Rd.

### Volume Adjustments and Site Characteristics

| Approach         | Eastbound |   |   | Westbound |   |     |
|------------------|-----------|---|---|-----------|---|-----|
|                  | L         | T | R | L         | T | R   |
| Movement         |           |   |   |           |   |     |
| Volume (veh/h)   | 0         | 0 | 0 | 54        | 0 | 201 |
| %Thrus Left Lane |           |   |   |           |   |     |

| Approach         | Northbound |     |    | Southbound |     |   |
|------------------|------------|-----|----|------------|-----|---|
|                  | L          | T   | R  | L          | T   | R |
| Movement         |            |     |    |            |     |   |
| Volume (veh/h)   | 0          | 205 | 19 | 159        | 457 | 0 |
| %Thrus Left Lane |            |     |    |            |     |   |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     |           |    | LTR       |    | T          | R    | L          | T    |
| PHF               |           |    | 0.97      |    | 0.97       | 0.97 | 0.97       | 0.97 |
| Flow Rate (veh/h) |           |    | 262       |    | 211        | 19   | 163        | 471  |
| % Heavy Vehicles  |           |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 0         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    |           |    | 1         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

### Saturation Headway Adjustment Worksheet

|                     |  |  |      |      |      |      |      |      |
|---------------------|--|--|------|------|------|------|------|------|
| Prop. Left-Turns    |  |  | 0.2  |      | 0.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns   |  |  | 0.8  |      | 0.0  | 1.0  | 0.0  | 0.0  |
| Prop. Heavy Vehicle |  |  | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj             |  |  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj             |  |  | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj             |  |  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed      |  |  | -0.4 |      | 0.0  | -0.7 | 0.5  | 0.0  |

### Departure Headway and Service Time

|                                  |  |  |      |  |      |      |      |      |
|----------------------------------|--|--|------|--|------|------|------|------|
| hd, initial value (s)            |  |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                       |  |  | 0.23 |  | 0.19 | 0.02 | 0.14 | 0.42 |
| hd, final value (s)              |  |  | 5.46 |  | 6.12 | 5.40 | 6.12 | 5.61 |
| x, final value                   |  |  | 0.40 |  | 0.36 | 0.03 | 0.28 | 0.73 |
| Move-up time, m (s)              |  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s) |  |  | 3.5  |  | 3.8  | 3.1  | 3.8  | 3.3  |

### Capacity and Level of Service

|                            | Eastbound |    | Westbound |    | Northbound |      | Southbound |       |
|----------------------------|-----------|----|-----------|----|------------|------|------------|-------|
|                            | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2    |
| Capacity (veh/h)           |           |    | 512       |    | 461        | 269  | 413        | 634   |
| Delay (s/veh)              |           |    | 12.01     |    | 12.19      | 8.26 | 11.15      | 22.20 |
| LOS                        |           |    | B         |    | B          | A    | B          | C     |
| Approach: Delay (s/veh)    |           |    | 12.01     |    | 11.87      |      | 19.36      |       |
| LOS                        |           |    | B         |    | B          |      | C          |       |
| Intersection Delay (s/veh) | 16.12     |    |           |    |            |      |            |       |
| Intersection LOS           | C         |    |           |    |            |      |            |       |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                 |
|----------------------|-------------|------------------|---------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd & Fountain Sprng Ln |
| Agency/Co.           |             | Jurisdiction     |                                 |
| Date Performed       |             | Analysis Year    | Existing + Project              |
| Analysis Time Period | PM Peak Hr. |                  |                                 |

Project ID BCyn&amp;FountS, Exist-PM

East/West Street: Fountain Spring Ln.

North/South Street: Brea Canyon Rd.

### Volume Adjustments and Site Characteristics

| Approach         | Eastbound |   |   | Westbound |   |    |
|------------------|-----------|---|---|-----------|---|----|
|                  | L         | T | R | L         | T | R  |
| Movement         |           |   |   |           |   |    |
| Volume (veh/h)   | 0         | 0 | 0 | 10        | 0 | 51 |
| %Thrus Left Lane |           |   |   |           |   |    |

| Approach         | Northbound |     |    | Southbound |     |   |
|------------------|------------|-----|----|------------|-----|---|
|                  | L          | T   | R  | L          | T   | R |
| Movement         |            |     |    |            |     |   |
| Volume (veh/h)   | 0          | 468 | 11 | 62         | 150 | 0 |
| %Thrus Left Lane |            |     |    |            |     |   |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     |           |    | LTR       |    | T          | R    | L          | T    |
| PHF               |           |    | 0.96      |    | 0.96       | 0.96 | 0.96       | 0.96 |
| Flow Rate (veh/h) |           |    | 63        |    | 487        | 11   | 64         | 156  |
| % Heavy Vehicles  |           |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 0         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    |           |    | 1         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

### Saturation Headway Adjustment Worksheet

|                     |  |  |      |      |      |      |      |      |
|---------------------|--|--|------|------|------|------|------|------|
| Prop. Left-Turns    |  |  | 0.2  |      | 0.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns   |  |  | 0.8  |      | 0.0  | 1.0  | 0.0  | 0.0  |
| Prop. Heavy Vehicle |  |  | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj             |  |  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj             |  |  | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj             |  |  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed      |  |  | -0.5 |      | 0.0  | -0.7 | 0.5  | 0.0  |

### Departure Headway and Service Time

|                                  |  |  |      |  |      |      |      |      |
|----------------------------------|--|--|------|--|------|------|------|------|
| hd, initial value (s)            |  |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                       |  |  | 0.06 |  | 0.43 | 0.01 | 0.06 | 0.14 |
| hd, final value (s)              |  |  | 5.06 |  | 4.87 | 4.17 | 5.56 | 5.06 |
| x, final value                   |  |  | 0.09 |  | 0.66 | 0.01 | 0.10 | 0.22 |
| Move-up time, m (s)              |  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s) |  |  | 3.1  |  | 2.6  | 1.9  | 3.3  | 2.8  |

### Capacity and Level of Service

|                            | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|----------------------------|-----------|----|-----------|----|------------|------|------------|------|
|                            | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Capacity (veh/h)           |           |    | 313       |    | 735        | 261  | 314        | 406  |
| Delay (s/veh)              |           |    | 8.56      |    | 16.45      | 6.92 | 8.87       | 9.17 |
| LOS                        |           |    | A         |    | C          | A    | A          | A    |
| Approach: Delay (s/veh)    |           |    | 8.56      |    | 16.24      |      | 9.09       |      |
| LOS                        |           |    | A         |    | C          |      | A          |      |
| Intersection Delay (s/veh) | 13.60     |    |           |    |            |      |            |      |
| Intersection LOS           | B         |    |           |    |            |      |            |      |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Fountain Springs Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 34     | 0.021 *   | 1                  | 1600     | 0          | 34        | 0.021 *   | 1                  | 1600     | 0          | 34        | 0.021 *   |
| NB Thru            | 2        | 3200     | 345    | 0.108     | 2                  | 3200     | 15         | 360       | 0.113     | 2                  | 3200     | 0          | 360       | 0.113     |
| NB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| SB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 2        | 3200     | 1311   | 0.469 *   | 2                  | 3200     | 3          | 1314      | 0.470 *   | 2                  | 3200     | 0          | 1314      | 0.470 *   |
| SB Right           | 0        | 0        | 190    |           | 0                  | 0        | 0          | 190       |           | 0                  | 0        | 0          | 190       |           |
| EB Left            | 1        | 1600     | 95     | 0.059 *   | 1                  | 1600     | 0          | 95        | 0.059 *   | 1                  | 1600     | 0          | 95        | 0.059 *   |
| EB Thru            | 8        | 6400     | 0      | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     |
| EB Right           | 1        | 1600     | 63     | 0.039     | 1                  | 1600     | 0          | 63        | 0.039     | 1                  | 1600     | 0          | 63        | 0.039     |
| WB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| WB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| N/S Critical Sum = |          |          |        | 0.490     | N/S Critical Sum = |          |            |           | 0.491     | N/S Critical Sum = |          |            |           | 0.491     |
| E/W Critical Sum = |          |          |        | 0.059     | E/W Critical Sum = |          |            |           | 0.059     | E/W Critical Sum = |          |            |           | 0.059     |
| [Sig Adjustment] = |          |          |        | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.579     | Total ICU =        |          |            |           | 0.580     | Total ICU =        |          |            |           | 0.580     |
| LOS =              |          |          |        | A         | LOS =              |          |            |           | A         | LOS =              |          |            |           | A         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Fountain Springs Rd.

| Movement           | EXISTING |          |        |              | EXISTING + PROJECT |          |            |           |              |                    |          |            |           |              |
|--------------------|----------|----------|--------|--------------|--------------------|----------|------------|-----------|--------------|--------------------|----------|------------|-----------|--------------|
|                    | Lanes    | Capacity | Volume | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    |
| NB Left            | 1        | 1600     | 34     | 0.021        | 1                  | 1600     | 0          | 34        | 0.021        | 1                  | 1600     | 0          | 34        | 0.021        |
| NB Thru            | 2        | 3200     | 1524   | 0.476 *      | 2                  | 3200     | 7          | 1531      | 0.478 *      | 2                  | 3200     | 0          | 1531      | 0.478 *      |
| NB Right           | 0        | 0        | 0      |              | 0                  | 0        | 0          | 0         |              | 0                  | 0        | 0          | 0         |              |
| SB Left            | 8        | 2880     | 0      | 0.000 *      | 8                  | 2880     | 0          | 0         | 0.000 *      | 8                  | 2880     | 0          | 0         | 0.000 *      |
| SB Thru            | 2        | 3200     | 514    | 0.181        | 2                  | 3200     | 14         | 528       | 0.185        | 2                  | 3200     | 0          | 528       | 0.185        |
| SB Right           | 0        | 0        | 65     |              | 0                  | 0        | 0          | 65        |              | 0                  | 0        | 0          | 65        |              |
| EB Left            | 1        | 1600     | 124    | 0.078 *      | 1                  | 1600     | 0          | 124       | 0.078 *      | 1                  | 1600     | 0          | 124       | 0.078 *      |
| EB Thru            | 8        | 6400     | 0      | 0.000        | 8                  | 6400     | 0          | 0         | 0.000        | 8                  | 6400     | 0          | 0         | 0.000        |
| EB Right           | 1        | 1600     | 31     | 0.019        | 1                  | 1600     | 0          | 31        | 0.019        | 1                  | 1600     | 0          | 31        | 0.019        |
| WB Left            | 8        | 2880     | 0      | 0.000        | 8                  | 2880     | 0          | 0         | 0.000        | 8                  | 2880     | 0          | 0         | 0.000        |
| WB Thru            | 8        | 6400     | 0      | 0.000 *      | 8                  | 6400     | 0          | 0         | 0.000 *      | 8                  | 6400     | 0          | 0         | 0.000 *      |
| WB Right           | 0        | 0        | 0      |              | 0                  | 0        | 0          | 0         |              | 0                  | 0        | 0          | 0         |              |
| N/S Critical Sum = |          |          |        | 0.476        | N/S Critical Sum = |          |            |           | 0.478        | N/S Critical Sum = |          |            |           | 0.478        |
| E/W Critical Sum = |          |          |        | 0.078        | E/W Critical Sum = |          |            |           | 0.078        | E/W Critical Sum = |          |            |           | 0.078        |
| [Sig Adjustment] = |          |          |        | -0.070       | [Sig Adjustment] = |          |            |           | -0.070       | [Sig Adjustment] = |          |            |           | -0.070       |
| Clearance =        |          |          |        | 0.100        | Clearance =        |          |            |           | 0.100        | Clearance =        |          |            |           | 0.100        |
| Total ICU =        |          |          |        | <b>0.584</b> | Total ICU =        |          |            |           | <b>0.586</b> | Total ICU =        |          |            |           | <b>0.586</b> |
| LOS =              |          |          |        | <b>A</b>     | LOS =              |          |            |           | <b>A</b>     | LOS =              |          |            |           | <b>A</b>     |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Sugar Pine Pl.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 14     | 0.009 *   | 1                  | 1600     | 0          | 14        | 0.009 *   | 1                  | 1600     | 0          | 14        | 0.009 *   |
| NB Thru            | 2        | 3200     | 341    | 0.108     | 2                  | 3200     | 15         | 356       | 0.113     | 2                  | 3200     | 0          | 356       | 0.113     |
| NB Right           | 0        | 0        | 6      |           | 0                  | 0        | 0          | 6         |           | 0                  | 0        | 0          | 6         |           |
| SB Left            | 1        | 1600     | 12     | 0.008     | 1                  | 1600     | 0          | 12        | 0.008     | 1                  | 1600     | 0          | 12        | 0.008     |
| SB Thru            | 2        | 3200     | 1398   | 0.437 *   | 2                  | 3200     | 3          | 1401      | 0.438 *   | 2                  | 3200     | 0          | 1401      | 0.438 *   |
| SB Right           | 1        | 1600     | 31     | 0.019     | 1                  | 1600     | 0          | 31        | 0.019     | 1                  | 1600     | 0          | 31        | 0.019     |
| EB Left            | 1        | 1600     | 10     | 0.006     | 1                  | 1600     | 0          | 10        | 0.006     | 1                  | 1600     | 0          | 10        | 0.006     |
| EB Thru            | 1        | 1600     | 2      | 0.001 *   | 1                  | 1600     | 0          | 2         | 0.001 *   | 1                  | 1600     | 0          | 2         | 0.001 *   |
| EB Right           | 1        | 1600     | 24     | 0.015     | 1                  | 1600     | 0          | 24        | 0.015     | 1                  | 1600     | 0          | 24        | 0.015     |
| WB Left            | 1        | 1600     | 23     | 0.014 *   | 1                  | 1600     | 0          | 23        | 0.014 *   | 1                  | 1600     | 0          | 23        | 0.014 *   |
| WB Thru            | 1        | 1600     | 0      | 0.000     | 1                  | 1600     | 0          | 0         | 0.000     | 1                  | 1600     | 0          | 0         | 0.000     |
| WB Right           | 1        | 1600     | 27     | 0.017     | 1                  | 1600     | 0          | 27        | 0.017     | 1                  | 1600     | 0          | 27        | 0.017     |
| N/S Critical Sum = |          |          |        | 0.446     | N/S Critical Sum = |          |            |           | 0.447     | N/S Critical Sum = |          |            |           | 0.447     |
| E/W Critical Sum = |          |          |        | 0.015     | E/W Critical Sum = |          |            |           | 0.015     | E/W Critical Sum = |          |            |           | 0.015     |
| [RT&Sig Adjust] =  |          |          |        | -0.065    | [RT&Sig Adjust] =  |          |            |           | -0.065    | [RT&Sig Adjust] =  |          |            |           | -0.065    |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.496     | Total ICU =        |          |            |           | 0.497     | Total ICU =        |          |            |           | 0.497     |
| LOS =              |          |          |        | A         | LOS =              |          |            |           | A         | LOS =              |          |            |           | A         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Sugar Pine Pl.

| Movement           | EXISTING |          |        |              | EXISTING + PROJECT |          |            |           |              |                    |          |            |           |              |
|--------------------|----------|----------|--------|--------------|--------------------|----------|------------|-----------|--------------|--------------------|----------|------------|-----------|--------------|
|                    | Lanes    | Capacity | Volume | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    |
| NB Left            | 1        | 1600     | 32     | 0.020        | 1                  | 1600     | 0          | 32        | 0.020        | 1                  | 1600     | 0          | 32        | 0.020        |
| NB Thru            | 2        | 3200     | 1522   | 0.481 *      | 2                  | 3200     | 7          | 1529      | 0.483 *      | 2                  | 3200     | 0          | 1529      | 0.483 *      |
| NB Right           | 0        | 0        | 17     |              | 0                  | 0        | 0          | 17        |              | 0                  | 0        | 0          | 17        |              |
| SB Left            | 1        | 1600     | 34     | 0.021 *      | 1                  | 1600     | 0          | 34        | 0.021 *      | 1                  | 1600     | 0          | 34        | 0.021 *      |
| SB Thru            | 2        | 3200     | 446    | 0.139        | 2                  | 3200     | 14         | 460       | 0.144        | 2                  | 3200     | 0          | 460       | 0.144        |
| SB Right           | 1        | 1600     | 59     | 0.037        | 1                  | 1600     | 0          | 59        | 0.037        | 1                  | 1600     | 0          | 59        | 0.037        |
| EB Left            | 1        | 1600     | 91     | 0.057 *      | 1                  | 1600     | 0          | 91        | 0.057 *      | 1                  | 1600     | 0          | 91        | 0.057 *      |
| EB Thru            | 1        | 1600     | 3      | 0.002        | 1                  | 1600     | 0          | 3         | 0.002        | 1                  | 1600     | 0          | 3         | 0.002        |
| EB Right           | 1        | 1600     | 41     | 0.026        | 1                  | 1600     | 0          | 41        | 0.026        | 1                  | 1600     | 0          | 41        | 0.026        |
| WB Left            | 1        | 1600     | 19     | 0.012        | 1                  | 1600     | 0          | 19        | 0.012        | 1                  | 1600     | 0          | 19        | 0.012        |
| WB Thru            | 1        | 1600     | 1      | 0.001 *      | 1                  | 1600     | 0          | 1         | 0.001 *      | 1                  | 1600     | 0          | 1         | 0.001 *      |
| WB Right           | 1        | 1600     | 26     | 0.016        | 1                  | 1600     | 0          | 26        | 0.016        | 1                  | 1600     | 0          | 26        | 0.016        |
| N/S Critical Sum = |          |          |        | 0.502        | N/S Critical Sum = |          |            |           | 0.504        | N/S Critical Sum = |          |            |           | 0.504        |
| E/W Critical Sum = |          |          |        | 0.058        | E/W Critical Sum = |          |            |           | 0.058        | E/W Critical Sum = |          |            |           | 0.058        |
| [Sig Adjustment] = |          |          |        | -0.070       | [Sig Adjustment] = |          |            |           | -0.070       | [Sig Adjustment] = |          |            |           | -0.070       |
| Clearance =        |          |          |        | 0.100        | Clearance =        |          |            |           | 0.100        | Clearance =        |          |            |           | 0.100        |
| Total ICU =        |          |          |        | <b>0.590</b> | Total ICU =        |          |            |           | <b>0.592</b> | Total ICU =        |          |            |           | <b>0.592</b> |
| LOS =              |          |          |        | <b>A</b>     | LOS =              |          |            |           | <b>A</b>     | LOS =              |          |            |           | <b>A</b>     |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Existing                       |
| Analysis Time Period | AM Peak Hr. |                  |                                |

|  |  |
|--|--|
| Project ID <i>BCyn&amp;ColdS, Exist-AM</i> |  |
| East/West Street: <i>Cold Spring Ln.</i>   | North/South Street: <i>Brea Canyon Rd.</i> |

| Volume Adjustments and Site Characteristics |            |     |    |            |     |    |
|---|------------|-----|----|------------|-----|----|
| Approach                                    | Eastbound  |     |    | Westbound  |     |    |
|   | L          | T   | R  | L          | T   | R  |
| Movement                                    |            |     |    |            |     |    |
| Volume (veh/h)                              | 32         | 56  | 32 | 87         | 63  | 61 |
| %Thrus Left Lane                            |            |     |    |            |     |    |
| Approach                                    | Northbound |     |    | Southbound |     |    |
|   | L          | T   | R  | L          | T   | R  |
| Movement                                    |            |     |    |            |     |    |
| Volume (veh/h)                              | 41         | 178 | 56 | 81         | 391 | 27 |
| %Thrus Left Lane                            |            |     |    |            |     |    |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     | LTR       |    | LTR       |    | L          | TR   | L          | TR   |
| PHF               | 0.98      |    | 0.98      |    | 0.98       | 0.98 | 0.98       | 0.98 |
| Flow Rate (veh/h) | 121       |    | 214       |    | 41         | 238  | 82         | 425  |
| % Heavy Vehicles  | 0         |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 1         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    | 2         |    | 2         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

| Saturation Headway Adjustment Worksheet |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|
| Prop. Left-Turns                        | 0.3  |      | 0.4  |      | 1.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns                       | 0.3  |      | 0.3  |      | 0.0  | 0.2  | 0.0  | 0.1  |
| Prop. Heavy Vehicle                     | 0.0  |      | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj                                 | 0.2  | 0.2  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj                                 | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj                                 | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed                          | -0.1 |      | -0.1 |      | 0.5  | -0.2 | 0.5  | -0.0 |

| Departure Headway and Service Time |      |  |      |  |      |      |      |      |
|------------------------------------|------|--|------|--|------|------|------|------|
| hd, initial value (s)              | 3.20 |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                         | 0.11 |  | 0.19 |  | 0.04 | 0.21 | 0.07 | 0.38 |
| hd, final value (s)                | 6.41 |  | 6.17 |  | 6.90 | 6.22 | 6.56 | 6.01 |
| x, final value                     | 0.22 |  | 0.37 |  | 0.08 | 0.41 | 0.15 | 0.71 |
| Move-up time, m (s)                | 2.0  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s)   | 4.4  |  | 4.2  |  | 4.6  | 3.9  | 4.3  | 3.7  |

| Capacity and Level of Service |           |    |           |    |            |       |            |       |
|-------------------------------|-----------|----|-----------|----|------------|-------|------------|-------|
|                               | Eastbound |    | Westbound |    | Northbound |       | Southbound |       |
|                               | L1        | L2 | L1        | L2 | L1         | L2    | L1         | L2    |
| Capacity (veh/h)              | 371       |    | 464       |    | 291        | 488   | 332        | 586   |
| Delay (s/veh)                 | 11.17     |    | 12.71     |    | 10.19      | 13.19 | 10.41      | 22.03 |
| LOS                           | B         |    | B         |    | B          | B     | B          | C     |
| Approach: Delay (s/veh)       | 11.17     |    | 12.71     |    | 12.75      |       | 20.15      |       |
| LOS                           | B         |    | B         |    | B          |       | C          |       |
| Intersection Delay (s/veh)    | 15.92     |    |           |    |            |       |            |       |
| Intersection LOS              | C         |    |           |    |            |       |            |       |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       | 7/19/2011   | Analysis Year    | Existing                       |
| Analysis Time Period | PM Peak Hr. |                  |                                |

|  |  |
|--|--|
| Project ID <i>BCyn&amp;ColdS, Exist-PM</i> |  |
| East/West Street: <i>Cold Spring Ln.</i>   | North/South Street: <i>Brea Canyon Rd.</i> |

| Volume Adjustments and Site Characteristics |            |     |    |            |    |    |
|---|------------|-----|----|------------|----|----|
| Approach                                    | Eastbound  |     |    | Westbound  |    |    |
|   | L          | T   | R  | L          | T  | R  |
| Movement                                    |            |     |    |            |    |    |
| Volume (veh/h)                              | 29         | 18  | 4  | 13         | 24 | 53 |
| % Thrus Left Lane                           |            |     |    |            |    |    |
| Approach                                    | Northbound |     |    | Southbound |    |    |
|   | L          | T   | R  | L          | T  | R  |
| Movement                                    |            |     |    |            |    |    |
| Volume (veh/h)                              | 7          | 409 | 25 | 61         | 60 | 31 |
| % Thrus Left Lane                           |            |     |    |            |    |    |

|                   | Eastbound   |    | Westbound   |    | Northbound  |             | Southbound  |             |
|-------------------|-------------|----|-------------|----|-------------|-------------|-------------|-------------|
|                   | L1          | L2 | L1          | L2 | L1          | L2          | L1          | L2          |
| Configuration     | <i>LTR</i>  |    | <i>LTR</i>  |    | <i>L</i>    | <i>TR</i>   | <i>L</i>    | <i>TR</i>   |
| PHF               | <i>1.00</i> |    | <i>1.00</i> |    | <i>1.00</i> | <i>1.00</i> | <i>1.00</i> | <i>1.00</i> |
| Flow Rate (veh/h) | <i>51</i>   |    | <i>90</i>   |    | <i>7</i>    | <i>434</i>  | <i>61</i>   | <i>91</i>   |
| % Heavy Vehicles  | <i>0</i>    |    | <i>0</i>    |    | <i>0</i>    | <i>0</i>    | <i>0</i>    | <i>0</i>    |
| No. Lanes         | <i>1</i>    |    | <i>1</i>    |    | <i>2</i>    |             | <i>2</i>    |             |
| Geometry Group    | <i>2</i>    |    | <i>2</i>    |    | <i>5</i>    |             | <i>5</i>    |             |
| Duration, T       | <i>0.25</i> |    |             |    |             |             |             |             |

| Saturation Headway Adjustment Worksheet |             |             |             |             |             |             |             |             |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Prop. Left-Turns                        | <i>0.6</i>  |             | <i>0.1</i>  |             | <i>1.0</i>  | <i>0.0</i>  | <i>1.0</i>  | <i>0.0</i>  |
| Prop. Right-Turns                       | <i>0.1</i>  |             | <i>0.6</i>  |             | <i>0.0</i>  | <i>0.1</i>  | <i>0.0</i>  | <i>0.3</i>  |
| Prop. Heavy Vehicle                     | <i>0.0</i>  |             | <i>0.0</i>  |             | <i>0.0</i>  | <i>0.0</i>  | <i>0.0</i>  | <i>0.0</i>  |
| hLT-adj                                 | <i>0.2</i>  | <i>0.2</i>  | <i>0.2</i>  | <i>0.2</i>  | <i>0.5</i>  | <i>0.5</i>  | <i>0.5</i>  | <i>0.5</i>  |
| hRT-adj                                 | <i>-0.6</i> | <i>-0.6</i> | <i>-0.6</i> | <i>-0.6</i> | <i>-0.7</i> | <i>-0.7</i> | <i>-0.7</i> | <i>-0.7</i> |
| hHV-adj                                 | <i>1.7</i>  |
| hadj, computed                          | <i>0.1</i>  |             | <i>-0.3</i> |             | <i>0.5</i>  | <i>-0.0</i> | <i>0.5</i>  | <i>-0.2</i> |

| Departure Headway and Service Time |             |  |             |  |             |             |             |             |
|------------------------------------|-------------|--|-------------|--|-------------|-------------|-------------|-------------|
| hd, initial value (s)              | <i>3.20</i> |  | <i>3.20</i> |  | <i>3.20</i> | <i>3.20</i> | <i>3.20</i> | <i>3.20</i> |
| x, initial                         | <i>0.05</i> |  | <i>0.08</i> |  | <i>0.01</i> | <i>0.39</i> | <i>0.05</i> | <i>0.08</i> |
| hd, final value (s)                | <i>5.56</i> |  | <i>5.10</i> |  | <i>5.56</i> | <i>5.01</i> | <i>5.81</i> | <i>5.06</i> |
| x, final value                     | <i>0.08</i> |  | <i>0.13</i> |  | <i>0.01</i> | <i>0.60</i> | <i>0.10</i> | <i>0.13</i> |
| Move-up time, m (s)                | <i>2.0</i>  |  | <i>2.0</i>  |  | <i>2.3</i>  |             | <i>2.3</i>  |             |
| Service Time, t <sub>s</sub> (s)   | <i>3.6</i>  |  | <i>3.1</i>  |  | <i>3.3</i>  | <i>2.7</i>  | <i>3.5</i>  | <i>2.8</i>  |

| Capacity and Level of Service |              |    |             |    |              |              |             |             |
|-------------------------------|--------------|----|-------------|----|--------------|--------------|-------------|-------------|
|                               | Eastbound    |    | Westbound   |    | Northbound   |              | Southbound  |             |
|                               | L1           | L2 | L1          | L2 | L1           | L2           | L1          | L2          |
| Capacity (veh/h)              | <i>301</i>   |    | <i>340</i>  |    | <i>257</i>   | <i>684</i>   | <i>311</i>  | <i>341</i>  |
| Delay (s/veh)                 | <i>9.03</i>  |    | <i>8.84</i> |    | <i>8.32</i>  | <i>15.06</i> | <i>9.14</i> | <i>8.51</i> |
| LOS                           | <i>A</i>     |    | <i>A</i>    |    | <i>A</i>     | <i>C</i>     | <i>A</i>    | <i>A</i>    |
| Approach: Delay (s/veh)       | <i>9.03</i>  |    | <i>8.84</i> |    | <i>14.96</i> |              | <i>8.76</i> |             |
| LOS                           | <i>A</i>     |    | <i>A</i>    |    | <i>B</i>     |              | <i>A</i>    |             |
| Intersection Delay (s/veh)    | <i>12.51</i> |    |             |    |              |              |             |             |
| Intersection LOS              | <i>B</i>     |    |             |    |              |              |             |             |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Existing + Project             |
| Analysis Time Period | AM Peak Hr. |                  |                                |

|  |  |
|--|--|
| Project ID <i>BCyn&amp;ColdS, Exist-AM</i> |  |
| East/West Street: <i>Cold Spring Ln.</i>   | North/South Street: <i>Brea Canyon Rd.</i> |

| Volume Adjustments and Site Characteristics |            |     |    |            |     |    |
|---|------------|-----|----|------------|-----|----|
| Approach                                    | Eastbound  |     |    | Westbound  |     |    |
|   | L          | T   | R  | L          | T   | R  |
| Movement                                    |            |     |    |            |     |    |
| Volume (veh/h)                              | 32         | 56  | 32 | 87         | 63  | 61 |
| %Thrus Left Lane                            |            |     |    |            |     |    |
| Approach                                    | Northbound |     |    | Southbound |     |    |
|   | L          | T   | R  | L          | T   | R  |
| Movement                                    |            |     |    |            |     |    |
| Volume (veh/h)                              | 41         | 182 | 56 | 81         | 392 | 27 |
| %Thrus Left Lane                            |            |     |    |            |     |    |

|                   | Eastbound   |    | Westbound   |    | Northbound  |             | Southbound  |             |
|-------------------|-------------|----|-------------|----|-------------|-------------|-------------|-------------|
|                   | L1          | L2 | L1          | L2 | L1          | L2          | L1          | L2          |
| Configuration     | <i>LTR</i>  |    | <i>LTR</i>  |    | <i>L</i>    | <i>TR</i>   | <i>L</i>    | <i>TR</i>   |
| PHF               | <i>0.98</i> |    | <i>0.98</i> |    | <i>0.98</i> | <i>0.98</i> | <i>0.98</i> | <i>0.98</i> |
| Flow Rate (veh/h) | <i>121</i>  |    | <i>214</i>  |    | <i>41</i>   | <i>242</i>  | <i>82</i>   | <i>426</i>  |
| % Heavy Vehicles  | <i>0</i>    |    | <i>0</i>    |    | <i>0</i>    | <i>0</i>    | <i>0</i>    | <i>0</i>    |
| No. Lanes         | <i>1</i>    |    | <i>1</i>    |    | <i>2</i>    |             | <i>2</i>    |             |
| Geometry Group    | <i>2</i>    |    | <i>2</i>    |    | <i>5</i>    |             | <i>5</i>    |             |
| Duration, T       | <i>0.25</i> |    |             |    |             |             |             |             |

| Saturation Headway Adjustment Worksheet |             |             |             |             |             |             |             |             |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Prop. Left-Turns                        | <i>0.3</i>  |             | <i>0.4</i>  |             | <i>1.0</i>  | <i>0.0</i>  | <i>1.0</i>  | <i>0.0</i>  |
| Prop. Right-Turns                       | <i>0.3</i>  |             | <i>0.3</i>  |             | <i>0.0</i>  | <i>0.2</i>  | <i>0.0</i>  | <i>0.1</i>  |
| Prop. Heavy Vehicle                     | <i>0.0</i>  |             | <i>0.0</i>  |             | <i>0.0</i>  | <i>0.0</i>  | <i>0.0</i>  | <i>0.0</i>  |
| hLT-adj                                 | <i>0.2</i>  | <i>0.2</i>  | <i>0.2</i>  | <i>0.2</i>  | <i>0.5</i>  | <i>0.5</i>  | <i>0.5</i>  | <i>0.5</i>  |
| hRT-adj                                 | <i>-0.6</i> | <i>-0.6</i> | <i>-0.6</i> | <i>-0.6</i> | <i>-0.7</i> | <i>-0.7</i> | <i>-0.7</i> | <i>-0.7</i> |
| hHV-adj                                 | <i>1.7</i>  |
| hadj, computed                          | <i>-0.1</i> |             | <i>-0.1</i> |             | <i>0.5</i>  | <i>-0.2</i> | <i>0.5</i>  | <i>-0.0</i> |

| Departure Headway and Service Time |             |  |             |  |             |             |             |             |
|------------------------------------|-------------|--|-------------|--|-------------|-------------|-------------|-------------|
| hd, initial value (s)              | <i>3.20</i> |  | <i>3.20</i> |  | <i>3.20</i> | <i>3.20</i> | <i>3.20</i> | <i>3.20</i> |
| x, initial                         | <i>0.11</i> |  | <i>0.19</i> |  | <i>0.04</i> | <i>0.22</i> | <i>0.07</i> | <i>0.38</i> |
| hd, final value (s)                | <i>6.44</i> |  | <i>6.19</i> |  | <i>6.91</i> | <i>6.23</i> | <i>6.58</i> | <i>6.02</i> |
| x, final value                     | <i>0.22</i> |  | <i>0.37</i> |  | <i>0.08</i> | <i>0.42</i> | <i>0.15</i> | <i>0.71</i> |
| Move-up time, m (s)                | <i>2.0</i>  |  | <i>2.0</i>  |  | <i>2.3</i>  |             | <i>2.3</i>  |             |
| Service Time, t <sub>s</sub> (s)   | <i>4.4</i>  |  | <i>4.2</i>  |  | <i>4.6</i>  | <i>3.9</i>  | <i>4.3</i>  | <i>3.7</i>  |

| Capacity and Level of Service |              |    |              |    |              |              |              |              |
|-------------------------------|--------------|----|--------------|----|--------------|--------------|--------------|--------------|
|                               | Eastbound    |    | Westbound    |    | Northbound   |              | Southbound   |              |
|                               | L1           | L2 | L1           | L2 | L1           | L2           | L1           | L2           |
| Capacity (veh/h)              | <i>371</i>   |    | <i>464</i>   |    | <i>291</i>   | <i>492</i>   | <i>332</i>   | <i>585</i>   |
| Delay (s/veh)                 | <i>11.21</i> |    | <i>12.76</i> |    | <i>10.20</i> | <i>13.34</i> | <i>10.43</i> | <i>22.25</i> |
| LOS                           | <i>B</i>     |    | <i>B</i>     |    | <i>B</i>     | <i>B</i>     | <i>B</i>     | <i>C</i>     |
| Approach: Delay (s/veh)       | <i>11.21</i> |    | <i>12.76</i> |    | <i>12.89</i> |              | <i>20.34</i> |              |
| LOS                           | <i>B</i>     |    | <i>B</i>     |    | <i>B</i>     |              | <i>C</i>     |              |
| Intersection Delay (s/veh)    | <i>16.05</i> |    |              |    |              |              |              |              |
| Intersection LOS              | <i>C</i>     |    |              |    |              |              |              |              |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Existing + Project             |
| Analysis Time Period | PM Peak Hr. |                  |                                |

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Project ID BCyn&ColdS, Exist-PM   |                                     |
| East/West Street: Cold Spring Ln. | North/South Street: Brea Canyon Rd. |

| Volume Adjustments and Site Characteristics |            |     |    |            |    |    |
|---|------------|-----|----|------------|----|----|
| Approach                                    | Eastbound  |     |    | Westbound  |    |    |
|   | L          | T   | R  | L          | T  | R  |
| Movement                                    |            |     |    |            |    |    |
| Volume (veh/h)                              | 29         | 18  | 4  | 13         | 24 | 53 |
| %Thrus Left Lane                            |            |     |    |            |    |    |
| Approach                                    | Northbound |     |    | Southbound |    |    |
|   | L          | T   | R  | L          | T  | R  |
| Movement                                    |            |     |    |            |    |    |
| Volume (veh/h)                              | 7          | 411 | 25 | 61         | 64 | 31 |
| %Thrus Left Lane                            |            |     |    |            |    |    |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     | LTR       |    | LTR       |    | L          | TR   | L          | TR   |
| PHF               | 1.00      |    | 1.00      |    | 1.00       | 1.00 | 1.00       | 1.00 |
| Flow Rate (veh/h) | 51        |    | 90        |    | 7          | 436  | 61         | 95   |
| % Heavy Vehicles  | 0         |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 1         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    | 2         |    | 2         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

| Saturation Headway Adjustment Worksheet |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|
| Prop. Left-Turns                        | 0.6  |      | 0.1  |      | 1.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns                       | 0.1  |      | 0.6  |      | 0.0  | 0.1  | 0.0  | 0.3  |
| Prop. Heavy Vehicle                     | 0.0  |      | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj                                 | 0.2  | 0.2  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj                                 | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj                                 | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed                          | 0.1  |      | -0.3 |      | 0.5  | -0.0 | 0.5  | -0.2 |

| Departure Headway and Service Time |      |  |      |  |      |      |      |      |
|------------------------------------|------|--|------|--|------|------|------|------|
| hd, initial value (s)              | 3.20 |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                         | 0.05 |  | 0.08 |  | 0.01 | 0.39 | 0.05 | 0.08 |
| hd, final value (s)                | 5.57 |  | 5.12 |  | 5.56 | 5.02 | 5.81 | 5.08 |
| x, final value                     | 0.08 |  | 0.13 |  | 0.01 | 0.61 | 0.10 | 0.13 |
| Move-up time, m (s)                | 2.0  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s)   | 3.6  |  | 3.1  |  | 3.3  | 2.7  | 3.5  | 2.8  |

| Capacity and Level of Service |           |    |           |    |            |       |            |      |
|-------------------------------|-----------|----|-----------|----|------------|-------|------------|------|
|                               | Eastbound |    | Westbound |    | Northbound |       | Southbound |      |
|                               | L1        | L2 | L1        | L2 | L1         | L2    | L1         | L2   |
| Capacity (veh/h)              | 301       |    | 340       |    | 257        | 686   | 311        | 345  |
| Delay (s/veh)                 | 9.05      |    | 8.86      |    | 8.32       | 15.18 | 9.15       | 8.56 |
| LOS                           | A         |    | A         |    | A          | C     | A          | A    |
| Approach: Delay (s/veh)       | 9.05      |    | 8.86      |    | 15.07      |       | 8.79       |      |
| LOS                           | A         |    | A         |    | C          |       | A          |      |
| Intersection Delay (s/veh)    | 12.58     |    |           |    |            |       |            |      |
| Intersection LOS              | B         |    |           |    |            |       |            |      |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Cold Spring Ln.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 18     | 0.011 *   | 1                  | 1600     | 0          | 18        | 0.011 *   | 1                  | 1600     | 0          | 18        | 0.011 *   |
| NB Thru            | 2        | 3200     | 232    | 0.078     | 2                  | 3200     | 15         | 247       | 0.083     | 2                  | 3200     | 0          | 247       | 0.083     |
| NB Right           | 0        | 0        | 17     |           | 0                  | 0        | 0          | 17        |           | 0                  | 0        | 0          | 17        |           |
| SB Left            | 1        | 1600     | 55     | 0.034     | 1                  | 1600     | 0          | 55        | 0.034     | 1                  | 1600     | 0          | 55        | 0.034     |
| SB Thru            | 2        | 3200     | 1218   | 0.406 *   | 2                  | 3200     | 3          | 1221      | 0.407 *   | 2                  | 3200     | 0          | 1221      | 0.407 *   |
| SB Right           | 0        | 0        | 81     |           | 0                  | 0        | 0          | 81        |           | 0                  | 0        | 0          | 81        |           |
| EB Left            | 1        | 1600     | 47     | 0.029 *   | 1                  | 1600     | 0          | 47        | 0.029 *   | 1                  | 1600     | 0          | 47        | 0.029 *   |
| EB Thru            | 1        | 1600     | 54     | 0.048     | 1                  | 1600     | 0          | 54        | 0.048     | 1                  | 1600     | 0          | 54        | 0.048     |
| EB Right           | 0        | 0        | 23     |           | 0                  | 0        | 0          | 23        |           | 0                  | 0        | 0          | 23        |           |
| WB Left            | 1        | 1600     | 66     | 0.041     | 1                  | 1600     | 0          | 66        | 0.041     | 1                  | 1600     | 0          | 66        | 0.041     |
| WB Thru            | 1        | 1600     | 90     | 0.091 *   | 1                  | 1600     | 0          | 90        | 0.091 *   | 1                  | 1600     | 0          | 90        | 0.091 *   |
| WB Right           | 0        | 0        | 56     |           | 0                  | 0        | 0          | 56        |           | 0                  | 0        | 0          | 56        |           |
| N/S Critical Sum = |          |          |        | 0.417     | N/S Critical Sum = |          |            |           | 0.418     | N/S Critical Sum = |          |            |           | 0.418     |
| E/W Critical Sum = |          |          |        | 0.120     | E/W Critical Sum = |          |            |           | 0.120     | E/W Critical Sum = |          |            |           | 0.120     |
| [Sig Adjustment] = |          |          |        | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    | [Sig Adjustment] = |          |            |           | -0.070    |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.567     | Total ICU =        |          |            |           | 0.568     | Total ICU =        |          |            |           | 0.568     |
| LOS =              |          |          |        | A         | LOS =              |          |            |           | A         | LOS =              |          |            |           | A         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Cold Spring Ln.

| Movement           | EXISTING |          |        |              | EXISTING + PROJECT |          |            |           |              |                    |          |            |           |              |
|--------------------|----------|----------|--------|--------------|--------------------|----------|------------|-----------|--------------|--------------------|----------|------------|-----------|--------------|
|                    | Lanes    | Capacity | Volume | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    |
| NB Left            | 1        | 1600     | 32     | 0.020        | 1                  | 1600     | 0          | 32        | 0.020        | 1                  | 1600     | 0          | 32        | 0.020        |
| NB Thru            | 2        | 3200     | 1573   | 0.508 *      | 2                  | 3200     | 7          | 1580      | 0.510 *      | 2                  | 3200     | 0          | 1580      | 0.510 *      |
| NB Right           | 0        | 0        | 51     |              | 0                  | 0        | 0          | 51        |              | 0                  | 0        | 0          | 51        |              |
| SB Left            | 1        | 1600     | 96     | 0.060 *      | 1                  | 1600     | 0          | 96        | 0.060 *      | 1                  | 1600     | 0          | 96        | 0.060 *      |
| SB Thru            | 2        | 3200     | 378    | 0.133        | 2                  | 3200     | 14         | 392       | 0.138        | 2                  | 3200     | 0          | 392       | 0.138        |
| SB Right           | 0        | 0        | 49     |              | 0                  | 0        | 0          | 49        |              | 0                  | 0        | 0          | 49        |              |
| EB Left            | 1        | 1600     | 55     | 0.034 *      | 1                  | 1600     | 0          | 55        | 0.034 *      | 1                  | 1600     | 0          | 55        | 0.034 *      |
| EB Thru            | 1        | 1600     | 43     | 0.047        | 1                  | 1600     | 0          | 43        | 0.047        | 1                  | 1600     | 0          | 43        | 0.047        |
| EB Right           | 0        | 0        | 32     |              | 0                  | 0        | 0          | 32        |              | 0                  | 0        | 0          | 32        |              |
| WB Left            | 1        | 1600     | 33     | 0.021        | 1                  | 1600     | 0          | 33        | 0.021        | 1                  | 1600     | 0          | 33        | 0.021        |
| WB Thru            | 1        | 1600     | 15     | 0.042 *      | 1                  | 1600     | 0          | 15        | 0.042 *      | 1                  | 1600     | 0          | 15        | 0.042 *      |
| WB Right           | 0        | 0        | 52     |              | 0                  | 0        | 0          | 52        |              | 0                  | 0        | 0          | 52        |              |
| N/S Critical Sum = |          |          |        | 0.568        | N/S Critical Sum = |          |            |           | 0.570        | N/S Critical Sum = |          |            |           | 0.570        |
| E/W Critical Sum = |          |          |        | 0.076        | E/W Critical Sum = |          |            |           | 0.076        | E/W Critical Sum = |          |            |           | 0.076        |
| [Sig Adjustment] = |          |          |        | -0.070       | [Sig Adjustment] = |          |            |           | -0.070       | [Sig Adjustment] = |          |            |           | -0.070       |
| Clearance =        |          |          |        | 0.100        | Clearance =        |          |            |           | 0.100        | Clearance =        |          |            |           | 0.100        |
| Total ICU =        |          |          |        | <b>0.674</b> | Total ICU =        |          |            |           | <b>0.676</b> | Total ICU =        |          |            |           | <b>0.676</b> |
| LOS =              |          |          |        | <b>B</b>     | LOS =              |          |            |           | <b>B</b>     | LOS =              |          |            |           | <b>B</b>     |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Pathfinder Rd. & Brea Canyon Cutoff Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 68     | 0.043     | 1                  | 1600     | 0          | 68        | 0.043     | 1                  | 1600     | 0          | 68        | 0.043     |
| NB Thru            | 2        | 3200     | 192    | 0.168     | 2                  | 3200     | 8          | 200       | 0.170 *   | 2                  | 3200     | 0          | 200       | 0.170 *   |
| NB Right           | 0        | 0        | 344    |           | 0                  | 0        | 0          | 344       |           | 0                  | 0        | 0          | 344       |           |
| SB Left            | 1        | 1600     | 109    | 0.068     | 1                  | 1600     | 0          | 109       | 0.068 *   | 1                  | 1600     | 0          | 109       | 0.068 *   |
| SB Thru            | 2        | 3200     | 470    | 0.193     | 2                  | 3200     | 2          | 472       | 0.193     | 2                  | 3200     | 0          | 472       | 0.193     |
| SB Right           | 0        | 0        | 147    |           | 0                  | 0        | 0          | 147       |           | 0                  | 0        | 0          | 147       |           |
| EB Left            | 1        | 1600     | 32     | 0.020     | 1                  | 1600     | 0          | 32        | 0.020     | 1                  | 1600     | 0          | 32        | 0.020     |
| EB Thru            | 1        | 1600     | 452    | 0.320 *   | 1                  | 1600     | 0          | 452       | 0.320 *   | 1                  | 1600     | 0          | 452       | 0.320 *   |
| EB Right           | 0        | 0        | 60     |           | 0                  | 0        | 0          | 60        |           | 0                  | 0        | 0          | 60        |           |
| WB Left            | 1        | 1600     | 212    | 0.133 *   | 1                  | 1600     | 0          | 212       | 0.133 *   | 1                  | 1600     | 0          | 212       | 0.133 *   |
| WB Thru            | 1        | 1600     | 340    | 0.213     | 1                  | 1600     | 0          | 340       | 0.213     | 1                  | 1600     | 0          | 340       | 0.213     |
| WB Right           | 1        | 1600     | 45     | 0.028     | 1                  | 1600     | 0          | 45        | 0.028     | 1                  | 1600     | 0          | 45        | 0.028     |
| N/S Critical Sum = |          |          |        | 0.236     | N/S Critical Sum = |          |            |           | 0.238     | N/S Critical Sum = |          |            |           | 0.238     |
| E/W Critical Sum = |          |          |        | 0.453     | E/W Critical Sum = |          |            |           | 0.453     | E/W Critical Sum = |          |            |           | 0.453     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.789     | Total ICU =        |          |            |           | 0.791     | Total ICU =        |          |            |           | 0.791     |
| LOS =              |          |          |        | C         | LOS =              |          |            |           | C         | LOS =              |          |            |           | C         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Pathfinder Rd. & Brea Canyon Cutoff Rd.

| Movement           | EXISTING |          |        |              | EXISTING + PROJECT |          |            |           |              |                    |          |            |           |              |
|--------------------|----------|----------|--------|--------------|--------------------|----------|------------|-----------|--------------|--------------------|----------|------------|-----------|--------------|
|                    | Lanes    | Capacity | Volume | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    |
| NB Left            | 1        | 1600     | 143    | 0.089        | 1                  | 1600     | 0          | 143       | 0.089        | 1                  | 1600     | 0          | 143       | 0.089        |
| NB Thru            | 2        | 3200     | 481    | 0.245 *      | 2                  | 3200     | 4          | 485       | 0.246 *      | 2                  | 3200     | 0          | 485       | 0.246 *      |
| NB Right           | 0        | 0        | 302    |              | 0                  | 0        | 0          | 302       |              | 0                  | 0        | 0          | 302       |              |
| SB Left            | 1        | 1600     | 16     | 0.010 *      | 1                  | 1600     | 0          | 16        | 0.010 *      | 1                  | 1600     | 0          | 16        | 0.010 *      |
| SB Thru            | 2        | 3200     | 350    | 0.143        | 2                  | 3200     | 7          | 357       | 0.145        | 2                  | 3200     | 0          | 357       | 0.145        |
| SB Right           | 0        | 0        | 108    |              | 0                  | 0        | 0          | 108       |              | 0                  | 0        | 0          | 108       |              |
| EB Left            | 1        | 1600     | 133    | 0.083        | 1                  | 1600     | 0          | 133       | 0.083        | 1                  | 1600     | 0          | 133       | 0.083        |
| EB Thru            | 1        | 1600     | 485    | 0.363 *      | 1                  | 1600     | 0          | 485       | 0.363 *      | 1                  | 1600     | 0          | 485       | 0.363 *      |
| EB Right           | 0        | 0        | 96     |              | 0                  | 0        | 0          | 96        |              | 0                  | 0        | 0          | 96        |              |
| WB Left            | 1        | 1600     | 297    | 0.186 *      | 1                  | 1600     | 0          | 297       | 0.186 *      | 1                  | 1600     | 0          | 297       | 0.186 *      |
| WB Thru            | 1        | 1600     | 555    | 0.347        | 1                  | 1600     | 0          | 555       | 0.347        | 1                  | 1600     | 0          | 555       | 0.347        |
| WB Right           | 1        | 1600     | 99     | 0.062        | 1                  | 1600     | 0          | 99        | 0.062        | 1                  | 1600     | 0          | 99        | 0.062        |
| N/S Critical Sum = |          |          |        | 0.255        | N/S Critical Sum = |          |            |           | 0.256        | N/S Critical Sum = |          |            |           | 0.256        |
| E/W Critical Sum = |          |          |        | 0.549        | E/W Critical Sum = |          |            |           | 0.549        | E/W Critical Sum = |          |            |           | 0.549        |
| [RT Adjustment] =  |          |          |        | 0.000        | [RT Adjustment] =  |          |            |           | 0.000        | [RT Adjustment] =  |          |            |           | 0.000        |
| Clearance =        |          |          |        | 0.100        | Clearance =        |          |            |           | 0.100        | Clearance =        |          |            |           | 0.100        |
| <b>Total ICU =</b> |          |          |        | <b>0.904</b> | <b>Total ICU =</b> |          |            |           | <b>0.905</b> | <b>Total ICU =</b> |          |            |           | <b>0.905</b> |
| LOS =              |          |          |        | E            | LOS =              |          |            |           | E            | LOS =              |          |            |           | E            |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative

Fallow Field-Diamond Canyon Rd. & Brea Canyon Cutoff Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 23     | 0.014 *   | 1                  | 1600     | 0          | 23        | 0.014 *   | 1                  | 1600     | 0          | 23        | 0.014 *   |
| NB Thru            | 1        | 1600     | 18     | 0.034     | 1                  | 1600     | 8          | 26        | 0.039     | 1                  | 1600     | 0          | 26        | 0.039     |
| NB Right           | 0        | 0        | 37     |           | 0                  | 0        | 0          | 37        |           | 0                  | 0        | 0          | 37        |           |
| SB Left            | 8        | 2880     | 29     | 0.010     | 8                  | 2880     | 0          | 29        | 0.010     | 8                  | 2880     | 0          | 29        | 0.010     |
| SB Thru            | 1        | 1600     | 21     | 0.066 *   | 1                  | 1600     | 2          | 23        | 0.067 *   | 1                  | 1600     | 0          | 23        | 0.067 *   |
| SB Right           | 0        | 0        | 84     |           | 0                  | 0        | 0          | 84        |           | 0                  | 0        | 0          | 84        |           |
| EB Left            | 1        | 1600     | 123    | 0.077     | 1                  | 1600     | 0          | 123       | 0.077     | 1                  | 1600     | 0          | 123       | 0.077     |
| EB Thru            | 2        | 3200     | 845    | 0.276 *   | 2                  | 3200     | 0          | 845       | 0.276 *   | 2                  | 3200     | 0          | 845       | 0.276 *   |
| EB Right           | 0        | 0        | 38     |           | 0                  | 0        | 0          | 38        |           | 0                  | 0        | 0          | 38        |           |
| WB Left            | 1        | 1600     | 94     | 0.059 *   | 1                  | 1600     | 0          | 94        | 0.059 *   | 1                  | 1600     | 0          | 94        | 0.059 *   |
| WB Thru            | 2        | 3200     | 601    | 0.195     | 2                  | 3200     | 0          | 601       | 0.195     | 2                  | 3200     | 0          | 601       | 0.195     |
| WB Right           | 0        | 0        | 23     |           | 0                  | 0        | 0          | 23        |           | 0                  | 0        | 0          | 23        |           |
| N/S Critical Sum = |          |          |        | 0.080     | N/S Critical Sum = |          |            |           | 0.081     | N/S Critical Sum = |          |            |           | 0.081     |
| E/W Critical Sum = |          |          |        | 0.335     | E/W Critical Sum = |          |            |           | 0.335     | E/W Critical Sum = |          |            |           | 0.335     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.515     | Total ICU =        |          |            |           | 0.516     | Total ICU =        |          |            |           | 0.516     |
| LOS =              |          |          |        | A         | LOS =              |          |            |           | A         | LOS =              |          |            |           | A         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Fallow Field-Diamond Canyon Rd. & Brea Canyon Cutoff Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 47     | 0.029     | 1                  | 1600     | 0          | 47        | 0.029     | 1                  | 1600     | 0          | 47        | 0.029     |
| NB Thru            | 1        | 1600     | 7      | 0.043 *   | 1                  | 1600     | 4          | 11        | 0.045     | 1                  | 1600     | 0          | 11        | 0.045     |
| NB Right           | 0        | 0        | 61     |           | 0                  | 0        | 0          | 61        |           | 0                  | 0        | 0          | 61        |           |
| SB Left            | 8        | 2880     | 32     | 0.011 *   | 8                  | 2880     | 0          | 32        | 0.011     | 8                  | 2880     | 0          | 32        | 0.011     |
| SB Thru            | 1        | 1600     | 4      | 0.023     | 1                  | 1600     | 7          | 11        | 0.027     | 1                  | 1600     | 0          | 11        | 0.027     |
| SB Right           | 0        | 0        | 32     |           | 0                  | 0        | 0          | 32        |           | 0                  | 0        | 0          | 32        |           |
| EB Left            | 1        | 1600     | 24     | 0.015 *   | 1                  | 1600     | 0          | 24        | 0.015 *   | 1                  | 1600     | 0          | 24        | 0.015 *   |
| EB Thru            | 2        | 3200     | 730    | 0.241     | 2                  | 3200     | 0          | 730       | 0.241     | 2                  | 3200     | 0          | 730       | 0.241     |
| EB Right           | 0        | 0        | 40     |           | 0                  | 0        | 0          | 40        |           | 0                  | 0        | 0          | 40        |           |
| WB Left            | 1        | 1600     | 45     | 0.028     | 1                  | 1600     | 0          | 45        | 0.028     | 1                  | 1600     | 0          | 45        | 0.028     |
| WB Thru            | 2        | 3200     | 912    | 0.293 *   | 2                  | 3200     | 0          | 912       | 0.293 *   | 2                  | 3200     | 0          | 912       | 0.293 *   |
| WB Right           | 0        | 0        | 25     |           | 0                  | 0        | 0          | 25        |           | 0                  | 0        | 0          | 25        |           |
| N/S Critical Sum = |          |          |        | 0.054     | N/S Critical Sum = |          |            |           | 0.056     | N/S Critical Sum = |          |            |           | 0.056     |
| E/W Critical Sum = |          |          |        | 0.308     | E/W Critical Sum = |          |            |           | 0.308     | E/W Critical Sum = |          |            |           | 0.308     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.462     | Total ICU =        |          |            |           | 0.464     | Total ICU =        |          |            |           | 0.464     |
| LOS =              |          |          |        | A         | LOS =              |          |            |           | A         | LOS =              |          |            |           | A         |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                        |                        |           | Site Information                   |                      |      |            |    |      |
|--|------------------------|-----------|------------------------------------|----------------------|------|------------|----|------|
| Analyst                                    | SSS                    |           | Intersection                       | SR-57 SB & BC Cutoff |      |            |    |      |
| Agency/Co.                                 |                        |           | Jurisdiction                       |                      |      |            |    |      |
| Date Performed                             |                        |           | Analysis Year                      | Existing             |      |            |    |      |
| Analysis Time Period                       | AM Peak Hr.            |           |                                    |                      |      |            |    |      |
| Project Description 57-SB&BC cut, Exist-AM |                        |           |                                    |                      |      |            |    |      |
| East/West Street: Brea Canyon Cutoff Rd.   |                        |           | North/South Street: SR-57 SB Ramps |                      |      |            |    |      |
| Intersection Orientation: East-West        |                        |           | Study Period (hrs): 0.25           |                      |      |            |    |      |
| Vehicle Volumes and Adjustments            |                        |           |                                    |                      |      |            |    |      |
| Major Street                               | Eastbound              |           |                                    | Westbound            |      |            |    |      |
| Movement                                   | 1                      | 2         | 3                                  | 4                    | 5    | 6          |    |      |
|  | L                      | T         | R                                  | L                    | T    | R          |    |      |
| Volume (veh/h)                             |                        | 555       | 451                                | 396                  | 661  |            |    |      |
| Peak-Hour Factor, PHF                      | 1.00                   | 0.98      | 0.98                               | 0.98                 | 0.98 | 1.00       |    |      |
| Hourly Flow Rate, HFR (veh/h)              | 0                      | 566       | 460                                | 404                  | 674  | 0          |    |      |
| Percent Heavy Vehicles                     | 0                      | --        | --                                 | 0                    | --   | --         |    |      |
| Median Type                                | Two Way Left Turn Lane |           |                                    |                      |      |            |    |      |
| RT Channelized                             |                        |           | 1                                  |                      |      | 0          |    |      |
| Lanes                                      | 0                      | 2         | 1                                  | 1                    | 2    | 0          |    |      |
| Configuration                              |                        | T         | R                                  | L                    | T    |            |    |      |
| Upstream Signal                            |                        | 0         |                                    |                      | 0    |            |    |      |
| Minor Street                               | Northbound             |           |                                    | Southbound           |      |            |    |      |
| Movement                                   | 7                      | 8         | 9                                  | 10                   | 11   | 12         |    |      |
|  | L                      | T         | R                                  | L                    | T    | R          |    |      |
| Volume (veh/h)                             |                        |           |                                    | 50                   | 0    | 56         |    |      |
| Peak-Hour Factor, PHF                      | 1.00                   | 1.00      | 1.00                               | 0.99                 | 0.99 | 0.99       |    |      |
| Hourly Flow Rate, HFR (veh/h)              | 0                      | 0         | 0                                  | 50                   | 0    | 56         |    |      |
| Percent Heavy Vehicles                     | 0                      | 0         | 0                                  | 0                    | 0    | 0          |    |      |
| Percent Grade (%)                          |                        | 0         |                                    |                      | 0    |            |    |      |
| Flared Approach                            |                        | N         |                                    |                      | N    |            |    |      |
| Storage                                    |                        | 0         |                                    |                      | 0    |            |    |      |
| RT Channelized                             |                        |           | 0                                  |                      |      | 0          |    |      |
| Lanes                                      | 0                      | 0         | 0                                  | 0                    | 1    | 1          |    |      |
| Configuration                              |                        |           |                                    | LT                   |      | R          |    |      |
| Delay, Queue Length, and Level of Service  |                        |           |                                    |                      |      |            |    |      |
| Approach                                   | Eastbound              | Westbound | Northbound                         |                      |      | Southbound |    |      |
| Movement                                   | 1                      | 4         | 7                                  | 8                    | 9    | 10         | 11 | 12   |
| Lane Configuration                         |                        | L         |                                    |                      |      | LT         |    | R    |
| v (veh/h)                                  |                        | 404       |                                    |                      |      | 50         |    | 56   |
| C (m) (veh/h)                              |                        | 1016      |                                    |                      |      | 88         |    | 665  |
| v/c  |                        | 0.40      |                                    |                      |      | 0.57       |    | 0.08 |
| 95% queue length                           |                        | 1.93      |                                    |                      |      | 2.56       |    | 0.27 |
| Control Delay (s/veh)                      |                        | 10.9      |                                    |                      |      | 89.8       |    | 10.9 |
| LOS  |                        | B         |                                    |                      |      | F          |    | B    |
| Approach Delay (s/veh)                     | --                     | --        |                                    |                      |      | 48.1       |    |      |
| Approach LOS                               | --                     | --        |                                    |                      |      | E          |    |      |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                        |             |  | Site Information                   |                      |  |
|--|-------------|--|------------------------------------|----------------------|--|
| Analyst                                    | SSS         |  | Intersection                       | SR-57 SB & BC Cutoff |  |
| Agency/Co.                                 |             |  | Jurisdiction                       |                      |  |
| Date Performed                             |             |  | Analysis Year                      | Existing             |  |
| Analysis Time Period                       | PM Peak Hr. |  |                                    |                      |  |
| Project Description 57-SB&BC cut, Exist-PM |             |  |                                    |                      |  |
| East/West Street: Brea Canyon Cutoff Rd.   |             |  | North/South Street: SR-57 SB Ramps |                      |  |
| Intersection Orientation: East-West        |             |  | Study Period (hrs): 0.25           |                      |  |

| Vehicle Volumes and Adjustments |           |      |      |           |      |      |
|---------------------------------|-----------|------|------|-----------|------|------|
| Major Street                    | Eastbound |      |      | Westbound |      |      |
| Movement                        | 1         | 2    | 3    | 4         | 5    | 6    |
|                                 | L         | T    | R    | L         | T    | R    |
| Volume (veh/h)                  |           | 285  | 513  | 197       | 969  |      |
| Peak-Hour Factor, PHF           | 1.00      | 0.97 | 0.97 | 0.97      | 0.96 | 1.00 |
| Hourly Flow Rate, HFR (veh/h)   | 0         | 293  | 528  | 203       | 1009 | 0    |
| Percent Heavy Vehicles          | 0         | -    | -    | 0         | -    | -    |
| Median Type                     | Undivided |      |      |           |      |      |
| RT Channelized                  |           |      | 1    |           |      | 0    |
| Lanes                           | 0         | 2    | 1    | 1         | 2    | 0    |
| Configuration                   |           | T    | R    | L         | T    |      |
| Upstream Signal                 |           | 0    |      |           | 0    |      |

| Minor Street                  | Northbound |      |      | Southbound |      |      |
|-------------------------------|------------|------|------|------------|------|------|
| Movement                      | 7          | 8    | 9    | 10         | 11   | 12   |
|                               | L          | T    | R    | L          | T    | R    |
| Volume (veh/h)                |            |      |      | 67         | 0    | 21   |
| Peak-Hour Factor, PHF         | 1.00       | 1.00 | 1.00 | 0.96       | 0.96 | 0.96 |
| Hourly Flow Rate, HFR (veh/h) | 0          | 0    | 0    | 69         | 0    | 21   |
| Percent Heavy Vehicles        | 0          | 0    | 0    | 0          | 0    | 0    |
| Percent Grade (%)             |            | 0    |      |            | 0    |      |
| Flared Approach               |            | N    |      |            | N    |      |
| Storage                       |            | 0    |      |            | 0    |      |
| RT Channelized                |            |      | 0    |            |      | 0    |
| Lanes                         | 0          | 0    | 0    | 0          | 1    | 1    |
| Configuration                 |            |      |      | LT         |      | R    |

| Delay, Queue Length, and Level of Service |           |           |            |   |   |            |    |      |
|---|-----------|-----------|------------|---|---|------------|----|------|
| Approach                                  | Eastbound | Westbound | Northbound |   |   | Southbound |    |      |
| Movement                                  | 1         | 4         | 7          | 8 | 9 | 10         | 11 | 12   |
| Lane Configuration                        |           | L         |            |   |   | LT         |    | R    |
| v (veh/h)                                 |           | 203       |            |   |   | 69         |    | 21   |
| C (m) (veh/h)                             |           | 1280      |            |   |   | 88         |    | 518  |
| v/c                                       |           | 0.16      |            |   |   | 0.78       |    | 0.04 |
| 95% queue length                          |           | 0.56      |            |   |   | 4.04       |    | 0.13 |
| Control Delay (s/veh)                     |           | 8.3       |            |   |   | 126.9      |    | 12.2 |
| LOS                                       |           | A         |            |   |   | F          |    | B    |
| Approach Delay (s/veh)                    | --        | --        |            |   |   | 100.2      |    |      |
| Approach LOS                              | --        | --        |            |   |   | F          |    |      |

## TWO-WAY STOP CONTROL SUMMARY

| General Information  |             | Site Information |                      |
|----------------------|-------------|------------------|----------------------|
| Analyst              | SSS         | Intersection     | SR-57 SB & BC Cutoff |
| Agency/Co.           |             | Jurisdiction     |                      |
| Date Performed       |             | Analysis Year    | Existing + Project   |
| Analysis Time Period | AM Peak Hr. |                  |                      |

|  |                                    |
|--|------------------------------------|
| Project Description 57-SB&BC cut, E+P-AM |                                    |
| East/West Street: Brea Canyon Cutoff Rd. | North/South Street: SR-57 SB Ramps |
| Intersection Orientation: East-West      | Study Period (hrs): 0.25           |

### Vehicle Volumes and Adjustments

| Major Street<br>Movement      | Eastbound |        |        | Westbound |        |        |
|-------------------------------|-----------|--------|--------|-----------|--------|--------|
|                               | 1<br>L    | 2<br>T | 3<br>R | 4<br>L    | 5<br>T | 6<br>R |
| Volume (veh/h)                |           | 557    | 451    | 418       | 669    |        |
| Peak-Hour Factor, PHF         | 1.00      | 0.98   | 0.98   | 0.98      | 0.98   | 1.00   |
| Hourly Flow Rate, HFR (veh/h) | 0         | 568    | 460    | 426       | 682    | 0      |
| Percent Heavy Vehicles        | 0         | —      | —      | 0         | —      | —      |
| Median Type                   | Undivided |        |        |           |        |        |
| RT Channelized                |           |        | 1      |           |        | 0      |
| Lanes                         | 0         | 2      | 1      | 1         | 2      | 0      |
| Configuration                 |           | T      | R      | L         | T      |        |
| Upstream Signal               |           | 0      |        |           | 0      |        |

| Minor Street<br>Movement      | Northbound |        |        | Southbound |         |         |
|-------------------------------|------------|--------|--------|------------|---------|---------|
|                               | 7<br>L     | 8<br>T | 9<br>R | 10<br>L    | 11<br>T | 12<br>R |
| Volume (veh/h)                |            |        |        | 54         | 0       | 56      |
| Peak-Hour Factor, PHF         | 1.00       | 1.00   | 1.00   | 0.99       | 0.99    | 0.99    |
| Hourly Flow Rate, HFR (veh/h) | 0          | 0      | 0      | 54         | 0       | 56      |
| Percent Heavy Vehicles        | 0          | 0      | 0      | 0          | 0       | 0       |
| Percent Grade (%)             |            | 0      |        |            | 0       |         |
| Flared Approach               |            | N      |        |            | N       |         |
| Storage                       |            | 0      |        |            | 0       |         |
| RT Channelized                |            |        | 0      |            |         | 0       |
| Lanes                         | 0          | 0      | 0      | 0          | 1       | 1       |
| Configuration                 |            |        |        | LT         |         | R       |

### Delay, Queue Length, and Level of Service

| Approach               | Eastbound | Westbound | Northbound |   |   | Southbound |    |      |
|------------------------|-----------|-----------|------------|---|---|------------|----|------|
|                        | 1         | 4         | 7          | 8 | 9 | 10         | 11 | 12   |
| Movement               |           |           |            |   |   |            |    |      |
| Lane Configuration     |           | L         |            |   |   | LT         |    | R    |
| v (veh/h)              |           | 426       |            |   |   | 54         |    | 56   |
| C (m) (veh/h)          |           | 1014      |            |   |   | 41         |    | 661  |
| v/c                    |           | 0.42      |            |   |   | 1.32       |    | 0.08 |
| 95% queue length       |           | 2.11      |            |   |   | 5.39       |    | 0.28 |
| Control Delay (s/veh)  |           | 11.1      |            |   |   | 403.2      |    | 10.9 |
| LOS                    |           | B         |            |   |   | F          |    | B    |
| Approach Delay (s/veh) | —         | --        |            |   |   | 203.5      |    |      |
| Approach LOS           | --        | --        |            |   |   | F          |    |      |

## TWO-WAY STOP CONTROL SUMMARY

| General Information  |             | Site Information |                      |
|----------------------|-------------|------------------|----------------------|
| Analyst              | SSS         | Intersection     | SR-57 SB & BC Cutoff |
| Agency/Co.           |             | Jurisdiction     |                      |
| Date Performed       |             | Analysis Year    | Existing + Project   |
| Analysis Time Period | PM Peak Hr. |                  |                      |

|  |                                    |
|--|------------------------------------|
| Project Description 57-SB&BC cut, E+P-PM |                                    |
| East/West Street: Brea Canyon Cutoff Rd. | North/South Street: SR-57 SB Ramps |
| Intersection Orientation: East-West      | Study Period (hrs): 0.25           |

### Vehicle Volumes and Adjustments

| Major Street<br>Movement         | Eastbound |        |        | Westbound |        |        |
|----------------------------------|-----------|--------|--------|-----------|--------|--------|
|                                  | 1<br>L    | 2<br>T | 3<br>R | 4<br>L    | 5<br>T | 6<br>R |
| Volume (veh/h)                   |           | 292    | 513    | 207       | 973    |        |
| Peak-Hour Factor, PHF            | 1.00      | 0.97   | 0.97   | 0.97      | 0.96   | 1.00   |
| Hourly Flow Rate, HFR<br>(veh/h) | 0         | 301    | 528    | 213       | 1013   | 0      |
| Percent Heavy Vehicles           | 0         | --     | --     | 0         | --     | --     |
| Median Type                      | Undivided |        |        |           |        |        |
| RT Channelized                   |           |        | 1      |           |        | 0      |
| Lanes                            | 0         | 2      | 1      | 1         | 2      | 0      |
| Configuration                    |           | T      | R      | L         | T      |        |
| Upstream Signal                  |           | 0      |        |           | 0      |        |

| Minor Street<br>Movement         | Northbound |        |        | Southbound |         |         |
|----------------------------------|------------|--------|--------|------------|---------|---------|
|                                  | 7<br>L     | 8<br>T | 9<br>R | 10<br>L    | 11<br>T | 12<br>R |
| Volume (veh/h)                   |            |        |        | 88         | 0       | 21      |
| Peak-Hour Factor, PHF            | 1.00       | 1.00   | 1.00   | 0.96       | 0.96    | 0.96    |
| Hourly Flow Rate, HFR<br>(veh/h) | 0          | 0      | 0      | 91         | 0       | 21      |
| Percent Heavy Vehicles           | 0          | 0      | 0      | 0          | 0       | 0       |
| Percent Grade (%)                |            | 0      |        |            | 0       |         |
| Flared Approach<br>Storage       |            | N<br>0 |        |            | N<br>0  |         |
| RT Channelized                   |            |        | 0      |            |         | 0       |
| Lanes                            | 0          | 0      | 0      | 0          | 1       | 1       |
| Configuration                    |            |        |        | LT         |         | R       |

### Delay, Queue Length, and Level of Service

| Approach               | Eastbound | Westbound | Northbound |   |   | Southbound |    |      |
|------------------------|-----------|-----------|------------|---|---|------------|----|------|
|                        | 1         | 4         | 7          | 8 | 9 | 10         | 11 | 12   |
| Movement               |           |           |            |   |   |            |    |      |
| Lane Configuration     |           | L         |            |   |   | LT         |    | R    |
| v (veh/h)              |           | 213       |            |   |   | 91         |    | 21   |
| C (m) (veh/h)          |           | 1272      |            |   |   | 83         |    | 517  |
| v/c                    |           | 0.17      |            |   |   | 1.10       |    | 0.04 |
| 95% queue length       |           | 0.60      |            |   |   | 6.36       |    | 0.13 |
| Control Delay (s/veh)  |           | 8.4       |            |   |   | 217.9      |    | 12.3 |
| LOS                    |           | A         |            |   |   | F          |    | B    |
| Approach Delay (s/veh) | --        | --        |            |   |   | 179.4      |    |      |
| Approach LOS           | --        | --        |            |   |   | F          |    |      |

## Table X

### AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
SR-57 SB Ramps & Brea Canyon Cutoff Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| NB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| SB Left            | 1        | 1600     | 50     | 0.031 *   | 1                  | 1600     | 4          | 54        | 0.034 *   | 1                  | 1600     | 0          | 54        | 0.034 *   |
| SB Thru            | 8        | 6400     | 0      | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     |
| SB Right           | 1        | 1600     | 56     | 0.035     | 1                  | 1600     | 0          | 56        | 0.035     | 1                  | 1600     | 0          | 56        | 0.035     |
| EB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| EB Thru            | 2        | 3200     | 555    | 0.173 *   | 2                  | 3200     | 2          | 557       | 0.174 *   | 2                  | 3200     | 0          | 557       | 0.174 *   |
| EB Right           | 1        | 1600     | 451    | 0.282     | 1                  | 1600     | 0          | 451       | 0.282     | 1                  | 1600     | 0          | 451       | 0.282     |
| WB Left            | 1        | 1600     | 396    | 0.248 *   | 1                  | 1600     | 22         | 418       | 0.261 *   | 1                  | 1600     | 0          | 418       | 0.261 *   |
| WB Thru            | 2        | 3200     | 661    | 0.207     | 2                  | 3200     | 8          | 669       | 0.209     | 2                  | 3200     | 0          | 669       | 0.209     |
| WB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| N/S Critical Sum = |          |          |        | 0.031     | N/S Critical Sum = |          |            |           | 0.034     | N/S Critical Sum = |          |            |           | 0.034     |
| E/W Critical Sum = |          |          |        | 0.421     | E/W Critical Sum = |          |            |           | 0.435     | E/W Critical Sum = |          |            |           | 0.435     |
| [RT Adjustment] =  |          |          |        | 0.113     | [RT Adjustment] =  |          |            |           | 0.108     | [RT Adjustment] =  |          |            |           | 0.108     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.665     | Total ICU =        |          |            |           | 0.677     | Total ICU =        |          |            |           | 0.677     |
| LOS =              |          |          |        | <b>B</b>  | LOS =              |          |            |           | <b>B</b>  | LOS =              |          |            |           | <b>B</b>  |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
SR-57 SB Ramps & Brea Canyon Cutoff Rd.

| Movement | EXISTING |          |                    |              | EXISTING + PROJECT |          |                    |              |           |       |          |                    |              |           |
|----------|----------|----------|--------------------|--------------|--------------------|----------|--------------------|--------------|-----------|-------|----------|--------------------|--------------|-----------|
|          | Lanes    | Capacity | Volume             | V/C Ratio    | Lanes              | Capacity | Added Vol.         | Tot. Vol.    | V/C Ratio | Lanes | Capacity | Added Vol.         | Tot. Vol.    | V/C Ratio |
| NB Left  | 8        | 2880     | 0                  | 0.000        | 8                  | 2880     | 0                  | 0            | 0.000     | 8     | 2880     | 0                  | 0            | 0.000     |
| NB Thru  | 8        | 6400     | 0                  | 0.000 *      | 8                  | 6400     | 0                  | 0            | 0.000 *   | 8     | 6400     | 0                  | 0            | 0.000 *   |
| NB Right | 0        | 0        | 0                  |              | 0                  | 0        | 0                  | 0            |           | 0     | 0        | 0                  | 0            |           |
| SB Left  | 1        | 1600     | 67                 | 0.042 *      | 1                  | 1600     | 21                 | 88           | 0.055 *   | 1     | 1600     | 0                  | 88           | 0.055 *   |
| SB Thru  | 8        | 6400     | 0                  | 0.000        | 8                  | 6400     | 0                  | 0            | 0.000     | 8     | 6400     | 0                  | 0            | 0.000     |
| SB Right | 1        | 1600     | 21                 | 0.013        | 1                  | 1600     | 0                  | 21           | 0.013     | 1     | 1600     | 0                  | 21           | 0.013     |
| EB Left  | 8        | 2880     | 0                  | 0.000 *      | 8                  | 2880     | 0                  | 0            | 0.000 *   | 8     | 2880     | 0                  | 0            | 0.000 *   |
| EB Thru  | 2        | 3200     | 285                | 0.089        | 2                  | 3200     | 7                  | 292          | 0.091     | 2     | 3200     | 0                  | 292          | 0.091     |
| EB Right | 1        | 1600     | 513                | 0.321        | 1                  | 1600     | 0                  | 513          | 0.321     | 1     | 1600     | 0                  | 513          | 0.321     |
| WB Left  | 1        | 1600     | 197                | 0.123        | 1                  | 1600     | 10                 | 207          | 0.129     | 1     | 1600     | 0                  | 207          | 0.129     |
| WB Thru  | 2        | 3200     | 969                | 0.303 *      | 2                  | 3200     | 4                  | 973          | 0.304 *   | 2     | 3200     | 0                  | 973          | 0.304 *   |
| WB Right | 0        | 0        | 0                  |              | 0                  | 0        | 0                  | 0            |           | 0     | 0        | 0                  | 0            |           |
|          |          |          | N/S Critical Sum = | 0.042        |                    |          | N/S Critical Sum = | 0.055        |           |       |          | N/S Critical Sum = | 0.055        |           |
|          |          |          | E/W Critical Sum = | 0.303        |                    |          | E/W Critical Sum = | 0.304        |           |       |          | E/W Critical Sum = | 0.304        |           |
|          |          |          | [RT Adjustment] =  | 0.141        |                    |          | [RT Adjustment] =  | 0.153        |           |       |          | [RT Adjustment] =  | 0.153        |           |
|          |          |          | Clearance =        | 0.100        |                    |          | Clearance =        | 0.100        |           |       |          | Clearance =        | 0.100        |           |
|          |          |          | <b>Total ICU =</b> | <b>0.586</b> |                    |          | <b>Total ICU =</b> | <b>0.612</b> |           |       |          | <b>Total ICU =</b> | <b>0.612</b> |           |
|          |          |          | <b>LOS =</b>       | <b>A</b>     |                    |          | <b>LOS =</b>       | <b>B</b>     |           |       |          | <b>LOS =</b>       | <b>B</b>     |           |

## Table X

### AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

SR-57 NB Ramps & Brea Canyon Cutoff Rd.

| Movement | EXISTING |                    |        |              | EXISTING + PROJECT |                    |            |              |           |       |                    |            |              |           |
|----------|----------|--------------------|--------|--------------|--------------------|--------------------|------------|--------------|-----------|-------|--------------------|------------|--------------|-----------|
|          | Lanes    | Capacity           | Volume | V/C Ratio    | Lanes              | Capacity           | Added Vol. | Tot. Vol.    | V/C Ratio | Lanes | Capacity           | Added Vol. | Tot. Vol.    | V/C Ratio |
| NB Left  | 1        | 1600               | 282    | 0.176 *      | 1                  | 1600               | 0          | 282          | 0.176 *   | 1     | 1600               | 0          | 282          | 0.176 *   |
| NB Thru  | 8        | 6400               | 0      | 0.000        | 8                  | 6400               | 0          | 0            | 0.000     | 8     | 6400               | 0          | 0            | 0.000     |
| NB Right | 1        | 1600               | 66     | 0.041        | 1                  | 1600               | 4          | 70           | 0.044     | 1     | 1600               | 0          | 70           | 0.044     |
| SB Left  | 8        | 2880               | 0      | 0.000        | 8                  | 2880               | 0          | 0            | 0.000     | 8     | 2880               | 0          | 0            | 0.000     |
| SB Thru  | 8        | 6400               | 0      | 0.000 *      | 8                  | 6400               | 0          | 0            | 0.000 *   | 8     | 6400               | 0          | 0            | 0.000 *   |
| SB Right | 0        | 0                  | 0      |              | 0                  | 0                  | 0          | 0            |           | 0     | 0                  | 0          | 0            |           |
| EB Left  | 1        | 1600               | 39     | 0.024 *      | 1                  | 1600               | 0          | 39           | 0.024 *   | 1     | 1600               | 0          | 39           | 0.024 *   |
| EB Thru  | 2        | 3200               | 617    | 0.193        | 2                  | 3200               | 6          | 623          | 0.195     | 2     | 3200               | 0          | 623          | 0.195     |
| EB Right | 0        | 0                  | 0      |              | 0                  | 0                  | 0          | 0            |           | 0     | 0                  | 0          | 0            |           |
| WB Left  | 8        | 2880               | 0      | 0.000        | 8                  | 2880               | 0          | 0            | 0.000     | 8     | 2880               | 0          | 0            | 0.000     |
| WB Thru  | 2        | 3200               | 777    | 0.243 *      | 2                  | 3200               | 30         | 807          | 0.252 *   | 2     | 3200               | 0          | 807          | 0.252 *   |
| WB Right | Free     | NC                 | 130    | 0.000        | Free               | NC                 | 22         | 152          | 0.000     | Free  | NC                 | 0          | 152          | 0.000     |
|          |          | N/S Critical Sum = |        | 0.176        |                    | N/S Critical Sum = |            | 0.176        |           |       | N/S Critical Sum = |            | 0.176        |           |
|          |          | E/W Critical Sum = |        | 0.267        |                    | E/W Critical Sum = |            | 0.276        |           |       | E/W Critical Sum = |            | 0.276        |           |
|          |          | [RT Adjustment] =  |        | 0.000        |                    | [RT Adjustment] =  |            | 0.000        |           |       | [RT Adjustment] =  |            | 0.000        |           |
|          |          | Clearance =        |        | 0.100        |                    | Clearance =        |            | 0.100        |           |       | Clearance =        |            | 0.100        |           |
|          |          | <b>Total ICU =</b> |        | <b>0.543</b> |                    | <b>Total ICU =</b> |            | <b>0.552</b> |           |       | <b>Total ICU =</b> |            | <b>0.552</b> |           |
|          |          | <b>LOS =</b>       |        | <b>A</b>     |                    | <b>LOS =</b>       |            | <b>A</b>     |           |       | <b>LOS =</b>       |            | <b>A</b>     |           |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 SR-57 NB Ramps & Brea Canyon Cutoff Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 556    | 0.348 *   | 1                  | 1600     | 0          | 556       | 0.348 *   | 1                  | 1600     | 0          | 556       | 0.348 *   |
| NB Thru            | 8        | 6400     | 0      | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     | 8                  | 6400     | 0          | 0         | 0.000     |
| NB Right           | 1        | 1600     | 618    | 0.386     | 1                  | 1600     | 21         | 639       | 0.399     | 1                  | 1600     | 0          | 639       | 0.399     |
| SB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   |
| SB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| EB Left            | 1        | 1600     | 22     | 0.014 *   | 1                  | 1600     | 0          | 22        | 0.014 *   | 1                  | 1600     | 0          | 22        | 0.014 *   |
| EB Thru            | 2        | 3200     | 334    | 0.104     | 2                  | 3200     | 28         | 362       | 0.113     | 2                  | 3200     | 0          | 362       | 0.113     |
| EB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                  | 0        | 0          | 0         |           |
| WB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 2        | 3200     | 595    | 0.186 *   | 2                  | 3200     | 14         | 609       | 0.190 *   | 2                  | 3200     | 0          | 609       | 0.190 *   |
| WB Right           | Free     | NC       | 102    | 0.000     | Free               | NC       | 10         | 112       | 0.000     | Free               | NC       | 0          | 112       | 0.000     |
| N/S Critical Sum = |          |          |        | 0.348     | N/S Critical Sum = |          |            |           | 0.348     | N/S Critical Sum = |          |            |           | 0.348     |
| E/W Critical Sum = |          |          |        | 0.200     | E/W Critical Sum = |          |            |           | 0.204     | E/W Critical Sum = |          |            |           | 0.204     |
| [RT Adjustment] =  |          |          |        | 0.038     | [RT Adjustment] =  |          |            |           | 0.051     | [RT Adjustment] =  |          |            |           | 0.051     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.686     | Total ICU =        |          |            |           | 0.703     | Total ICU =        |          |            |           | 0.703     |
| LOS =              |          |          |        | B         | LOS =              |          |            |           | C         | LOS =              |          |            |           | C         |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Brea Canyon Rd. & Diamond Bar Blvd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 2        | 2880     | 159    | 0.055 *   | 2                  | 2880     | 0          | 159       | 0.055 *   | 2                  | 2880     | 0          | 159       | 0.055 *   |
| NB Thru            | 1        | 1600     | 89     | 0.056     | 1                  | 1600     | 0          | 89        | 0.056     | 1                  | 1600     | 0          | 89        | 0.056     |
| NB Right           | 1        | 1600     | 62     | 0.039     | 1                  | 1600     | 1          | 63        | 0.039     | 1                  | 1600     | 0          | 63        | 0.039     |
| SB Left            | 1        | 1600     | 13     | 0.008     | 1                  | 1600     | 1          | 14        | 0.009     | 1                  | 1600     | 0          | 14        | 0.009     |
| SB Thru            | 2        | 3200     | 325    | 0.131 *   | 2                  | 3200     | 0          | 325       | 0.131 *   | 2                  | 3200     | 0          | 325       | 0.131 *   |
| SB Right           | 0        | 0        | 94     |           | 0                  | 0        | 0          | 94        |           | 0                  | 0        | 0          | 94        |           |
| EB Left            | 1        | 1600     | 107    | 0.067     | 1                  | 1600     | 0          | 107       | 0.067     | 1                  | 1600     | 0          | 107       | 0.067     |
| EB Thru            | 2        | 3200     | 195    | 0.159 *   | 2                  | 3200     | 10         | 205       | 0.162 *   | 2                  | 3200     | 0          | 205       | 0.162 *   |
| EB Right           | 0        | 0        | 314    |           | 0                  | 0        | 0          | 314       |           | 0                  | 0        | 0          | 314       |           |
| WB Left            | 1        | 1600     | 703    | 0.439 *   | 1                  | 1600     | 4          | 707       | 0.442 *   | 1                  | 1600     | 0          | 707       | 0.442 *   |
| WB Thru            | 2        | 3200     | 621    | 0.204     | 2                  | 3200     | 52         | 673       | 0.222     | 2                  | 3200     | 0          | 673       | 0.222     |
| WB Right           | 0        | 0        | 33     |           | 0                  | 0        | 4          | 37        |           | 0                  | 0        | 0          | 37        |           |
| N/S Critical Sum = |          |          |        | 0.186     | N/S Critical Sum = |          |            |           | 0.186     | N/S Critical Sum = |          |            |           | 0.186     |
| E/W Critical Sum = |          |          |        | 0.598     | E/W Critical Sum = |          |            |           | 0.604     | E/W Critical Sum = |          |            |           | 0.604     |
| [RT Adjustment] =  |          |          |        | -0.070    | [RT Adjustment] =  |          |            |           | -0.070    | [RT Adjustment] =  |          |            |           | -0.070    |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.814     | Total ICU =        |          |            |           | 0.820     | Total ICU =        |          |            |           | 0.820     |
| LOS =              |          |          |        | D         | LOS =              |          |            |           | D         | LOS =              |          |            |           | D         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Brea Canyon Rd. & Diamond Bar Blvd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 2        | 2880     | 383    | 0.133     | 2                  | 2880     | 0          | 383       | 0.133     | 2                  | 2880     | 0          | 383       | 0.133     |
| NB Thru            | 1        | 1600     | 364    | 0.228 *   | 1                  | 1600     | 0          | 364       | 0.228 *   | 1                  | 1600     | 0          | 364       | 0.228 *   |
| NB Right           | 1        | 1600     | 765    | 0.478     | 1                  | 1600     | 4          | 769       | 0.481     | 1                  | 1600     | 0          | 769       | 0.481     |
| SB Left            | 1        | 1600     | 57     | 0.036 *   | 1                  | 1600     | 4          | 61        | 0.038 *   | 1                  | 1600     | 0          | 61        | 0.038 *   |
| SB Thru            | 2        | 3200     | 1      | 0.016     | 2                  | 3200     | 0          | 1         | 0.016     | 2                  | 3200     | 0          | 1         | 0.016     |
| SB Right           | 0        | 0        | 51     |           | 0                  | 0        | 0          | 51        |           | 0                  | 0        | 0          | 51        |           |
| EB Left            | 1        | 1600     | 129    | 0.081     | 1                  | 1600     | 0          | 129       | 0.081     | 1                  | 1600     | 0          | 129       | 0.081     |
| EB Thru            | 2        | 3200     | 802    | 0.269 *   | 2                  | 3200     | 49         | 851       | 0.284 *   | 2                  | 3200     | 0          | 851       | 0.284 *   |
| EB Right           | 0        | 0        | 59     |           | 0                  | 0        | 0          | 59        |           | 0                  | 0        | 0          | 59        |           |
| WB Left            | 1        | 1600     | 129    | 0.081 *   | 1                  | 1600     | 2          | 131       | 0.082 *   | 1                  | 1600     | 0          | 131       | 0.082 *   |
| WB Thru            | 2        | 3200     | 300    | 0.104     | 2                  | 3200     | 24         | 324       | 0.112     | 2                  | 3200     | 0          | 324       | 0.112     |
| WB Right           | 0        | 0        | 32     |           | 0                  | 0        | 2          | 34        |           | 0                  | 0        | 0          | 34        |           |
| N/S Critical Sum = |          |          |        | 0.264     | N/S Critical Sum = |          |            |           | 0.266     | N/S Critical Sum = |          |            |           | 0.266     |
| E/W Critical Sum = |          |          |        | 0.350     | E/W Critical Sum = |          |            |           | 0.366     | E/W Critical Sum = |          |            |           | 0.366     |
| [RT Adjustment] =  |          |          |        | 0.099     | [RT Adjustment] =  |          |            |           | 0.102     | [RT Adjustment] =  |          |            |           | 0.102     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.813     | Total ICU =        |          |            |           | 0.834     | Total ICU =        |          |            |           | 0.834     |
| LOS =              |          |          |        | D         | LOS =              |          |            |           | D         | LOS =              |          |            |           | D         |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                                 |             | Site Information                             |                     |
|---|-------------|--|---------------------|
| Analyst   | SSS         | Intersection                                 | DBB & Crooked Creek |
| Agency/Co.  |             | Jurisdiction                                 |                     |
| Date Performed                                      |             | Analysis Year                                | Existing            |
| Analysis Time Period                                | AM Peak Hr. |  |                     |
| Project Description <i>DBB&amp;CrookC, Exist-AM</i> |             |  |                     |
| East/West Street: <i>Crooked Creek Dr.</i>          |             | North/South Street: <i>Diamond Bar Blvd.</i> |                     |
| Intersection Orientation: <i>North-South</i>        |             | Study Period (hrs): <i>0.25</i>              |                     |

### Vehicle Volumes and Adjustments

| Major Street                  | Northbound         |      |      | Southbound |      |      |
|-------------------------------|--------------------|------|------|------------|------|------|
| Movement                      | 1                  | 2    | 3    | 4          | 5    | 6    |
|                               | L                  | T    | R    | L          | T    | R    |
| Volume (veh/h)                | 7                  | 161  |      |            | 1333 | 0    |
| Peak-Hour Factor, PHF         | 1.00               | 1.00 | 1.00 | 1.00       | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 2                  | 0    | 37   | 0          | 0    | 0    |
| Percent Heavy Vehicles        | 0                  | --   | --   | 0          | --   | --   |
| Median Type                   | <i>Raised curb</i> |      |      |            |      |      |
| RT Channelized                |                    |      | 0    |            |      | 0    |
| Lanes                         | 1                  | 2    | 0    | 0          | 2    | 0    |
| Configuration                 | L                  | T    |      |            | T    | TR   |
| Upstream Signal               |                    | 0    |      |            | 0    |      |
| Minor Street                  | Eastbound          |      |      | Westbound  |      |      |
| Movement                      | 7                  | 8    | 9    | 10         | 11   | 12   |
|                               | L                  | T    | R    | L          | T    | R    |
| Volume (veh/h)                | 2                  | 0    | 37   |            |      |      |
| Peak-Hour Factor, PHF         | 1.00               | 1.00 | 1.00 | 1.00       | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 0                  | 1333 | 0    | 7          | 161  | 0    |
| Percent Heavy Vehicles        | 0                  | 0    | 0    | 0          | 0    | 0    |
| Percent Grade (%)             |                    | 0    |      |            | 0    |      |
| Flared Approach               |                    | N    |      |            | N    |      |
| Storage                       |                    | 0    |      |            | 0    |      |
| RT Channelized                |                    |      | 0    |            |      | 0    |
| Lanes                         | 0                  | 1    | 0    | 0          | 0    | 0    |
| Configuration                 |                    | LTR  |      |            |      |      |

### Delay, Queue Length, and Level of Service

| Approach               | Northbound | Southbound | Westbound |   |   | Eastbound |      |    |
|------------------------|------------|------------|-----------|---|---|-----------|------|----|
| Movement               | 1          | 4          | 7         | 8 | 9 | 10        | 11   | 12 |
| Lane Configuration     | L          |            |           |   |   |           | LTR  |    |
| v (veh/h)              | 7          |            |           |   |   |           | 39   |    |
| C (m) (veh/h)          | 524        |            |           |   |   |           | 384  |    |
| v/c                    | 0.01       |            |           |   |   |           | 0.10 |    |
| 95% queue length       | 0.04       |            |           |   |   |           | 0.34 |    |
| Control Delay (s/veh)  | 12.0       |            |           |   |   |           | 15.4 |    |
| LOS                    | B          |            |           |   |   |           | C    |    |
| Approach Delay (s/veh) | --         | --         |           |   |   |           | 15.4 |    |
| Approach LOS           | --         | --         |           |   |   |           | C    |    |

**TWO-WAY STOP CONTROL SUMMARY**

| General Information                                 |             | Site Information                             |                     |
|---|-------------|--|---------------------|
| Analyst   | SSS         | Intersection                                 | DBB & Crooked Creek |
| Agency/Co.  |             | Jurisdiction                                 |                     |
| Date Performed                                      |             | Analysis Year                                | Existing            |
| Analysis Time Period                                | PM Peak Hr. |  |                     |
| Project Description <i>DBB&amp;CrookC, Exist-PM</i> |             |  |                     |
| East/West Street: <i>Crooked Creek Dr.</i>          |             | North/South Street: <i>Diamond Bar Blvd.</i> |                     |
| Intersection Orientation: <i>North-South</i>        |             | Study Period (hrs): <i>0.25</i>              |                     |

**Vehicle Volumes and Adjustments**

| Major Street<br>Movement         | Northbound         |        |        | Southbound |        |        |
|----------------------------------|--------------------|--------|--------|------------|--------|--------|
|                                  | 1<br>L             | 2<br>T | 3<br>R | 4<br>L     | 5<br>T | 6<br>R |
| Volume (veh/h)                   | 25                 | 1608   |        |            | 450    | 0      |
| Peak-Hour Factor, PHF            | 1.00               | 1.00   | 1.00   | 1.00       | 1.00   | 1.00   |
| Hourly Flow Rate, HFR<br>(veh/h) | 0                  | 0      | 11     | 0          | 0      | 0      |
| Percent Heavy Vehicles           | 0                  | --     | --     | 0          | --     | --     |
| Median Type                      | <i>Raised curb</i> |        |        |            |        |        |
| RT Channelized                   |                    |        | 0      |            |        | 0      |
| Lanes                            | 1                  | 2      | 0      | 0          | 2      | 0      |
| Configuration                    | L                  | T      |        |            | T      | TR     |
| Upstream Signal                  |                    | 0      |        |            | 0      |        |

| Minor Street<br>Movement         | Eastbound |        |        | Westbound |         |         |
|----------------------------------|-----------|--------|--------|-----------|---------|---------|
|                                  | 7<br>L    | 8<br>T | 9<br>R | 10<br>L   | 11<br>T | 12<br>R |
| Volume (veh/h)                   | 0         | 0      | 11     |           |         |         |
| Peak-Hour Factor, PHF            | 1.00      | 1.00   | 1.00   | 1.00      | 1.00    | 1.00    |
| Hourly Flow Rate, HFR<br>(veh/h) | 0         | 450    | 0      | 25        | 1608    | 0       |
| Percent Heavy Vehicles           | 0         | 0      | 0      | 0         | 0       | 0       |
| Percent Grade (%)                | 0         |        |        | 0         |         |         |
| Flared Approach                  |           | N      |        |           | N       |         |
| Storage                          |           | 0      |        |           | 0       |         |
| RT Channelized                   |           |        | 0      |           |         | 0       |
| Lanes                            | 0         | 1      | 0      | 0         | 0       | 0       |
| Configuration                    |           | LTR    |        |           |         |         |

**Delay, Queue Length, and Level of Service**

| Approach               | Northbound | Southbound | Westbound |   |   | Eastbound |      |    |
|------------------------|------------|------------|-----------|---|---|-----------|------|----|
|                        | 1          | 4          | 7         | 8 | 9 | 10        | 11   | 12 |
| Movement               |            |            |           |   |   |           |      |    |
| Lane Configuration     | L          |            |           |   |   |           | LTR  |    |
| v (veh/h)              | 25         |            |           |   |   |           | 11   |    |
| C (m) (veh/h)          | 1121       |            |           |   |   |           | 784  |    |
| v/c                    | 0.02       |            |           |   |   |           | 0.01 |    |
| 95% queue length       | 0.07       |            |           |   |   |           | 0.04 |    |
| Control Delay (s/veh)  | 8.3        |            |           |   |   |           | 9.7  |    |
| LOS                    | A          |            |           |   |   |           | A    |    |
| Approach Delay (s/veh) | --         | --         |           |   |   |           | 9.7  |    |
| Approach LOS           | --         | --         |           |   |   |           | A    |    |

**TWO-WAY STOP CONTROL SUMMARY**

| General Information                               |             | Site Information                             |                     |
|---|-------------|--|---------------------|
| Analyst   | SSS         | Intersection                                 | DBB & Crooked Creek |
| Agency/Co.  |             | Jurisdiction                                 |                     |
| Date Performed                                    |             | Analysis Year                                | Existing + Project  |
| Analysis Time Period                              | AM Peak Hr. |  |                     |
| Project Description <i>DBB&amp;CrookC, E+P-AM</i> |             |  |                     |
| East/West Street: <i>Crooked Creek Dr.</i>        |             | North/South Street: <i>Diamond Bar Blvd.</i> |                     |
| Intersection Orientation: <i>North-South</i>      |             | Study Period (hrs): <i>0.25</i>              |                     |

| Vehicle Volumes and Adjustments |                    |      |      |            |      |      |
|---------------------------------|--------------------|------|------|------------|------|------|
| Major Street                    | Northbound         |      |      | Southbound |      |      |
| Movement                        | 1                  | 2    | 3    | 4          | 5    | 6    |
|                                 | L                  | T    | R    | L          | T    | R    |
| Volume (veh/h)                  | 7                  | 161  | 12   | 3          | 1333 | 2    |
| Peak-Hour Factor, PHF           | 1.00               | 1.00 | 1.00 | 1.00       | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h)   | 2                  | 0    | 37   | 60         | 0    | 15   |
| Percent Heavy Vehicles          | 0                  | --   | --   | 0          | --   | --   |
| Median Type                     | <i>Raised curb</i> |      |      |            |      |      |
| RT Channelized                  |                    |      | 0    |            |      | 0    |
| Lanes                           | 1                  | 2    | 0    | 1          | 2    | 0    |
| Configuration                   | L                  | T    | TR   | L          | T    | TR   |
| Upstream Signal                 |                    | 0    |      |            | 0    |      |

| Minor Street                  | Eastbound |      |      | Westbound |      |      |
|-------------------------------|-----------|------|------|-----------|------|------|
| Movement                      | 7         | 8    | 9    | 10        | 11   | 12   |
|                               | L         | T    | R    | L         | T    | R    |
| Volume (veh/h)                | 2         | 0    | 37   | 60        | 0    | 15   |
| Peak-Hour Factor, PHF         | 1.00      | 1.00 | 1.00 | 1.00      | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 3         | 1333 | 2    | 7         | 161  | 12   |
| Percent Heavy Vehicles        | 0         | 0    | 0    | 0         | 0    | 0    |
| Percent Grade (%)             |           | 0    |      |           | 0    |      |
| Flared Approach               |           | N    |      |           | N    |      |
| Storage                       |           | 0    |      |           | 0    |      |
| RT Channelized                |           |      | 0    |           |      | 0    |
| Lanes                         | 0         | 1    | 0    | 0         | 1    | 0    |
| Configuration                 |           | LTR  |      |           | LTR  |      |

| Delay, Queue Length, and Level of Service |            |            |           |   |   |           |    |    |
|---|------------|------------|-----------|---|---|-----------|----|----|
| Approach                                  | Northbound | Southbound | Westbound |   |   | Eastbound |    |    |
| Movement                                  | 1          | 4          | 7         | 8 | 9 | 10        | 11 | 12 |
| Lane Configuration                        | L          | L          | LTR       |   |   | LTR       |    |    |
| v (veh/h)                                 | 7          | 3          | 75        |   |   | 39        |    |    |
| C (m) (veh/h)                             | 523        | 1416       | 361       |   |   | 371       |    |    |
| v/c                                       | 0.01       | 0.00       | 0.21      |   |   | 0.11      |    |    |
| 95% queue length                          | 0.04       | 0.01       | 0.77      |   |   | 0.35      |    |    |
| Control Delay (s/veh)                     | 12.0       | 7.5        | 17.6      |   |   | 15.8      |    |    |
| LOS                                       | B          | A          | C         |   |   | C         |    |    |
| Approach Delay (s/veh)                    | --         | --         | 17.6      |   |   | 15.8      |    |    |
| Approach LOS                              | --         | --         | C         |   |   | C         |    |    |

**TWO-WAY STOP CONTROL SUMMARY**

| General Information  |             | Site Information |                     |
|----------------------|-------------|------------------|---------------------|
| Analyst              | SSS         | Intersection     | DBB & Crooked Creek |
| Agency/Co.           |             | Jurisdiction     |                     |
| Date Performed       |             | Analysis Year    | Existing + Project  |
| Analysis Time Period | PM Peak Hr. |                  |                     |

|   |  |
|---|--|
| Project Description <i>DBB&amp;CrookC, E+P-PM</i> |  |
| East/West Street: <i>Crooked Creek Dr.</i>        | North/South Street: <i>Diamond Bar Blvd.</i> |
| Intersection Orientation: <i>North-South</i>      | Study Period (hrs): <i>0.25</i>              |

**Vehicle Volumes and Adjustments**

| Major Street                  | Northbound         |      |      | Southbound |      |      |      |
|-------------------------------|--------------------|------|------|------------|------|------|------|
|                               | Movement           | 1    | 2    | 3          | 4    | 5    | 6    |
|                               |                    | L    | T    | R          | L    | T    | R    |
| Volume (veh/h)                |                    | 25   | 1608 | 57         | 14   | 450  | 0    |
| Peak-Hour Factor, PHF         |                    | 1.00 | 1.00 | 1.00       | 1.00 | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) |                    | 0    | 0    | 11         | 28   | 0    | 7    |
| Percent Heavy Vehicles        |                    | 0    | --   | --         | 0    | --   | --   |
| Median Type                   | <i>Raised curb</i> |      |      |            |      |      |      |
| RT Channelized                |                    |      |      | 0          |      |      | 0    |
| Lanes                         |                    | 1    | 2    | 0          | 1    | 2    | 0    |
| Configuration                 |                    | L    | T    | TR         | L    | T    | TR   |
| Upstream Signal               |                    |      | 0    |            |      | 0    |      |

| Minor Street                  | Eastbound |      |      | Westbound |      |      |      |
|-------------------------------|-----------|------|------|-----------|------|------|------|
|                               | Movement  | 7    | 8    | 9         | 10   | 11   | 12   |
|                               |           | L    | T    | R         | L    | T    | R    |
| Volume (veh/h)                |           | 0    | 0    | 11        | 28   | 0    | 7    |
| Peak-Hour Factor, PHF         |           | 1.00 | 1.00 | 1.00      | 1.00 | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) |           | 14   | 450  | 0         | 25   | 1608 | 57   |
| Percent Heavy Vehicles        |           | 0    | 0    | 0         | 0    | 0    | 0    |
| Percent Grade (%)             |           |      | 0    |           |      | 0    |      |
| Flared Approach               |           |      | N    |           |      | N    |      |
| Storage                       |           |      | 0    |           |      | 0    |      |
| RT Channelized                |           |      |      | 0         |      |      | 0    |
| Lanes                         |           | 0    | 1    | 0         | 0    | 1    | 0    |
| Configuration                 |           |      | LTR  |           |      | LTR  |      |

**Delay, Queue Length, and Level of Service**

| Approach               | Northbound | Southbound | Westbound |   |      | Eastbound |    |      |    |
|------------------------|------------|------------|-----------|---|------|-----------|----|------|----|
|                        | Movement   | 1          | 4         | 7 | 8    | 9         | 10 | 11   | 12 |
| Lane Configuration     |            | L          | L         |   | LTR  |           |    | LTR  |    |
| v (veh/h)              |            | 25         | 14        |   | 35   |           |    | 11   |    |
| C (m) (veh/h)          |            | 1121       | 391       |   | 100  |           |    | 784  |    |
| v/c                    |            | 0.02       | 0.04      |   | 0.35 |           |    | 0.01 |    |
| 95% queue length       |            | 0.07       | 0.11      |   | 1.38 |           |    | 0.04 |    |
| Control Delay (s/veh)  |            | 8.3        | 14.5      |   | 59.2 |           |    | 9.7  |    |
| LOS                    |            | A          | B         |   | F    |           |    | A    |    |
| Approach Delay (s/veh) |            | --         | --        |   | 59.2 |           |    | 9.7  |    |
| Approach LOS           |            | --         | --        |   | F    |           |    | A    |    |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Crooked Creek

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8        | 2880     | 0      | 0.000 *   | 1                  | 1600     | 60         | 60        | 0.038 *   | 1                  | 1600     | 0          | 60        | 0.038 *   |
| NB Thru            | 8        | 6400     | 0      | 0.000     | 1                  | 1600     | 0          | 0         | 0.009     | 1                  | 1600     | 0          | 0         | 0.009     |
| NB Right           | 0        | 0        | 0      |           | 0                  | 0        | 15         | 15        |           | 0                  | 0        | 0          | 15        |           |
| SB Left            | 8        | 2880     | 2      | 0.001     | 8                  | 2880     | 0          | 2         | 0.001     | 8                  | 2880     | 0          | 2         | 0.001     |
| SB Thru            | 1        | 1600     | 0      | 0.023 *   | 1                  | 1600     | 0          | 0         | 0.023 *   | 1                  | 1600     | 0          | 0         | 0.023 *   |
| SB Right           | 0        | 0        | 37     |           | 0                  | 0        | 0          | 37        |           | 0                  | 0        | 0          | 37        |           |
| EB Left            | 1        | 1600     | 7      | 0.004 *   | 1                  | 1600     | 0          | 7         | 0.004 *   | 1                  | 1600     | 0          | 7         | 0.004 *   |
| EB Thru            | 2        | 3200     | 161    | 0.050     | 3                  | 4800     | 0          | 161       | 0.034     | 3                  | 4800     | 0          | 161       | 0.034     |
| EB Right           | 1        | 1600     | 0      | 0.000     | 1                  | 1600     | 12         | 12        | 0.008     | 1                  | 1600     | 0          | 12        | 0.008     |
| WB Left            | 1        | 1600     | 0      | 0.000     | 1                  | 1600     | 3          | 3         | 0.002     | 1                  | 1600     | 0          | 3         | 0.002     |
| WB Thru            | 2        | 3200     | 1333   | 0.417 *   | 2                  | 3200     | 0          | 1333      | 0.417 *   | 2                  | 3200     | 0          | 1333      | 0.417 *   |
| WB Right           | 1        | 1600     | 2      | 0.001     | 1                  | 1600     | 0          | 2         | 0.001     | 1                  | 1600     | 0          | 2         | 0.001     |
| N/S Critical Sum = |          |          |        | 0.023     | N/S Critical Sum = |          |            |           | 0.061     | N/S Critical Sum = |          |            |           | 0.061     |
| E/W Critical Sum = |          |          |        | 0.421     | E/W Critical Sum = |          |            |           | 0.421     | E/W Critical Sum = |          |            |           | 0.421     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.544     | Total ICU =        |          |            |           | 0.582     | Total ICU =        |          |            |           | 0.582     |
| LOS =              |          |          |        | A         | LOS =              |          |            |           | A         | LOS =              |          |            |           | A         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Crooked Creek

| Movement | EXISTING |          |                    |           | EXISTING + PROJECT |          |                    |           |           | EXISTING + PROJECT |          |                    |           |           |
|----------|----------|----------|--------------------|-----------|--------------------|----------|--------------------|-----------|-----------|--------------------|----------|--------------------|-----------|-----------|
|          | Lanes    | Capacity | Volume             | V/C Ratio | Lanes              | Capacity | Added Vol.         | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol.         | Tot. Vol. | V/C Ratio |
| NB Left  | 8        | 2880     | 0                  | 0.000 *   | 8                  | 2880     | 28                 | 28        | 0.010 *   | 8                  | 2880     | 0                  | 28        | 0.010 *   |
| NB Thru  | 8        | 6400     | 0                  | 0.000     | 8                  | 6400     | 0                  | 0         | 0.001     | 8                  | 6400     | 0                  | 0         | 0.001     |
| NB Right | 0        | 0        | 0                  |           | 0                  | 0        | 7                  | 7         |           | 0                  | 0        | 0                  | 7         |           |
| SB Left  | 8        | 2880     | 0                  | 0.000     | 8                  | 2880     | 0                  | 0         | 0.000     | 8                  | 2880     | 0                  | 0         | 0.000     |
| SB Thru  | 1        | 1600     | 0                  | 0.007 *   | 1                  | 1600     | 0                  | 0         | 0.007 *   | 1                  | 1600     | 0                  | 0         | 0.007 *   |
| SB Right | 0        | 0        | 11                 |           | 0                  | 0        | 0                  | 11        |           | 0                  | 0        | 0                  | 11        |           |
| EB Left  | 1        | 1600     | 25                 | 0.016     | 1                  | 1600     | 0                  | 25        | 0.016     | 1                  | 1600     | 0                  | 25        | 0.016     |
| EB Thru  | 2        | 3200     | 1608               | 0.503 *   | 2                  | 3200     | 0                  | 1608      | 0.503 *   | 2                  | 3200     | 0                  | 1608      | 0.503 *   |
| EB Right | 1        | 1600     | 0                  | 0.000     | 1                  | 1600     | 57                 | 57        | 0.036     | 1                  | 1600     | 0                  | 57        | 0.036     |
| WB Left  | 1        | 1600     | 0                  | 0.000 *   | 1                  | 1600     | 14                 | 14        | 0.009 *   | 1                  | 1600     | 0                  | 14        | 0.009 *   |
| WB Thru  | 2        | 3200     | 450                | 0.141     | 2                  | 3200     | 0                  | 450       | 0.141     | 2                  | 3200     | 0                  | 450       | 0.141     |
| WB Right | 1        | 1600     | 0                  | 0.000     | 1                  | 1600     | 0                  | 0         | 0.000     | 1                  | 1600     | 0                  | 0         | 0.000     |
|          |          |          | N/S Critical Sum = | 0.007     |                    |          | N/S Critical Sum = | 0.017     |           |                    |          | N/S Critical Sum = | 0.017     |           |
|          |          |          | E/W Critical Sum = | 0.503     |                    |          | E/W Critical Sum = | 0.512     |           |                    |          | E/W Critical Sum = | 0.512     |           |
|          |          |          | [RT Adjustment] =  | 0.000     |                    |          | [RT Adjustment] =  | 0.000     |           |                    |          | [RT Adjustment] =  | 0.000     |           |
|          |          |          | Clearance =        | 0.100     |                    |          | Clearance =        | 0.100     |           |                    |          | Clearance =        | 0.100     |           |
|          |          |          | Total ICU =        | 0.610     |                    |          | Total ICU =        | 0.629     |           |                    |          | Total ICU =        | 0.629     |           |
|          |          |          | LOS =              | B         |                    |          | LOS =              | B         |           |                    |          | LOS =              | B         |           |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Brea Canyon Rd. & Silver Bullet Dr.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           | EXIST + PROJECT W/ IMPROVEMENTS |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|---------------------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                           | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8        | 2880     | 0      | 0.000 *   | 8                  | 2880     | 0          | 0         | 0.000 *   | 8                               | 2880     | 0          | 0         | 0.000 *   |
| NB Thru            | 1        | 1600     | 123    | 0.077     | 1                  | 1600     | 1          | 124       | 0.078     | 2                               | 3200     | 0          | 124       | 0.039     |
| NB Right           | 1        | 1600     | 5      | 0.003     | 1                  | 1600     | 0          | 5         | 0.003     | 1                               | 1600     | 0          | 5         | 0.003     |
| SB Left            | 1        | 1600     | 1      | 0.001     | 1                  | 1600     | 0          | 1         | 0.001     | 1                               | 1600     | 0          | 1         | 0.001     |
| SB Thru            | 1        | 1600     | 1434   | 0.896 *   | 1                  | 1600     | 4          | 1438      | 0.899 *   | 2                               | 3200     | 0          | 1438      | 0.449 *   |
| SB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                               | 0        | 0          | 0         |           |
| EB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                               | 2880     | 0          | 0         | 0.000     |
| EB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                               | 6400     | 0          | 0         | 0.000 *   |
| EB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                               | 0        | 0          | 0         |           |
| WB Left            | 8        | 2880     | 83     | 0.029 *   | 8                  | 2880     | 0          | 83        | 0.029 *   | 8                               | 2880     | 0          | 83        | 0.029 *   |
| WB Thru            | 1        | 1600     | 0      | 0.004     | 1                  | 1600     | 0          | 0         | 0.004     | 1                               | 1600     | 0          | 0         | 0.004     |
| WB Right           | 0        | 0        | 7      |           | 0                  | 0        | 0          | 7         |           | 0                               | 0        | 0          | 7         |           |
| N/S Critical Sum = |          |          |        | 0.896     | N/S Critical Sum = |          |            |           | 0.899     | N/S Critical Sum =              |          |            |           | 0.449     |
| E/W Critical Sum = |          |          |        | 0.029     | E/W Critical Sum = |          |            |           | 0.029     | E/W Critical Sum =              |          |            |           | 0.029     |
| [RT Adjustment] =  |          |          |        | 0.027     | [RT Adjustment] =  |          |            |           | 0.027     | [RT Adjustment] =               |          |            |           | 0.027     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =                     |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 1.052     | Total ICU =        |          |            |           | 1.055     | Total ICU =                     |          |            |           | 0.605     |
| LOS =              |          |          |        | F         | LOS =              |          |            |           | F         | LOS =                           |          |            |           | B         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Brea Canyon Rd. & Silver Bullet Dr.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           | EXIST + PROJECT W/ IMPROVEMENTS |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|---------------------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                           | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                               | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 1        | 1600     | 1451   | 0.907 *   | 1                  | 1600     | 4          | 1455      | 0.909 *   | 2                               | 3200     | 0          | 1455      | 0.455 *   |
| NB Right           | 1        | 1600     | 33     | 0.021     | 1                  | 1600     | 0          | 33        | 0.021     | 1                               | 1600     | 0          | 33        | 0.021     |
| SB Left            | 1        | 1600     | 4      | 0.003 *   | 1                  | 1600     | 0          | 4         | 0.003 *   | 1                               | 1600     | 0          | 4         | 0.003 *   |
| SB Thru            | 1        | 1600     | 126    | 0.079     | 1                  | 1600     | 2          | 128       | 0.080     | 2                               | 3200     | 0          | 128       | 0.040     |
| SB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                               | 0        | 0          | 0         |           |
| EB Left            | 8        | 2880     | 0      | 0.000     | 8                  | 2880     | 0          | 0         | 0.000     | 8                               | 2880     | 0          | 0         | 0.000     |
| EB Thru            | 8        | 6400     | 0      | 0.000 *   | 8                  | 6400     | 0          | 0         | 0.000 *   | 8                               | 6400     | 0          | 0         | 0.000 *   |
| EB Right           | 0        | 0        | 0      |           | 0                  | 0        | 0          | 0         |           | 0                               | 0        | 0          | 0         |           |
| WB Left            | 8        | 2880     | 15     | 0.005 *   | 8                  | 2880     | 0          | 15        | 0.005 *   | 8                               | 2880     | 0          | 15        | 0.005 *   |
| WB Thru            | 1        | 1600     | 0      | 0.001     | 1                  | 1600     | 0          | 0         | 0.001     | 1                               | 1600     | 0          | 0         | 0.001     |
| WB Right           | 0        | 0        | 2      |           | 0                  | 0        | 0          | 2         |           | 0                               | 0        | 0          | 2         |           |
| N/S Critical Sum = |          |          |        | 0.910     | N/S Critical Sum = |          |            |           | 0.912     | N/S Critical Sum =              |          |            |           | 0.458     |
| E/W Critical Sum = |          |          |        | 0.005     | E/W Critical Sum = |          |            |           | 0.005     | E/W Critical Sum =              |          |            |           | 0.005     |
| [RT Adjustment] =  |          |          |        | 0.006     | [RT Adjustment] =  |          |            |           | 0.006     | [RT Adjustment] =               |          |            |           | 0.006     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =                     |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 1.021     | Total ICU =        |          |            |           | 1.023     | Total ICU =                     |          |            |           | 0.569     |
| LOS =              |          |          |        | F         | LOS =              |          |            |           | F         | LOS =                           |          |            |           | A         |

## Table X

### AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Grand Ave.

| Movement | EXISTING |          |                    |           | EXISTING + PROJECT |          |                    |           |           |       |          |                    |           |           |
|----------|----------|----------|--------------------|-----------|--------------------|----------|--------------------|-----------|-----------|-------|----------|--------------------|-----------|-----------|
|          | Lanes    | Capacity | Volume             | V/C Ratio | Lanes              | Capacity | Added Vol.         | Tot. Vol. | V/C Ratio | Lanes | Capacity | Added Vol.         | Tot. Vol. | V/C Ratio |
| NB Left  | 2        | 2880     | 377                | 0.131 *   | 2                  | 2880     | 4                  | 381       | 0.132 *   | 2     | 2880     | 0                  | 381       | 0.132 *   |
| NB Thru  | 2        | 3200     | 575                | 0.180     | 2                  | 3200     | 11                 | 586       | 0.183     | 2     | 3200     | 0                  | 586       | 0.183     |
| NB Right | 1        | 1600     | 258                | 0.161     | 1                  | 1600     | 0                  | 258       | 0.161     | 1     | 1600     | 0                  | 258       | 0.161     |
| SB Left  | 2        | 2880     | 113                | 0.039     | 2                  | 2880     | 0                  | 113       | 0.039     | 2     | 2880     | 0                  | 113       | 0.039     |
| SB Thru  | 2        | 3200     | 622                | 0.194 *   | 2                  | 3200     | 2                  | 624       | 0.195 *   | 2     | 3200     | 0                  | 624       | 0.195 *   |
| SB Right | 1        | 1600     | 93                 | 0.058     | 1                  | 1600     | 0                  | 93        | 0.058     | 1     | 1600     | 0                  | 93        | 0.058     |
| EB Left  | 2        | 2880     | 118                | 0.041 *   | 2                  | 2880     | 0                  | 118       | 0.041 *   | 2     | 2880     | 0                  | 118       | 0.041 *   |
| EB Thru  | 2        | 3200     | 387                | 0.121     | 2                  | 3200     | 0                  | 387       | 0.121     | 2     | 3200     | 0                  | 387       | 0.121     |
| EB Right | 1        | 1600     | 204                | 0.128     | 1                  | 1600     | 1                  | 205       | 0.128     | 1     | 1600     | 0                  | 205       | 0.128     |
| WB Left  | 2        | 2880     | 580                | 0.201     | 2                  | 2880     | 0                  | 580       | 0.201     | 2     | 2880     | 0                  | 580       | 0.201     |
| WB Thru  | 2        | 3200     | 1126               | 0.352 *   | 2                  | 3200     | 0                  | 1126      | 0.352 *   | 2     | 3200     | 0                  | 1126      | 0.352 *   |
| WB Right | 1        | 1600     | 56                 | 0.035     | 1                  | 1600     | 0                  | 56        | 0.035     | 1     | 1600     | 0                  | 56        | 0.035     |
|          |          |          | N/S Critical Sum = | 0.325     |                    |          | N/S Critical Sum = | 0.327     |           |       |          | N/S Critical Sum = | 0.327     |           |
|          |          |          | E/W Critical Sum = | 0.393     |                    |          | E/W Critical Sum = | 0.393     |           |       |          | E/W Critical Sum = | 0.393     |           |
|          |          |          | [RT Adjustment] =  | -0.070    |                    |          | [RT Adjustment] =  | -0.070    |           |       |          | [RT Adjustment] =  | -0.070    |           |
|          |          |          | Clearance =        | 0.100     |                    |          | Clearance =        | 0.100     |           |       |          | Clearance =        | 0.100     |           |
|          |          |          | Total ICU =        | 0.748     |                    |          | Total ICU =        | 0.750     |           |       |          | Total ICU =        | 0.750     |           |
|          |          |          | LOS =              | C         |                    |          | LOS =              | C         |           |       |          | LOS =              | C         |           |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Grand Ave.

| Movement           | EXISTING |          |        |              | EXISTING + PROJECT |          |            |           |              |                    |          |            |           |              |
|--------------------|----------|----------|--------|--------------|--------------------|----------|------------|-----------|--------------|--------------------|----------|------------|-----------|--------------|
|                    | Lanes    | Capacity | Volume | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    |
| NB Left            | 2        | 2880     | 227    | 0.079        | 2                  | 2880     | 2          | 229       | 0.080        | 2                  | 2880     | 0          | 229       | 0.080        |
| NB Thru            | 2        | 3200     | 1012   | 0.316 *      | 2                  | 3200     | 5          | 1017      | 0.318 *      | 2                  | 3200     | 0          | 1017      | 0.318 *      |
| NB Right           | 1        | 1600     | 733    | 0.458        | 1                  | 1600     | 0          | 733       | 0.458        | 1                  | 1600     | 0          | 733       | 0.458        |
| SB Left            | 2        | 2880     | 264    | 0.092 *      | 2                  | 2880     | 0          | 264       | 0.092 *      | 2                  | 2880     | 0          | 264       | 0.092 *      |
| SB Thru            | 2        | 3200     | 541    | 0.169        | 2                  | 3200     | 10         | 551       | 0.172        | 2                  | 3200     | 0          | 551       | 0.172        |
| SB Right           | 1        | 1600     | 88     | 0.055        | 1                  | 1600     | 0          | 88        | 0.055        | 1                  | 1600     | 0          | 88        | 0.055        |
| EB Left            | 2        | 2880     | 264    | 0.092        | 2                  | 2880     | 0          | 264       | 0.092        | 2                  | 2880     | 0          | 264       | 0.092        |
| EB Thru            | 2        | 3200     | 897    | 0.280 *      | 2                  | 3200     | 0          | 897       | 0.280 *      | 2                  | 3200     | 0          | 897       | 0.280 *      |
| EB Right           | 1        | 1600     | 159    | 0.099        | 1                  | 1600     | 4          | 163       | 0.102        | 1                  | 1600     | 0          | 163       | 0.102        |
| WB Left            | 2        | 2880     | 416    | 0.144 *      | 2                  | 2880     | 0          | 416       | 0.144 *      | 2                  | 2880     | 0          | 416       | 0.144 *      |
| WB Thru            | 2        | 3200     | 412    | 0.129        | 2                  | 3200     | 0          | 412       | 0.129        | 2                  | 3200     | 0          | 412       | 0.129        |
| WB Right           | 1        | 1600     | 27     | 0.017        | 1                  | 1600     | 0          | 27        | 0.017        | 1                  | 1600     | 0          | 27        | 0.017        |
| N/S Critical Sum = |          |          |        | 0.408        | N/S Critical Sum = |          |            |           | 0.410        | N/S Critical Sum = |          |            |           | 0.410        |
| E/W Critical Sum = |          |          |        | 0.424        | E/W Critical Sum = |          |            |           | 0.424        | E/W Critical Sum = |          |            |           | 0.424        |
| [RT Adjustment] =  |          |          |        | -0.070       | [RT Adjustment] =  |          |            |           | -0.070       | [RT Adjustment] =  |          |            |           | -0.070       |
| Clearance =        |          |          |        | 0.100        | Clearance =        |          |            |           | 0.100        | Clearance =        |          |            |           | 0.100        |
| Total ICU =        |          |          |        | <b>0.862</b> | Total ICU =        |          |            |           | <b>0.864</b> | Total ICU =        |          |            |           | <b>0.864</b> |
| LOS =              |          |          |        | <b>D</b>     | LOS =              |          |            |           | <b>D</b>     | LOS =              |          |            |           | <b>D</b>     |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Colima Rd. & Fairway-Brea Canyon Cutoff Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 254    | 0.159 *   | 1                  | 1600     | 0          | 254       | 0.159 *   | 1                  | 1600     | 0          | 254       | 0.159 *   |
| NB Thru            | 3        | 4800     | 393    | 0.104     | 3                  | 4800     | 8          | 401       | 0.106     | 3                  | 4800     | 0          | 401       | 0.106     |
| NB Right           | 0        | 0        | 107    |           | 0                  | 0        | 0          | 107       |           | 0                  | 0        | 0          | 107       |           |
| SB Left            | 1        | 1600     | 188    | 0.118     | 1                  | 1600     | 0          | 188       | 0.118     | 1                  | 1600     | 0          | 188       | 0.118     |
| SB Thru            | 3        | 4800     | 845    | 0.238 *   | 3                  | 4800     | 2          | 847       | 0.238 *   | 3                  | 4800     | 0          | 847       | 0.238 *   |
| SB Right           | 0        | 0        | 295    |           | 0                  | 0        | 0          | 295       |           | 0                  | 0        | 0          | 295       |           |
| EB Left            | 1        | 1600     | 191    | 0.119 *   | 1                  | 1600     | 0          | 191       | 0.119 *   | 1                  | 1600     | 0          | 191       | 0.119 *   |
| EB Thru            | 2        | 3200     | 383    | 0.158     | 2                  | 3200     | 0          | 383       | 0.158     | 2                  | 3200     | 0          | 383       | 0.158     |
| EB Right           | 0        | 0        | 124    |           | 0                  | 0        | 0          | 124       |           | 0                  | 0        | 0          | 124       |           |
| WB Left            | 1        | 1600     | 249    | 0.156     | 1                  | 1600     | 0          | 249       | 0.156     | 1                  | 1600     | 0          | 249       | 0.156     |
| WB Thru            | 2        | 3200     | 495    | 0.227 *   | 2                  | 3200     | 0          | 495       | 0.227 *   | 2                  | 3200     | 0          | 495       | 0.227 *   |
| WB Right           | 0        | 0        | 230    |           | 0                  | 0        | 0          | 230       |           | 0                  | 0        | 0          | 230       |           |
| N/S Critical Sum = |          |          |        | 0.397     | N/S Critical Sum = |          |            |           | 0.397     | N/S Critical Sum = |          |            |           | 0.397     |
| E/W Critical Sum = |          |          |        | 0.346     | E/W Critical Sum = |          |            |           | 0.346     | E/W Critical Sum = |          |            |           | 0.346     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.843     | Total ICU =        |          |            |           | 0.843     | Total ICU =        |          |            |           | 0.843     |
| LOS =              |          |          |        | D         | LOS =              |          |            |           | D         | LOS =              |          |            |           | D         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Colima Rd. & Fairway-Brea Canyon Cutoff Rd.

| Movement           | EXISTING |          |        |           | EXISTING + PROJECT |          |            |           |           |                    |          |            |           |           |
|--------------------|----------|----------|--------|-----------|--------------------|----------|------------|-----------|-----------|--------------------|----------|------------|-----------|-----------|
|                    | Lanes    | Capacity | Volume | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes              | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1        | 1600     | 253    | 0.158     | 1                  | 1600     | 0          | 253       | 0.158     | 1                  | 1600     | 0          | 253       | 0.158     |
| NB Thru            | 3        | 4800     | 798    | 0.201 *   | 3                  | 4800     | 8          | 806       | 0.203 *   | 3                  | 4800     | 0          | 806       | 0.203 *   |
| NB Right           | 0        | 0        | 168    |           | 0                  | 0        | 0          | 168       |           | 0                  | 0        | 0          | 168       |           |
| SB Left            | 1        | 1600     | 194    | 0.121 *   | 1                  | 1600     | 0          | 194       | 0.121 *   | 1                  | 1600     | 0          | 194       | 0.121 *   |
| SB Thru            | 3        | 4800     | 566    | 0.135     | 3                  | 4800     | 2          | 568       | 0.135     | 3                  | 4800     | 0          | 568       | 0.135     |
| SB Right           | 0        | 0        | 81     |           | 0                  | 0        | 0          | 81        |           | 0                  | 0        | 0          | 81        |           |
| EB Left            | 1        | 1600     | 272    | 0.170     | 1                  | 1600     | 0          | 272       | 0.170     | 1                  | 1600     | 0          | 272       | 0.170     |
| EB Thru            | 2        | 3200     | 648    | 0.278 *   | 2                  | 3200     | 0          | 648       | 0.278 *   | 2                  | 3200     | 0          | 648       | 0.278 *   |
| EB Right           | 0        | 0        | 240    |           | 0                  | 0        | 0          | 240       |           | 0                  | 0        | 0          | 240       |           |
| WB Left            | 1        | 1600     | 246    | 0.154 *   | 1                  | 1600     | 0          | 246       | 0.154 *   | 1                  | 1600     | 0          | 246       | 0.154 *   |
| WB Thru            | 2        | 3200     | 478    | 0.208     | 2                  | 3200     | 0          | 478       | 0.208     | 2                  | 3200     | 0          | 478       | 0.208     |
| WB Right           | 0        | 0        | 188    |           | 0                  | 0        | 0          | 188       |           | 0                  | 0        | 0          | 188       |           |
| N/S Critical Sum = |          |          |        | 0.322     | N/S Critical Sum = |          |            |           | 0.324     | N/S Critical Sum = |          |            |           | 0.324     |
| E/W Critical Sum = |          |          |        | 0.432     | E/W Critical Sum = |          |            |           | 0.432     | E/W Critical Sum = |          |            |           | 0.432     |
| [RT Adjustment] =  |          |          |        | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     | [RT Adjustment] =  |          |            |           | 0.000     |
| Clearance =        |          |          |        | 0.100     | Clearance =        |          |            |           | 0.100     | Clearance =        |          |            |           | 0.100     |
| Total ICU =        |          |          |        | 0.854     | Total ICU =        |          |            |           | 0.856     | Total ICU =        |          |            |           | 0.856     |
| LOS =              |          |          |        | D         | LOS =              |          |            |           | D         | LOS =              |          |            |           | D         |

**INTERSECTION ANALYSIS  
WORKSHEETS**

**YEAR 2030 CONDITIONS**

**(With & Without Project)**

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## Table X

### AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Brea Canyon Rd. & Pathfinder Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| NB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| SB Left            | 2                     | 2880     | 1140   | 0.396 *   | 2                    | 2880     | 1          | 1141      | 0.396 *   | 2                                       | 2880     | 0          | 1141      | 0.396 *   |
| SB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| SB Right           | 1                     | 1600     | 380    | 0.238     | 1                    | 1600     | 0          | 380       | 0.238     | 1                                       | 1600     | 0          | 380       | 0.238     |
| EB Left            | 1                     | 1600     | 382    | 0.239 *   | 1                    | 1600     | 0          | 382       | 0.239 *   | 2                                       | 2880     | 0          | 382       | 0.133 *   |
| EB Thru            | 3                     | 4800     | 381    | 0.079     | 3                    | 4800     | 0          | 381       | 0.079     | 3                                       | 4800     | 0          | 381       | 0.079     |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| WB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 2                     | 3200     | 787    | 0.246 *   | 2                    | 3200     | 0          | 787       | 0.246 *   | 2                                       | 3200     | 0          | 787       | 0.246 *   |
| WB Right           | 1                     | 1600     | 1002   | 0.626     | 1                    | 1600     | 4          | 1006      | 0.629     | 2                                       | 3200     | 0          | 1006      | 0.314     |
| N/S Critical Sum = |                       |          |        | 0.396     | N/S Critical Sum =   |          |            |           | 0.396     | N/S Critical Sum =                      |          |            |           | 0.396     |
| E/W Critical Sum = |                       |          |        | 0.485     | E/W Critical Sum =   |          |            |           | 0.485     | E/W Critical Sum =                      |          |            |           | 0.379     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.000     |
| Total ICU =        |                       |          |        | 0.981     | Total ICU =          |          |            |           | 0.981     | Total ICU =                             |          |            |           | 0.775     |
| LOS =              |                       |          |        | E         | LOS =                |          |            |           | E         | LOS =                                   |          |            |           | C         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Brea Canyon Rd. & Pathfinder Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| NB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| SB Left            | 2                     | 2880     | 1084   | 0.376 *   | 2                    | 2880     | 4          | 1088      | 0.378 *   | 2                                       | 2880     | 0          | 1088      | 0.378 *   |
| SB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| SB Right           | 1                     | 1600     | 273    | 0.171     | 1                    | 1600     | 0          | 273       | 0.171     | 1                                       | 1600     | 0          | 273       | 0.171     |
| EB Left            | 1                     | 1600     | 442    | 0.276 *   | 1                    | 1600     | 0          | 442       | 0.276 *   | 2                                       | 2880     | 0          | 442       | 0.153 *   |
| EB Thru            | 3                     | 4800     | 611    | 0.127     | 3                    | 4800     | 0          | 611       | 0.127     | 3                                       | 4800     | 0          | 611       | 0.127     |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| WB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 2                     | 3200     | 467    | 0.146 *   | 2                    | 3200     | 0          | 467       | 0.146 *   | 2                                       | 3200     | 0          | 467       | 0.146 *   |
| WB Right           | 1                     | 1600     | 996    | 0.623     | 1                    | 1600     | 2          | 998       | 0.624     | 2                                       | 3200     | 0          | 998       | 0.312     |
| N/S Critical Sum = |                       |          |        | 0.376     | N/S Critical Sum =   |          |            |           | 0.378     | N/S Critical Sum =                      |          |            |           | 0.378     |
| E/W Critical Sum = |                       |          |        | 0.422     | E/W Critical Sum =   |          |            |           | 0.422     | E/W Critical Sum =                      |          |            |           | 0.299     |
| [RT Adjustment] =  |                       |          |        | 0.101     | [RT Adjustment] =    |          |            |           | 0.101     | [RT Adjustment] =                       |          |            |           | 0.101     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.000     |
| Total ICU =        |                       |          |        | 0.999     | Total ICU =          |          |            |           | 1.001     | Total ICU =                             |          |            |           | 0.778     |
| LOS =              |                       |          |        | E         | LOS =                |          |            |           | E         | LOS =                                   |          |            |           | C         |

## Table X

### AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
SR-57 SB Ramps & Pathfinder Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| NB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| SB Left            | 1                     | 1600     | 460    | 0.288 *   | 1                    | 1600     | 0          | 460       | 0.288 *   | 1                                       | 1600     | 0          | 460       | 0.288 *   |
| SB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| SB Right           | 1                     | 1600     | 223    | 0.139     | 1                    | 1600     | 0          | 223       | 0.139     | 1                                       | 1600     | 0          | 223       | 0.139     |
| EB Left            | 8                     | 2880     | 0      | 0.000 *   | 8                    | 2880     | 0          | 0         | 0.000 *   | 8                                       | 2880     | 0          | 0         | 0.000 *   |
| EB Thru            | 2                     | 3200     | 1208   | 0.378     | 2                    | 3200     | 1          | 1209      | 0.378     | 2                                       | 3200     | 0          | 1209      | 0.378     |
| EB Right           | 1                     | 1600     | 258    | 0.161     | 1                    | 1600     | 0          | 258       | 0.161     | 1                                       | 1600     | 0          | 258       | 0.161     |
| WB Left            | 1                     | 1600     | 164    | 0.103     | 1                    | 1600     | 0          | 164       | 0.103     | 1                                       | 1600     | 0          | 164       | 0.103     |
| WB Thru            | 2                     | 3200     | 1564   | 0.489 *   | 2                    | 3200     | 4          | 1568      | 0.490 *   | 2                                       | 3200     | 0          | 1568      | 0.490 *   |
| WB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| N/S Critical Sum = |                       |          |        | 0.288     | N/S Critical Sum =   |          |            |           | 0.288     | N/S Critical Sum =                      |          |            |           | 0.288     |
| E/W Critical Sum = |                       |          |        | 0.489     | E/W Critical Sum =   |          |            |           | 0.490     | E/W Critical Sum =                      |          |            |           | 0.490     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.877     | Total ICU =          |          |            |           | 0.878     | Total ICU =                             |          |            |           | 0.878     |
| LOS =              |                       |          |        | D         | LOS =                |          |            |           | D         | LOS =                                   |          |            |           | D         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 SR-57 SB Ramps & Pathfinder Rd.

| Movement | YEAR 2030 w/o Project |          |        |                          | YEAR 2030 w/ Project |          |            |           |                          | YEAR 2030 w/ Project, with Improvements |          |            |           |                          |
|----------|-----------------------|----------|--------|--------------------------|----------------------|----------|------------|-----------|--------------------------|---|----------|------------|-----------|--------------------------|
|          | Lanes                 | Capacity | Volume | V/C Ratio                | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio                | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio                |
| NB Left  | 8                     | 2880     | 0      | 0.000                    | 8                    | 2880     | 0          | 0         | 0.000                    | 8                                       | 2880     | 0          | 0         | 0.000                    |
| NB Thru  | 8                     | 6400     | 0      | 0.000 *                  | 8                    | 6400     | 0          | 0         | 0.000 *                  | 8                                       | 6400     | 0          | 0         | 0.000 *                  |
| NB Right | 0                     | 0        | 0      |                          | 0                    | 0        | 0          | 0         |                          | 0                                       | 0        | 0          | 0         |                          |
| SB Left  | 1                     | 1600     | 299    | 0.187 *                  | 1                    | 1600     | 0          | 299       | 0.187 *                  | 1                                       | 1600     | 0          | 299       | 0.187 *                  |
| SB Thru  | 8                     | 6400     | 0      | 0.000                    | 8                    | 6400     | 0          | 0         | 0.000                    | 8                                       | 6400     | 0          | 0         | 0.000                    |
| SB Right | 1                     | 1600     | 170    | 0.106                    | 1                    | 1600     | 0          | 170       | 0.106                    | 1                                       | 1600     | 0          | 170       | 0.106                    |
| EB Left  | 8                     | 2880     | 0      | 0.000                    | 8                    | 2880     | 0          | 0         | 0.000                    | 8                                       | 2880     | 0          | 0         | 0.000                    |
| EB Thru  | 2                     | 3200     | 1202   | 0.376 *                  | 2                    | 3200     | 4          | 1206      | 0.377 *                  | 2                                       | 3200     | 0          | 1206      | 0.377 *                  |
| EB Right | 1                     | 1600     | 429    | 0.268                    | 1                    | 1600     | 0          | 429       | 0.268                    | 1                                       | 1600     | 0          | 429       | 0.268                    |
| WB Left  | 1                     | 1600     | 133    | 0.083 *                  | 1                    | 1600     | 0          | 133       | 0.083 *                  | 1                                       | 1600     | 0          | 133       | 0.083 *                  |
| WB Thru  | 2                     | 3200     | 1326   | 0.414                    | 2                    | 3200     | 2          | 1328      | 0.415                    | 2                                       | 3200     | 0          | 1328      | 0.415                    |
| WB Right | 0                     | 0        | 0      |                          | 0                    | 0        | 0          | 0         |                          | 0                                       | 0        | 0          | 0         |                          |
|          |                       |          |        | N/S Critical Sum = 0.187 |                      |          |            |           | N/S Critical Sum = 0.187 |   |          |            |           | N/S Critical Sum = 0.187 |
|          |                       |          |        | E/W Critical Sum = 0.459 |                      |          |            |           | E/W Critical Sum = 0.460 |   |          |            |           | E/W Critical Sum = 0.460 |
|          |                       |          |        | [RT Adjustment] = 0.000  |                      |          |            |           | [RT Adjustment] = 0.000  |   |          |            |           | [RT Adjustment] = 0.000  |
|          |                       |          |        | Clearance = 0.100        |                      |          |            |           | Clearance = 0.100        |   |          |            |           | Clearance = 0.100        |
|          |                       |          |        | <b>Total ICU = 0.746</b> |                      |          |            |           | <b>Total ICU = 0.747</b> |   |          |            |           | <b>Total ICU = 0.747</b> |
|          |                       |          |        | <b>LOS = C</b>           |                      |          |            |           | <b>LOS = C</b>           |   |          |            |           | <b>LOS = C</b>           |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 SR-57 NB Ramps & Pathfinder Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 341    | 0.213 *   | 1                    | 1600     | 0          | 341       | 0.213 *   | 1                                       | 1600     | 0          | 341       | 0.213 *   |
| NB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| NB Right           | 1                     | 1600     | 99     | 0.062     | 1                    | 1600     | 0          | 99        | 0.062     | 1                                       | 1600     | 0          | 99        | 0.062     |
| SB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| SB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| EB Left            | 1                     | 1600     | 125    | 0.078 *   | 1                    | 1600     | 0          | 125       | 0.078 *   | 1                                       | 1600     | 0          | 125       | 0.078 *   |
| EB Thru            | 2                     | 3200     | 1585   | 0.495     | 2                    | 3200     | 1          | 1586      | 0.496     | 2                                       | 3200     | 0          | 1586      | 0.496     |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| WB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 2                     | 3200     | 1352   | 0.423 *   | 2                    | 3200     | 4          | 1356      | 0.424 *   | 2                                       | 3200     | 0          | 1356      | 0.424 *   |
| WB Right           | 1                     | 1600     | 737    | 0.461     | 1                    | 1600     | 0          | 737       | 0.461     | 1                                       | 1600     | 0          | 737       | 0.461     |
| N/S Critical Sum = |                       |          |        | 0.213     | N/S Critical Sum =   |          |            |           | 0.213     | N/S Critical Sum =                      |          |            |           | 0.213     |
| E/W Critical Sum = |                       |          |        | 0.501     | E/W Critical Sum =   |          |            |           | 0.502     | E/W Critical Sum =                      |          |            |           | 0.502     |
| [RT Adjustment] =  |                       |          |        | 0.038     | [RT Adjustment] =    |          |            |           | 0.037     | [RT Adjustment] =                       |          |            |           | 0.037     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.852     | Total ICU =          |          |            |           | 0.852     | Total ICU =                             |          |            |           | 0.852     |
| LOS =              |                       |          |        | D         | LOS =                |          |            |           | D         | LOS =                                   |          |            |           | D         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
SR-57 NB Ramps & Pathfinder Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 492    | 0.308 *   | 1                    | 1600     | 0          | 492       | 0.308 *   | 1                                       | 1600     | 0          | 492       | 0.308 *   |
| NB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| NB Right           | 1                     | 1600     | 259    | 0.162     | 1                    | 1600     | 0          | 259       | 0.162     | 1                                       | 1600     | 0          | 259       | 0.162     |
| SB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| SB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| EB Left            | 1                     | 1600     | 138    | 0.086     | 1                    | 1600     | 0          | 138       | 0.086     | 1                                       | 1600     | 0          | 138       | 0.086     |
| EB Thru            | 2                     | 3200     | 1493   | 0.467 *   | 2                    | 3200     | 4          | 1497      | 0.468 *   | 2                                       | 3200     | 0          | 1497      | 0.468 *   |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| WB Left            | 8                     | 2880     | 0      | 0.000 *   | 8                    | 2880     | 0          | 0         | 0.000 *   | 8                                       | 2880     | 0          | 0         | 0.000 *   |
| WB Thru            | 2                     | 3200     | 937    | 0.293     | 2                    | 3200     | 2          | 939       | 0.293     | 2                                       | 3200     | 0          | 939       | 0.293     |
| WB Right           | 1                     | 1600     | 480    | 0.300     | 1                    | 1600     | 0          | 480       | 0.300     | 1                                       | 1600     | 0          | 480       | 0.300     |
| N/S Critical Sum = |                       |          |        | 0.308     | N/S Critical Sum =   |          |            |           | 0.308     | N/S Critical Sum =                      |          |            |           | 0.308     |
| E/W Critical Sum = |                       |          |        | 0.467     | E/W Critical Sum =   |          |            |           | 0.468     | E/W Critical Sum =                      |          |            |           | 0.468     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.875     | Total ICU =          |          |            |           | 0.876     | Total ICU =                             |          |            |           | 0.876     |
| LOS =              |                       |          |        | D         | LOS =                |          |            |           | D         | LOS =                                   |          |            |           | D         |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Fern Hollow Dr.-Brea Canyon Rd. & Pathfinder Rd.

| Movement           | YEAR 2030 w/o Project |          |        |              | YEAR 2030 w/ Project |          |            |           |              | YEAR 2030 w/ Project, with Improvements |          |            |           |              |
|--------------------|-----------------------|----------|--------|--------------|----------------------|----------|------------|-----------|--------------|---|----------|------------|-----------|--------------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio    | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    |
| NB Left            | 2                     | 2880     | 562    | 0.195 *      | 2                    | 2880     | 4          | 566       | 0.197 *      | 2                                       | 2880     | 0          | 566       | 0.197 *      |
| NB Thru            | 8                     | 6400     | 21     | 0.003        | 8                    | 6400     | 0          | 21        | 0.003        | 8                                       | 6400     | 0          | 21        | 0.003        |
| NB Right           | 1                     | 1600     | 130    | 0.081        | 1                    | 1600     | 0          | 130       | 0.081        | 1                                       | 1600     | 0          | 130       | 0.081        |
| SB Left            | 8                     | 2880     | 82     | 0.028        | 8                    | 2880     | 0          | 82        | 0.028        | 8                                       | 2880     | 0          | 82        | 0.028        |
| SB Thru            | 1                     | 1600     | 48     | 0.198 *      | 1                    | 1600     | 0          | 48        | 0.198 *      | 1                                       | 1600     | 0          | 48        | 0.198 *      |
| SB Right           | 0                     | 0        | 269    |              | 0                    | 0        | 0          | 269       |              | 0                                       | 0        | 0          | 269       |              |
| EB Left            | 1                     | 1600     | 76     | 0.048 *      | 1                    | 1600     | 0          | 76        | 0.048 *      | 1                                       | 1600     | 0          | 76        | 0.048 *      |
| EB Thru            | 2                     | 3200     | 955    | 0.298        | 2                    | 3200     | 0          | 955       | 0.298        | 2                                       | 3200     | 0          | 955       | 0.298        |
| EB Right           | 1                     | 1600     | 588    | 0.368        | 1                    | 1600     | 1          | 589       | 0.368        | 1                                       | 1600     | 0          | 589       | 0.368        |
| WB Left            | 1                     | 1600     | 52     | 0.033        | 1                    | 1600     | 0          | 52        | 0.033        | 1                                       | 1600     | 0          | 52        | 0.033        |
| WB Thru            | 2                     | 3200     | 1011   | 0.325 *      | 2                    | 3200     | 0          | 1011      | 0.325 *      | 2                                       | 3200     | 0          | 1011      | 0.325 *      |
| WB Right           | 0                     | 0        | 29     |              | 0                    | 0        | 0          | 29        |              | 0                                       | 0        | 0          | 29        |              |
| N/S Critical Sum = |                       |          |        | 0.393        | N/S Critical Sum =   |          |            |           | 0.395        | N/S Critical Sum =                      |          |            |           | 0.395        |
| E/W Critical Sum = |                       |          |        | 0.373        | E/W Critical Sum =   |          |            |           | 0.373        | E/W Critical Sum =                      |          |            |           | 0.373        |
| [RT Adjustment] =  |                       |          |        | 0.000        | [RT Adjustment] =    |          |            |           | 0.000        | [RT Adjustment] =                       |          |            |           | 0.000        |
| Clearance =        |                       |          |        | 0.100        | Clearance =          |          |            |           | 0.100        | Clearance =                             |          |            |           | 0.100        |
| <b>Total ICU =</b> |                       |          |        | <b>0.866</b> | <b>Total ICU =</b>   |          |            |           | <b>0.868</b> | <b>Total ICU =</b>                      |          |            |           | <b>0.868</b> |
| LOS =              |                       |          |        | <b>D</b>     | LOS =                |          |            |           | <b>D</b>     | LOS =                                   |          |            |           | <b>D</b>     |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Fern Hollow Dr.-Brea Canyon Rd. & Pathfinder Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 2                     | 2880     | 588    | 0.204 *   | 2                    | 2880     | 2          | 590       | 0.205 *   | 2                                       | 2880     | 0          | 590       | 0.205 *   |
| NB Thru            | 8                     | 6400     | 29     | 0.005     | 8                    | 6400     | 0          | 29        | 0.005     | 8                                       | 6400     | 0          | 29        | 0.005     |
| NB Right           | 1                     | 1600     | 87     | 0.054     | 1                    | 1600     | 0          | 87        | 0.054     | 1                                       | 1600     | 0          | 87        | 0.054     |
| SB Left            | 8                     | 2880     | 16     | 0.006     | 8                    | 2880     | 0          | 16        | 0.006     | 8                                       | 2880     | 0          | 16        | 0.006     |
| SB Thru            | 1                     | 1600     | 19     | 0.059 *   | 1                    | 1600     | 0          | 19        | 0.059 *   | 1                                       | 1600     | 0          | 19        | 0.059 *   |
| SB Right           | 0                     | 0        | 75     |           | 0                    | 0        | 0          | 75        |           | 0                                       | 0        | 0          | 75        |           |
| EB Left            | 1                     | 1600     | 136    | 0.085     | 1                    | 1600     | 0          | 136       | 0.085     | 1                                       | 1600     | 0          | 136       | 0.085     |
| EB Thru            | 2                     | 3200     | 1386   | 0.433 *   | 2                    | 3200     | 0          | 1386      | 0.433 *   | 2                                       | 3200     | 0          | 1386      | 0.433 *   |
| EB Right           | 1                     | 1600     | 250    | 0.156     | 1                    | 1600     | 4          | 254       | 0.159     | 1                                       | 1600     | 0          | 254       | 0.159     |
| WB Left            | 1                     | 1600     | 33     | 0.021 *   | 1                    | 1600     | 0          | 33        | 0.021 *   | 1                                       | 1600     | 0          | 33        | 0.021 *   |
| WB Thru            | 2                     | 3200     | 744    | 0.237     | 2                    | 3200     | 0          | 744       | 0.237     | 2                                       | 3200     | 0          | 744       | 0.237     |
| WB Right           | 0                     | 0        | 14     |           | 0                    | 0        | 0          | 14        |           | 0                                       | 0        | 0          | 14        |           |
| N/S Critical Sum = |                       |          |        | 0.263     | N/S Critical Sum =   |          |            |           | 0.264     | N/S Critical Sum =                      |          |            |           | 0.264     |
| E/W Critical Sum = |                       |          |        | 0.454     | E/W Critical Sum =   |          |            |           | 0.454     | E/W Critical Sum =                      |          |            |           | 0.454     |
| [SB Adjustment] =  |                       |          |        | 0.010     | [SB Adjustment] =    |          |            |           | 0.010     | [SB Adjustment] =                       |          |            |           | 0.010     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.827     | Total ICU =          |          |            |           | 0.828     | Total ICU =                             |          |            |           | 0.828     |
| LOS =              |                       |          |        | D         | LOS =                |          |            |           | D         | LOS =                                   |          |            |           | D         |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Pathfinder Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 191    | 0.119 *   | 1                    | 1600     | 0          | 191       | 0.119 *   | 1                                       | 1600     | 0          | 191       | 0.119 *   |
| NB Thru            | 2                     | 3200     | 783    | 0.247     | 2                    | 3200     | 15         | 798       | 0.252     | 3                                       | 4800     | 0          | 798       | 0.168     |
| NB Right           | 0                     | 0        | 8      |           | 0                    | 0        | 0          | 8         |           | 0                                       | 0        | 0          | 8         |           |
| SB Left            | 1                     | 1600     | 3      | 0.002     | 1                    | 1600     | 0          | 3         | 0.002     | 1                                       | 1600     | 0          | 3         | 0.002     |
| SB Thru            | 2                     | 3200     | 1810   | 0.566 *   | 2                    | 3200     | 3          | 1813      | 0.567 *   | 3                                       | 4800     | 0          | 1813      | 0.378 *   |
| SB Right           | 1                     | 1600     | 947    | 0.592     | 1                    | 1600     | 0          | 947       | 0.592     | 2                                       | 3200     | 0          | 947       | 0.296     |
| EB Left            | 2                     | 2880     | 902    | 0.313 *   | 2                    | 2880     | 0          | 902       | 0.313 *   | 3                                       | 3890     | 0          | 902       | 0.232 *   |
| EB Thru            | 1                     | 1600     | 17     | 0.011     | 1                    | 1600     | 0          | 17        | 0.011     | 8                                       | 6400     | 0          | 17        | 0.003     |
| EB Right           | 1                     | 1600     | 227    | 0.142     | 1                    | 1600     | 0          | 227       | 0.142     | 1                                       | 1600     | 0          | 227       | 0.142     |
| WB Left            | 1                     | 1600     | 16     | 0.010     | 1                    | 1600     | 0          | 16        | 0.010     | 1                                       | 1600     | 0          | 16        | 0.010     |
| WB Thru            | 1                     | 1600     | 35     | 0.024 *   | 1                    | 1600     | 0          | 35        | 0.024 *   | 1                                       | 1600     | 0          | 35        | 0.024 *   |
| WB Right           | 0                     | 0        | 3      |           | 0                    | 0        | 0          | 3         |           | 0                                       | 0        | 0          | 3         |           |
| N/S Critical Sum = |                       |          |        | 0.685     | N/S Critical Sum =   |          |            |           | 0.686     | N/S Critical Sum =                      |          |            |           | 0.497     |
| E/W Critical Sum = |                       |          |        | 0.337     | E/W Critical Sum =   |          |            |           | 0.337     | E/W Critical Sum =                      |          |            |           | 0.256     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.066    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 1.052     | Total ICU =          |          |            |           | 1.053     | Total ICU =                             |          |            |           | 0.787     |
| LOS =              |                       |          |        | F         | LOS =                |          |            |           | F         | LOS =                                   |          |            |           | C         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Pathfinder Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 140    | 0.088     | 1                    | 1600     | 0          | 140       | 0.088     | 1                                       | 1600     | 0          | 140       | 0.088     |
| NB Thru            | 2                     | 3200     | 2093   | 0.657 *   | 2                    | 3200     | 7          | 2100      | 0.659 *   | 3                                       | 4800     | 0          | 2100      | 0.439 *   |
| NB Right           | 0                     | 0        | 8      |           | 0                    | 0        | 0          | 8         |           | 0                                       | 0        | 0          | 8         |           |
| SB Left            | 1                     | 1600     | 144    | 0.090 *   | 1                    | 1600     | 0          | 144       | 0.090 *   | 1                                       | 1600     | 0          | 144       | 0.090 *   |
| SB Thru            | 2                     | 3200     | 951    | 0.297     | 2                    | 3200     | 14         | 965       | 0.302     | 3                                       | 4800     | 0          | 965       | 0.201     |
| SB Right           | 1                     | 1600     | 601    | 0.376     | 1                    | 1600     | 0          | 601       | 0.376     | 2                                       | 3200     | 0          | 601       | 0.188     |
| EB Left            | 2                     | 2880     | 1176   | 0.408 *   | 2                    | 2880     | 0          | 1176      | 0.408 *   | 3                                       | 3890     | 0          | 1176      | 0.302 *   |
| EB Thru            | 1                     | 1600     | 19     | 0.012     | 1                    | 1600     | 0          | 19        | 0.012     | 8                                       | 6400     | 0          | 19        | 0.003     |
| EB Right           | 1                     | 1600     | 195    | 0.122     | 1                    | 1600     | 0          | 195       | 0.122     | 1                                       | 1600     | 0          | 195       | 0.122     |
| WB Left            | 1                     | 1600     | 3      | 0.002     | 1                    | 1600     | 0          | 3         | 0.002     | 1                                       | 1600     | 0          | 3         | 0.002     |
| WB Thru            | 1                     | 1600     | 8      | 0.008 *   | 1                    | 1600     | 0          | 8         | 0.008 *   | 1                                       | 1600     | 0          | 8         | 0.008 *   |
| WB Right           | 0                     | 0        | 5      |           | 0                    | 0        | 0          | 5         |           | 0                                       | 0        | 0          | 5         |           |
| N/S Critical Sum = |                       |          |        | 0.747     | N/S Critical Sum =   |          |            |           | 0.749     | N/S Critical Sum =                      |          |            |           | 0.529     |
| E/W Critical Sum = |                       |          |        | 0.416     | E/W Critical Sum =   |          |            |           | 0.416     | E/W Critical Sum =                      |          |            |           | 0.310     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.065    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 1.193     | Total ICU =          |          |            |           | 1.195     | Total ICU =                             |          |            |           | 0.874     |
| LOS =              |                       |          |        | F         | LOS =                |          |            |           | F         | LOS =                                   |          |            |           | D         |

## Table X

### AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Diamond Bar Blvd. & Shadow Canyon Dr.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000 *   | 8                    | 2880     | 0          | 0         | 0.000 *   | 8                                       | 2880     | 0          | 0         | 0.000 *   |
| NB Thru            | 2                     | 3200     | 840    | 0.263     | 2                    | 3200     | 15         | 855       | 0.267     | 2                                       | 3200     | 0          | 855       | 0.267     |
| NB Right           | 1                     | 1600     | 48     | 0.030     | 1                    | 1600     | 0          | 48        | 0.030     | 1                                       | 1600     | 0          | 48        | 0.030     |
| SB Left            | 1                     | 1600     | 85     | 0.053     | 1                    | 1600     | 0          | 85        | 0.053     | 1                                       | 1600     | 0          | 85        | 0.053     |
| SB Thru            | 2                     | 3200     | 1911   | 0.597 *   | 2                    | 3200     | 3          | 1914      | 0.598 *   | 2                                       | 3200     | 0          | 1914      | 0.598 *   |
| SB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| EB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| EB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| WB Left            | 1                     | 1600     | 192    | 0.120 *   | 1                    | 1600     | 0          | 192       | 0.120 *   | 1                                       | 1600     | 0          | 192       | 0.120 *   |
| WB Thru            | 2                     | 3200     | 0      | 0.048     | 2                    | 3200     | 0          | 0         | 0.048     | 2                                       | 3200     | 0          | 0         | 0.048     |
| WB Right           | 0                     | 0        | 155    |           | 0                    | 0        | 0          | 155       |           | 0                                       | 0        | 0          | 155       |           |
| N/S Critical Sum = |                       |          |        | 0.597     | N/S Critical Sum =   |          |            |           | 0.598     | N/S Critical Sum =                      |          |            |           | 0.598     |
| E/W Critical Sum = |                       |          |        | 0.120     | E/W Critical Sum =   |          |            |           | 0.120     | E/W Critical Sum =                      |          |            |           | 0.120     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.070    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.747     | Total ICU =          |          |            |           | 0.748     | Total ICU =                             |          |            |           | 0.748     |
| LOS =              |                       |          |        | C         | LOS =                |          |            |           | C         | LOS =                                   |          |            |           | C         |

# Table Y

## PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Shadow Canyon Dr.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 2                     | 3200     | 2251   | 0.703 *   | 2                    | 3200     | 7          | 2258      | 0.706 *   | 2                                       | 3200     | 0          | 2258      | 0.706 *   |
| NB Right           | 1                     | 1600     | 134    | 0.084     | 1                    | 1600     | 0          | 134       | 0.084     | 1                                       | 1600     | 0          | 134       | 0.084     |
| SB Left            | 1                     | 1600     | 134    | 0.084 *   | 1                    | 1600     | 0          | 134       | 0.084 *   | 1                                       | 1600     | 0          | 134       | 0.084 *   |
| SB Thru            | 2                     | 3200     | 1181   | 0.369     | 2                    | 3200     | 14         | 1195      | 0.373     | 2                                       | 3200     | 0          | 1195      | 0.373     |
| SB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| EB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| EB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| WB Left            | 1                     | 1600     | 69     | 0.043 *   | 1                    | 1600     | 0          | 69        | 0.043 *   | 1                                       | 1600     | 0          | 69        | 0.043 *   |
| WB Thru            | 2                     | 3200     | 0      | 0.033     | 2                    | 3200     | 0          | 0         | 0.033     | 2                                       | 3200     | 0          | 0         | 0.033     |
| WB Right           | 0                     | 0        | 105    |           | 0                    | 0        | 0          | 105       |           | 0                                       | 0        | 0          | 105       |           |
| N/S Critical Sum = |                       |          |        | 0.787     | N/S Critical Sum =   |          |            |           | 0.790     | N/S Critical Sum =                      |          |            |           | 0.790     |
| E/W Critical Sum = |                       |          |        | 0.043     | E/W Critical Sum =   |          |            |           | 0.043     | E/W Critical Sum =                      |          |            |           | 0.043     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.070    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.860     | Total ICU =          |          |            |           | 0.863     | Total ICU =                             |          |            |           | 0.863     |
| LOS =              |                       |          |        | D         | LOS =                |          |            |           | D         | LOS =                                   |          |            |           | D         |

### ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd & Fountain Sprg Ln |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 w/o Project              |
| Analysis Time Period | AM Peak Hr. |                  |                                |

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Project ID                            |                                     |
| East/West Street: Fountain Spring Ln. | North/South Street: Brea Canyon Rd. |

| Volume Adjustments and Site Characteristics |           |   |   |           |   |     |
|---|-----------|---|---|-----------|---|-----|
| Approach                                    | Eastbound |   |   | Westbound |   |     |
|   | L         | T | R | L         | T | R   |
| Movement                                    |           |   |   |           |   |     |
| Volume (veh/h)                              | 0         | 0 | 0 | 65        | 0 | 244 |
| %Thrus Left Lane                            |           |   |   |           |   |     |

| Approach         | Northbound |     |    | Southbound |     |   |
|------------------|------------|-----|----|------------|-----|---|
|                  | L          | T   | R  | L          | T   | R |
| Movement         |            |     |    |            |     |   |
| Volume (veh/h)   | 0          | 290 | 23 | 203        | 568 | 0 |
| %Thrus Left Lane |            |     |    |            |     |   |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     |           |    | LTR       |    | T          | R    | L          | T    |
| PHF               |           |    | 0.97      |    | 0.97       | 0.97 | 0.97       | 0.97 |
| Flow Rate (veh/h) |           |    | 318       |    | 298        | 23   | 209        | 585  |
| % Heavy Vehicles  |           |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 0         |    |           | 1  |            | 2    |            | 2    |
| Geometry Group    |           |    |           | 1  |            | 5    |            | 5    |
| Duration, T       |           |    |           |    |            | 0.25 |            |      |

| Saturation Headway Adjustment Worksheet |  |  |      |      |      |      |      |      |
|---|--|--|------|------|------|------|------|------|
| Prop. Left-Turns                        |  |  | 0.2  |      | 0.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns                       |  |  | 0.8  |      | 0.0  | 1.0  | 0.0  | 0.0  |
| Prop. Heavy Vehicle                     |  |  | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj                                 |  |  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj                                 |  |  | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj                                 |  |  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed                          |  |  | -0.4 |      | 0.0  | -0.7 | 0.5  | 0.0  |

| Departure Headway and Service Time |  |  |      |  |      |      |      |      |
|------------------------------------|--|--|------|--|------|------|------|------|
| hd, initial value (s)              |  |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                         |  |  | 0.28 |  | 0.26 | 0.02 | 0.19 | 0.52 |
| hd, final value (s)                |  |  | 6.03 |  | 6.74 | 6.02 | 6.62 | 6.11 |
| x, final value                     |  |  | 0.53 |  | 0.56 | 0.04 | 0.38 | 0.99 |
| Move-up time, m (s)                |  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s)   |  |  | 4.0  |  | 4.4  | 3.7  | 4.3  | 3.8  |

| Capacity and Level of Service |           |    |           |    |            |      |            |       |
|-------------------------------|-----------|----|-----------|----|------------|------|------------|-------|
|                               | Eastbound |    | Westbound |    | Northbound |      | Southbound |       |
|                               | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2    |
| Capacity (veh/h)              |           |    | 568       |    | 523        | 273  | 459        | 589   |
| Delay (s/veh)                 |           |    | 15.67     |    | 17.59      | 8.96 | 13.39      | 59.49 |
| LOS                           |           |    | C         |    | C          | A    | B          | F     |
| Approach: Delay (s/veh)       |           |    | 15.67     |    | 16.97      |      | 47.35      |       |
| LOS                           |           |    | C         |    | C          |      | E          |       |
| Intersection Delay (s/veh)    |           |    | 33.52     |    |            |      |            |       |
| Intersection LOS              |           |    | D         |    |            |      |            |       |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd & Fountain Sprg Ln |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 w/o Project              |
| Analysis Time Period | PM Peak Hr. |                  |                                |

Project ID BCyn&amp;FountS, 2030-PM

East/West Street: Fountain Spring Ln.

North/South Street: Brea Canyon Rd.

### Volume Adjustments and Site Characteristics

| Approach         | Eastbound |   |   | Westbound |   |    |
|------------------|-----------|---|---|-----------|---|----|
|                  | L         | T | R | L         | T | R  |
| Movement         |           |   |   |           |   |    |
| Volume (veh/h)   | 0         | 0 | 0 | 13        | 0 | 81 |
| %Thrus Left Lane |           |   |   |           |   |    |

| Approach         | Northbound |     |    | Southbound |     |   |
|------------------|------------|-----|----|------------|-----|---|
|                  | L          | T   | R  | L          | T   | R |
| Movement         |            |     |    |            |     |   |
| Volume (veh/h)   | 0          | 601 | 14 | 87         | 237 | 0 |
| %Thrus Left Lane |            |     |    |            |     |   |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     |           |    | LTR       |    | T          | R    | L          | T    |
| PHF               |           |    | 0.97      |    | 0.97       | 0.97 | 0.97       | 0.97 |
| Flow Rate (veh/h) |           |    | 96        |    | 619        | 14   | 89         | 244  |
| % Heavy Vehicles  |           |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 0         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    |           |    | 1         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

### Saturation Headway Adjustment Worksheet

|                     |  |  |      |      |      |      |      |      |
|---------------------|--|--|------|------|------|------|------|------|
| Prop. Left-Turns    |  |  | 0.1  |      | 0.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns   |  |  | 0.9  |      | 0.0  | 1.0  | 0.0  | 0.0  |
| Prop. Heavy Vehicle |  |  | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj             |  |  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj             |  |  | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj             |  |  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed      |  |  | -0.5 |      | 0.0  | -0.7 | 0.5  | 0.0  |

### Departure Headway and Service Time

|                                  |  |  |      |  |      |      |      |      |
|----------------------------------|--|--|------|--|------|------|------|------|
| hd, initial value (s)            |  |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                       |  |  | 0.09 |  | 0.55 | 0.01 | 0.08 | 0.22 |
| hd, final value (s)              |  |  | 5.63 |  | 5.14 | 4.43 | 5.86 | 5.36 |
| x, final value                   |  |  | 0.15 |  | 0.88 | 0.02 | 0.14 | 0.36 |
| Move-up time, m (s)              |  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s) |  |  | 3.6  |  | 2.8  | 2.1  | 3.6  | 3.1  |

### Capacity and Level of Service

|                            | Eastbound |    | Westbound |    | Northbound |      | Southbound |       |
|----------------------------|-----------|----|-----------|----|------------|------|------------|-------|
|                            | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2    |
| Capacity (veh/h)           |           |    | 346       |    | 699        | 264  | 339        | 494   |
| Delay (s/veh)              |           |    | 9.63      |    | 33.80      | 7.21 | 9.55       | 11.08 |
| LOS                        |           |    | A         |    | D          | A    | A          | B     |
| Approach: Delay (s/veh)    |           |    | 9.63      |    | 33.21      |      | 10.67      |       |
| LOS                        |           |    | A         |    | D          |      | B          |       |
| Intersection Delay (s/veh) | 24.01     |    |           |    |            |      |            |       |
| Intersection LOS           | C         |    |           |    |            |      |            |       |

### ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd & Fountain Sprg Ln |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 + Project                |
| Analysis Time Period | AM Peak Hr. |                  |                                |

Project ID *BCyn&FountS, 2030wP-AM*  
 East/West Street: *Fountain Spring Ln.*      North/South Street: *Brea Canyon Rd.*

| Volume Adjustments and Site Characteristics |            |     |    |            |     |     |
|---|------------|-----|----|------------|-----|-----|
| Approach                                    | Eastbound  |     |    | Westbound  |     |     |
|   | L          | T   | R  | L          | T   | R   |
| Movement                                    |            |     |    |            |     |     |
| Volume (veh/h)                              | 0          | 0   | 0  | 65         | 0   | 244 |
| %Thrus Left Lane                            |            |     |    |            |     |     |
| Approach                                    | Northbound |     |    | Southbound |     |     |
|   | L          | T   | R  | L          | T   | R   |
| Movement                                    |            |     |    |            |     |     |
| Volume (veh/h)                              | 0          | 294 | 23 | 203        | 569 | 0   |
| %Thrus Left Lane                            |            |     |    |            |     |     |

|                   | Eastbound |    | Westbound  |    | Northbound |          | Southbound |          |
|-------------------|-----------|----|------------|----|------------|----------|------------|----------|
|                   | L1        | L2 | L1         | L2 | L1         | L2       | L1         | L2       |
| Configuration     |           |    | <i>LTR</i> |    | <i>T</i>   | <i>R</i> | <i>L</i>   | <i>T</i> |
| PHF               |           |    | 0.97       |    | 0.97       | 0.97     | 0.97       | 0.97     |
| Flow Rate (veh/h) |           |    | 318        |    | 303        | 23       | 209        | 586      |
| % Heavy Vehicles  |           |    | 0          |    | 0          | 0        | 0          | 0        |
| No. Lanes         | 0         |    | 1          |    | 2          |          | 2          |          |
| Geometry Group    |           |    | 1          |    | 5          |          | 5          |          |
| Duration, T       |           |    |            |    | 0.25       |          |            |          |

| Saturation Headway Adjustment Worksheet |  |  |      |      |      |      |      |      |
|---|--|--|------|------|------|------|------|------|
| Prop. Left-Turns                        |  |  | 0.2  |      | 0.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns                       |  |  | 0.8  |      | 0.0  | 1.0  | 0.0  | 0.0  |
| Prop. Heavy Vehicle                     |  |  | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj                                 |  |  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj                                 |  |  | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj                                 |  |  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed                          |  |  | -0.4 |      | 0.0  | -0.7 | 0.5  | 0.0  |

| Departure Headway and Service Time |  |  |      |  |      |      |      |      |
|------------------------------------|--|--|------|--|------|------|------|------|
| hd, initial value (s)              |  |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                         |  |  | 0.28 |  | 0.27 | 0.02 | 0.19 | 0.52 |
| hd, final value (s)                |  |  | 6.04 |  | 6.74 | 6.03 | 6.63 | 6.12 |
| x, final value                     |  |  | 0.53 |  | 0.57 | 0.04 | 0.39 | 1.00 |
| Move-up time, m (s)                |  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s)   |  |  | 4.0  |  | 4.4  | 3.7  | 4.3  | 3.8  |

| Capacity and Level of Service |           |    |           |    |            |      |            |       |
|-------------------------------|-----------|----|-----------|----|------------|------|------------|-------|
|                               | Eastbound |    | Westbound |    | Northbound |      | Southbound |       |
|                               | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2    |
| Capacity (veh/h)              |           |    | 568       |    | 523        | 273  | 459        | 588   |
| Delay (s/veh)                 |           |    | 15.74     |    | 17.92      | 8.97 | 13.42      | 60.47 |
| LOS                           |           |    | C         |    | C          | A    | B          | F     |
| Approach: Delay (s/veh)       |           |    | 15.74     |    | 17.29      |      | 48.10      |       |
| LOS                           |           |    | C         |    | C          |      | E          |       |
| Intersection Delay (s/veh)    |           |    | 33.97     |    |            |      |            |       |
| Intersection LOS              |           |    | D         |    |            |      |            |       |

### ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd & Fountain Sprg Ln |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 + Project                |
| Analysis Time Period | PM Peak Hr. |                  |                                |

Project ID *BCyn&FountS, 2030wP-PM*  
 East/West Street: *Fountain Spring Ln.* North/South Street: *Brea Canyon Rd.*

| Volume Adjustments and Site Characteristics |           |   |   |           |   |    |
|---|-----------|---|---|-----------|---|----|
| Approach                                    | Eastbound |   |   | Westbound |   |    |
|   | L         | T | R | L         | T | R  |
| Movement                                    |           |   |   |           |   |    |
| Volume (veh/h)                              | 0         | 0 | 0 | 13        | 0 | 81 |
| %Thrus Left Lane                            |           |   |   |           |   |    |

| Approach         | Northbound |     |    | Southbound |     |   |
|------------------|------------|-----|----|------------|-----|---|
|                  | L          | T   | R  | L          | T   | R |
| Movement         |            |     |    |            |     |   |
| Volume (veh/h)   | 0          | 603 | 14 | 87         | 241 | 0 |
| %Thrus Left Lane |            |     |    |            |     |   |

|                   | Eastbound |    | Westbound  |    | Northbound |          | Southbound |          |
|-------------------|-----------|----|------------|----|------------|----------|------------|----------|
|                   | L1        | L2 | L1         | L2 | L1         | L2       | L1         | L2       |
| Configuration     |           |    | <i>LTR</i> |    | <i>T</i>   | <i>R</i> | <i>L</i>   | <i>T</i> |
| PHF               |           |    | 0.96       |    | 0.96       | 0.96     | 0.96       | 0.96     |
| Flow Rate (veh/h) |           |    | 97         |    | 628        | 14       | 90         | 251      |
| % Heavy Vehicles  |           |    | 0          |    | 0          | 0        | 0          | 0        |
| No. Lanes         | 0         |    | 1          |    | 2          |          | 2          |          |
| Geometry Group    |           |    | 1          |    | 5          |          | 5          |          |
| Duration, T       | 0.25      |    |            |    |            |          |            |          |

| Saturation Headway Adjustment Worksheet |  |  |      |      |      |      |      |      |
|---|--|--|------|------|------|------|------|------|
| Prop. Left-Turns                        |  |  | 0.1  |      | 0.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns                       |  |  | 0.9  |      | 0.0  | 1.0  | 0.0  | 0.0  |
| Prop. Heavy Vehicle                     |  |  | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj                                 |  |  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj                                 |  |  | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj                                 |  |  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed                          |  |  | -0.5 |      | 0.0  | -0.7 | 0.5  | 0.0  |

| Departure Headway and Service Time |  |  |      |  |      |      |      |      |
|------------------------------------|--|--|------|--|------|------|------|------|
| hd, initial value (s)              |  |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                         |  |  | 0.09 |  | 0.56 | 0.01 | 0.08 | 0.22 |
| hd, final value (s)                |  |  | 5.67 |  | 5.15 | 4.45 | 5.88 | 5.38 |
| x, final value                     |  |  | 0.15 |  | 0.90 | 0.02 | 0.15 | 0.37 |
| Move-up time, m (s)                |  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s)   |  |  | 3.7  |  | 2.9  | 2.1  | 3.6  | 3.1  |

| Capacity and Level of Service |           |    |           |    |            |      |            |       |
|-------------------------------|-----------|----|-----------|----|------------|------|------------|-------|
|                               | Eastbound |    | Westbound |    | Northbound |      | Southbound |       |
|                               | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2    |
| Capacity (veh/h)              |           |    | 347       |    | 697        | 264  | 340        | 501   |
| Delay (s/veh)                 |           |    | 9.69      |    | 36.05      | 7.23 | 9.59       | 11.26 |
| LOS                           |           |    | A         |    | E          | A    | A          | B     |
| Approach: Delay (s/veh)       |           |    | 9.69      |    | 35.42      |      | 10.82      |       |
| LOS                           |           |    | A         |    | E          |      | B          |       |
| Intersection Delay (s/veh)    | 25.34     |    |           |    |            |      |            |       |
| Intersection LOS              | D         |    |           |    |            |      |            |       |

# Table X

## AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Fountain Springs Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 41     | 0.026 *   | 1                    | 1600     | 0          | 41        | 0.026 *   | 1                                       | 1600     | 0          | 41        | 0.026 *   |
| NB Thru            | 2                     | 3200     | 782    | 0.244     | 2                    | 3200     | 15         | 797       | 0.249     | 2                                       | 3200     | 0          | 797       | 0.249     |
| NB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| SB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 2                     | 3200     | 1782   | 0.632 *   | 2                    | 3200     | 3          | 1785      | 0.633 *   | 2                                       | 3200     | 0          | 1785      | 0.633 *   |
| SB Right           | 0                     | 0        | 239    |           | 0                    | 0        | 0          | 239       |           | 0                                       | 0        | 0          | 239       |           |
| EB Left            | 1                     | 1600     | 117    | 0.073 *   | 1                    | 1600     | 0          | 117       | 0.073 *   | 1                                       | 1600     | 0          | 117       | 0.073 *   |
| EB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| EB Right           | 1                     | 1600     | 77     | 0.048     | 1                    | 1600     | 0          | 77        | 0.048     | 1                                       | 1600     | 0          | 77        | 0.048     |
| WB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| WB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| N/S Critical Sum = |                       |          |        | 0.658     | N/S Critical Sum =   |          |            |           | 0.659     | N/S Critical Sum =                      |          |            |           | 0.659     |
| E/W Critical Sum = |                       |          |        | 0.073     | E/W Critical Sum =   |          |            |           | 0.073     | E/W Critical Sum =                      |          |            |           | 0.073     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.070    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.761     | Total ICU =          |          |            |           | 0.762     | Total ICU =                             |          |            |           | 0.762     |
| LOS =              |                       |          |        | C         | LOS =                |          |            |           | C         | LOS =                                   |          |            |           | C         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Fountain Springs Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 47     | 0.029     | 1                    | 1600     | 0          | 47        | 0.029     | 1                                       | 1600     | 0          | 47        | 0.029     |
| NB Thru            | 2                     | 3200     | 2234   | 0.698 *   | 2                    | 3200     | 7          | 2241      | 0.700 *   | 2                                       | 3200     | 0          | 2241      | 0.700 *   |
| NB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| SB Left            | 8                     | 2880     | 0      | 0.000 *   | 8                    | 2880     | 0          | 0         | 0.000 *   | 8                                       | 2880     | 0          | 0         | 0.000 *   |
| SB Thru            | 2                     | 3200     | 1131   | 0.383     | 2                    | 3200     | 14         | 1145      | 0.388     | 2                                       | 3200     | 0          | 1145      | 0.388     |
| SB Right           | 0                     | 0        | 95     |           | 0                    | 0        | 0          | 95        |           | 0                                       | 0        | 0          | 95        |           |
| EB Left            | 1                     | 1600     | 171    | 0.107 *   | 1                    | 1600     | 0          | 171       | 0.107 *   | 1                                       | 1600     | 0          | 171       | 0.107 *   |
| EB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| EB Right           | 1                     | 1600     | 47     | 0.029     | 1                    | 1600     | 0          | 47        | 0.029     | 1                                       | 1600     | 0          | 47        | 0.029     |
| WB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| WB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| N/S Critical Sum = |                       |          |        | 0.698     | N/S Critical Sum =   |          |            |           | 0.700     | N/S Critical Sum =                      |          |            |           | 0.700     |
| E/W Critical Sum = |                       |          |        | 0.107     | E/W Critical Sum =   |          |            |           | 0.107     | E/W Critical Sum =                      |          |            |           | 0.107     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.070    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.835     | Total ICU =          |          |            |           | 0.837     | Total ICU =                             |          |            |           | 0.837     |
| LOS =              |                       |          |        | D         | LOS =                |          |            |           | D         | LOS =                                   |          |            |           | D         |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Sugar Pine Pl.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 18     | 0.011 *   | 1                    | 1600     | 0          | 18        | 0.011 *   | 1                                       | 1600     | 0          | 18        | 0.011 *   |
| NB Thru            | 2                     | 3200     | 766    | 0.242     | 2                    | 3200     | 15         | 781       | 0.246     | 2                                       | 3200     | 0          | 781       | 0.246     |
| NB Right           | 0                     | 0        | 7      |           | 0                    | 0        | 0          | 7         |           | 0                                       | 0        | 0          | 7         |           |
| SB Left            | 1                     | 1600     | 15     | 0.009     | 1                    | 1600     | 0          | 15        | 0.009     | 1                                       | 1600     | 0          | 15        | 0.009     |
| SB Thru            | 2                     | 3200     | 1853   | 0.579 *   | 2                    | 3200     | 3          | 1856      | 0.580 *   | 2                                       | 3200     | 0          | 1856      | 0.580 *   |
| SB Right           | 1                     | 1600     | 76     | 0.048     | 1                    | 1600     | 0          | 76        | 0.048     | 1                                       | 1600     | 0          | 76        | 0.048     |
| EB Left            | 1                     | 1600     | 22     | 0.014     | 1                    | 1600     | 0          | 22        | 0.014     | 1                                       | 1600     | 0          | 22        | 0.014     |
| EB Thru            | 1                     | 1600     | 2      | 0.001 *   | 1                    | 1600     | 0          | 2         | 0.001 *   | 1                                       | 1600     | 0          | 2         | 0.001 *   |
| EB Right           | 1                     | 1600     | 33     | 0.021     | 1                    | 1600     | 0          | 33        | 0.021     | 1                                       | 1600     | 0          | 33        | 0.021     |
| WB Left            | 1                     | 1600     | 27     | 0.017 *   | 1                    | 1600     | 0          | 27        | 0.017 *   | 1                                       | 1600     | 0          | 27        | 0.017 *   |
| WB Thru            | 1                     | 1600     | 1      | 0.001     | 1                    | 1600     | 0          | 1         | 0.001     | 1                                       | 1600     | 0          | 1         | 0.001     |
| WB Right           | 1                     | 1600     | 33     | 0.021     | 1                    | 1600     | 0          | 33        | 0.021     | 1                                       | 1600     | 0          | 33        | 0.021     |
| N/S Critical Sum = |                       |          |        | 0.590     | N/S Critical Sum =   |          |            |           | 0.591     | N/S Critical Sum =                      |          |            |           | 0.591     |
| E/W Critical Sum = |                       |          |        | 0.018     | E/W Critical Sum =   |          |            |           | 0.018     | E/W Critical Sum =                      |          |            |           | 0.018     |
| [RT Adjustment] =  |                       |          |        | -0.061    | [RT Adjustment] =    |          |            |           | -0.061    | [RT Adjustment] =                       |          |            |           | -0.061    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.647     | Total ICU =          |          |            |           | 0.648     | Total ICU =                             |          |            |           | 0.648     |
| LOS =              |                       |          |        | B         | LOS =                |          |            |           | B         | LOS =                                   |          |            |           | B         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Sugar Pine Pl.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 67     | 0.042     | 1                    | 1600     | 0          | 67        | 0.042     | 1                                       | 1600     | 0          | 67        | 0.042     |
| NB Thru            | 2                     | 3200     | 2167   | 0.684 *   | 2                    | 3200     | 7          | 2174      | 0.686 *   | 2                                       | 3200     | 0          | 2174      | 0.686 *   |
| NB Right           | 0                     | 0        | 21     |           | 0                    | 0        | 0          | 21        |           | 0                                       | 0        | 0          | 21        |           |
| SB Left            | 1                     | 1600     | 41     | 0.026 *   | 1                    | 1600     | 0          | 41        | 0.026 *   | 1                                       | 1600     | 0          | 41        | 0.026 *   |
| SB Thru            | 2                     | 3200     | 1007   | 0.315     | 2                    | 3200     | 14         | 1021      | 0.319     | 2                                       | 3200     | 0          | 1021      | 0.319     |
| SB Right           | 1                     | 1600     | 133    | 0.083     | 1                    | 1600     | 0          | 133       | 0.083     | 1                                       | 1600     | 0          | 133       | 0.083     |
| EB Left            | 1                     | 1600     | 192    | 0.120 *   | 1                    | 1600     | 0          | 192       | 0.120 *   | 1                                       | 1600     | 0          | 192       | 0.120 *   |
| EB Thru            | 1                     | 1600     | 6      | 0.004     | 1                    | 1600     | 0          | 6         | 0.004     | 1                                       | 1600     | 0          | 6         | 0.004     |
| EB Right           | 1                     | 1600     | 88     | 0.055     | 1                    | 1600     | 0          | 88        | 0.055     | 1                                       | 1600     | 0          | 88        | 0.055     |
| WB Left            | 1                     | 1600     | 23     | 0.014     | 1                    | 1600     | 0          | 23        | 0.014     | 1                                       | 1600     | 0          | 23        | 0.014     |
| WB Thru            | 1                     | 1600     | 3      | 0.002 *   | 1                    | 1600     | 0          | 3         | 0.002 *   | 1                                       | 1600     | 0          | 3         | 0.002 *   |
| WB Right           | 1                     | 1600     | 32     | 0.020     | 1                    | 1600     | 0          | 32        | 0.020     | 1                                       | 1600     | 0          | 32        | 0.020     |
| N/S Critical Sum = |                       |          |        | 0.710     | N/S Critical Sum =   |          |            |           | 0.712     | N/S Critical Sum =                      |          |            |           | 0.712     |
| E/W Critical Sum = |                       |          |        | 0.122     | E/W Critical Sum =   |          |            |           | 0.122     | E/W Critical Sum =                      |          |            |           | 0.122     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.070    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.862     | Total ICU =          |          |            |           | 0.864     | Total ICU =                             |          |            |           | 0.864     |
| LOS =              |                       |          |        | D         | LOS =                |          |            |           | D         | LOS =                                   |          |            |           | D         |

### ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 w/o Project              |
| Analysis Time Period | AM Peak Hr. |                  |                                |

Project ID *BCyn&ColdS, 2030w/oP-AM*  
 East/West Street: *Cold Spring Ln.* North/South Street: *Brea Canyon Rd.*

| Volume Adjustments and Site Characteristics |           |    |    |           |    |    |
|---|-----------|----|----|-----------|----|----|
| Approach                                    | Eastbound |    |    | Westbound |    |    |
|   | L         | T  | R  | L         | T  | R  |
| Movement                                    |           |    |    |           |    |    |
| Volume (veh/h)                              | 39        | 67 | 39 | 109       | 76 | 74 |
| %Thrus Left Lane                            |           |    |    |           |    |    |

| Approach         | Northbound |     |    | Southbound |     |    |
|------------------|------------|-----|----|------------|-----|----|
|                  | L          | T   | R  | L          | T   | R  |
| Movement         |            |     |    |            |     |    |
| Volume (veh/h)   | 49         | 262 | 82 | 98         | 489 | 33 |
| %Thrus Left Lane |            |     |    |            |     |    |

|                   | Eastbound   |    | Westbound   |    | Northbound  |             | Southbound  |             |
|-------------------|-------------|----|-------------|----|-------------|-------------|-------------|-------------|
|                   | L1          | L2 | L1          | L2 | L1          | L2          | L1          | L2          |
| Configuration     | <i>LTR</i>  |    | <i>LTR</i>  |    | <i>L</i>    | <i>T</i>    | <i>L</i>    | <i>TR</i>   |
| PHF               | <i>0.98</i> |    | <i>0.98</i> |    | <i>0.98</i> | <i>0.98</i> | <i>0.98</i> | <i>0.98</i> |
| Flow Rate (veh/h) | <i>146</i>  |    | <i>263</i>  |    | <i>49</i>   | <i>267</i>  | <i>99</i>   | <i>531</i>  |
| % Heavy Vehicles  | <i>0</i>    |    | <i>0</i>    |    | <i>0</i>    | <i>0</i>    | <i>0</i>    | <i>0</i>    |
| No. Lanes         | <i>1</i>    |    | <i>1</i>    |    | <i>2</i>    |             | <i>2</i>    |             |
| Geometry Group    | <i>2</i>    |    | <i>2</i>    |    | <i>5</i>    |             | <i>5</i>    |             |
| Duration, T       | <i>0.25</i> |    |             |    |             |             |             |             |

| Saturation Headway Adjustment Worksheet |             |             |             |             |             |             |             |             |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Prop. Left-Turns                        | <i>0.3</i>  |             | <i>0.4</i>  |             | <i>1.0</i>  | <i>0.0</i>  | <i>1.0</i>  | <i>0.0</i>  |
| Prop. Right-Turns                       | <i>0.3</i>  |             | <i>0.3</i>  |             | <i>0.0</i>  | <i>0.0</i>  | <i>0.0</i>  | <i>0.1</i>  |
| Prop. Heavy Vehicle                     | <i>0.0</i>  |             | <i>0.0</i>  |             | <i>0.0</i>  | <i>0.0</i>  | <i>0.0</i>  | <i>0.0</i>  |
| hLT-adj                                 | <i>0.2</i>  | <i>0.2</i>  | <i>0.2</i>  | <i>0.2</i>  | <i>0.5</i>  | <i>0.5</i>  | <i>0.5</i>  | <i>0.5</i>  |
| hRT-adj                                 | <i>-0.6</i> | <i>-0.6</i> | <i>-0.6</i> | <i>-0.6</i> | <i>-0.7</i> | <i>-0.7</i> | <i>-0.7</i> | <i>-0.7</i> |
| hHV-adj                                 | <i>1.7</i>  |
| hadj, computed                          | <i>-0.1</i> |             | <i>-0.1</i> |             | <i>0.5</i>  | <i>0.0</i>  | <i>0.5</i>  | <i>-0.0</i> |

| Departure Headway and Service Time |             |  |             |  |             |             |             |             |
|------------------------------------|-------------|--|-------------|--|-------------|-------------|-------------|-------------|
| hd, initial value (s)              | <i>3.20</i> |  | <i>3.20</i> |  | <i>3.20</i> | <i>3.20</i> | <i>3.20</i> | <i>3.20</i> |
| x, initial                         | <i>0.13</i> |  | <i>0.23</i> |  | <i>0.04</i> | <i>0.24</i> | <i>0.09</i> | <i>0.47</i> |
| hd, final value (s)                | <i>7.36</i> |  | <i>6.95</i> |  | <i>7.73</i> | <i>7.22</i> | <i>7.20</i> | <i>6.64</i> |
| x, final value                     | <i>0.30</i> |  | <i>0.51</i> |  | <i>0.11</i> | <i>0.54</i> | <i>0.20</i> | <i>0.98</i> |
| Move-up time, m (s)                | <i>2.0</i>  |  | <i>2.0</i>  |  | <i>2.3</i>  |             | <i>2.3</i>  |             |
| Service Time, t <sub>s</sub> (s)   | <i>5.4</i>  |  | <i>5.0</i>  |  | <i>5.4</i>  | <i>4.9</i>  | <i>4.9</i>  | <i>4.3</i>  |

| Capacity and Level of Service |              |    |              |    |              |              |              |              |
|-------------------------------|--------------|----|--------------|----|--------------|--------------|--------------|--------------|
|                               | Eastbound    |    | Westbound    |    | Northbound   |              | Southbound   |              |
|                               | L1           | L2 | L1           | L2 | L1           | L2           | L1           | L2           |
| Capacity (veh/h)              | <i>396</i>   |    | <i>496</i>   |    | <i>299</i>   | <i>481</i>   | <i>349</i>   | <i>541</i>   |
| Delay (s/veh)                 | <i>13.47</i> |    | <i>16.91</i> |    | <i>11.34</i> | <i>17.92</i> | <i>11.67</i> | <i>59.07</i> |
| LOS                           | <i>B</i>     |    | <i>C</i>     |    | <i>B</i>     | <i>C</i>     | <i>B</i>     | <i>F</i>     |
| Approach: Delay (s/veh)       | <i>13.47</i> |    | <i>16.91</i> |    | <i>16.90</i> |              | <i>51.62</i> |              |
| LOS                           | <i>B</i>     |    | <i>C</i>     |    | <i>C</i>     |              | <i>F</i>     |              |
| Intersection Delay (s/veh)    | <i>32.67</i> |    |              |    |              |              |              |              |
| Intersection LOS              | <i>D</i>     |    |              |    |              |              |              |              |

### ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 w/o Project              |
| Analysis Time Period | PM Peak Hr. |                  |                                |

Project ID *BCyn&ColdS, 2030 w/oP-PM*  
 East/West Street: *Cold Spring Ln.* North/South Street: *Brea Canyon Rd.*

| Volume Adjustments and Site Characteristics |            |     |    |            |     |    |
|---|------------|-----|----|------------|-----|----|
| Approach                                    | Eastbound  |     |    | Westbound  |     |    |
|   | L          | T   | R  | L          | T   | R  |
| Movement                                    |            |     |    |            |     |    |
| Volume (veh/h)                              | 35         | 22  | 5  | 49         | 29  | 64 |
| %Thrus Left Lane                            |            |     |    |            |     |    |
| Approach                                    | Northbound |     |    | Southbound |     |    |
|   | L          | T   | R  | L          | T   | R  |
| Movement                                    |            |     |    |            |     |    |
| Volume (veh/h)                              | 8          | 533 | 25 | 74         | 133 | 38 |
| %Thrus Left Lane                            |            |     |    |            |     |    |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     | LTR       |    | LTR       |    | L          | T    | L          | TR   |
| PHF               | 1.00      |    | 1.00      |    | 1.00       | 1.00 | 1.00       | 1.00 |
| Flow Rate (veh/h) | 62        |    | 142       |    | 8          | 533  | 74         | 171  |
| % Heavy Vehicles  | 0         |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 1         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    | 2         |    | 2         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

| Saturation Headway Adjustment Worksheet |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|
| Prop. Left-Turns                        | 0.6  |      | 0.3  |      | 1.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns                       | 0.1  |      | 0.5  |      | 0.0  | 0.0  | 0.0  | 0.2  |
| Prop. Heavy Vehicle                     | 0.0  |      | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj                                 | 0.2  | 0.2  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj                                 | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj                                 | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed                          | 0.1  |      | -0.2 |      | 0.5  | 0.0  | 0.5  | -0.2 |

| Departure Headway and Service Time |      |  |      |  |      |      |      |      |
|------------------------------------|------|--|------|--|------|------|------|------|
| hd, initial value (s)              | 3.20 |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                         | 0.06 |  | 0.13 |  | 0.01 | 0.47 | 0.07 | 0.15 |
| hd, final value (s)                | 6.30 |  | 5.84 |  | 5.96 | 5.46 | 6.28 | 5.62 |
| x, final value                     | 0.11 |  | 0.23 |  | 0.01 | 0.81 | 0.13 | 0.27 |
| Move-up time, m (s)                | 2.0  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s)   | 4.3  |  | 3.8  |  | 3.7  | 3.2  | 4.0  | 3.3  |

| Capacity and Level of Service |           |    |           |    |            |       |            |       |
|-------------------------------|-----------|----|-----------|----|------------|-------|------------|-------|
|                               | Eastbound |    | Westbound |    | Northbound |       | Southbound |       |
|                               | L1        | L2 | L1        | L2 | L1         | L2    | L1         | L2    |
| Capacity (veh/h)              | 312       |    | 392       |    | 258        | 654   | 324        | 421   |
| Delay (s/veh)                 | 10.07     |    | 10.58     |    | 8.74       | 27.01 | 9.91       | 10.35 |
| LOS                           | B         |    | B         |    | A          | D     | A          | B     |
| Approach: Delay (s/veh)       | 10.07     |    | 10.58     |    | 26.74      |       | 10.22      |       |
| LOS                           | B         |    | B         |    | D          |       | B          |       |
| Intersection Delay (s/veh)    | 19.29     |    |           |    |            |       |            |       |
| Intersection LOS              | C         |    |           |    |            |       |            |       |

## ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 w Project                |
| Analysis Time Period | AM Peak Hr. |                  |                                |

Project ID BCyn&amp;ColdS, 2030wP-AM

East/West Street: Cold Spring Ln.

North/South Street: Brea Canyon Rd.

### Volume Adjustments and Site Characteristics

| Approach         | Eastbound |    |    | Westbound |    |    |
|------------------|-----------|----|----|-----------|----|----|
|                  | L         | T  | R  | L         | T  | R  |
| Movement         |           |    |    |           |    |    |
| Volume (veh/h)   | 39        | 67 | 39 | 109       | 76 | 74 |
| %Thrus Left Lane |           |    |    |           |    |    |

| Approach         | Northbound |     |    | Southbound |     |    |
|------------------|------------|-----|----|------------|-----|----|
|                  | L          | T   | R  | L          | T   | R  |
| Movement         |            |     |    |            |     |    |
| Volume (veh/h)   | 49         | 266 | 82 | 98         | 490 | 33 |
| %Thrus Left Lane |            |     |    |            |     |    |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     | LTR       |    | LTR       |    | L          | T    | L          | TR   |
| PHF               | 0.98      |    | 0.98      |    | 0.98       | 0.98 | 0.98       | 0.98 |
| Flow Rate (veh/h) | 146       |    | 263       |    | 49         | 271  | 99         | 532  |
| % Heavy Vehicles  | 0         |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 1         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    | 2         |    | 2         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

### Saturation Headway Adjustment Worksheet

|                     |      |      |      |      |      |      |      |      |
|---------------------|------|------|------|------|------|------|------|------|
| Prop. Left-Turns    | 0.3  |      | 0.4  |      | 1.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns   | 0.3  |      | 0.3  |      | 0.0  | 0.0  | 0.0  | 0.1  |
| Prop. Heavy Vehicle | 0.0  |      | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj             | 0.2  | 0.2  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj             | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj             | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed      | -0.1 |      | -0.1 |      | 0.5  | 0.0  | 0.5  | -0.0 |

### Departure Headway and Service Time

|                                  |      |  |      |  |      |      |      |      |
|----------------------------------|------|--|------|--|------|------|------|------|
| hd, initial value (s)            | 3.20 |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                       | 0.13 |  | 0.23 |  | 0.04 | 0.24 | 0.09 | 0.47 |
| hd, final value (s)              | 7.39 |  | 6.97 |  | 7.74 | 7.23 | 7.21 | 6.66 |
| x, final value                   | 0.30 |  | 0.51 |  | 0.11 | 0.54 | 0.20 | 0.98 |
| Move-up time, m (s)              | 2.0  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s) | 5.4  |  | 5.0  |  | 5.4  | 4.9  | 4.9  | 4.4  |

### Capacity and Level of Service

|                            | Eastbound |    | Westbound |    | Northbound |       | Southbound |       |
|----------------------------|-----------|----|-----------|----|------------|-------|------------|-------|
|                            | L1        | L2 | L1        | L2 | L1         | L2    | L1         | L2    |
| Capacity (veh/h)           | 396       |    | 495       |    | 299        | 481   | 349        | 540   |
| Delay (s/veh)              | 13.52     |    | 17.00     |    | 11.35      | 18.21 | 11.69      | 60.11 |
| LOS                        | B         |    | C         |    | B          | C     | B          | F     |
| Approach: Delay (s/veh)    | 13.52     |    | 17.00     |    | 17.16      |       | 52.52      |       |
| LOS                        | B         |    | C         |    | C          |       | F          |       |
| Intersection Delay (s/veh) | 33.14     |    |           |    |            |       |            |       |
| Intersection LOS           | D         |    |           |    |            |       |            |       |

### ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 w Project                |
| Analysis Time Period | PM Peak Hr. |                  |                                |

Project ID *BCyn&ColdS, 2030 wP-PM*  
 East/West Street: *Cold Spring Ln.*      North/South Street: *Brea Canyon Rd.*

| Volume Adjustments and Site Characteristics |           |    |   |           |    |    |
|---|-----------|----|---|-----------|----|----|
| Approach                                    | Eastbound |    |   | Westbound |    |    |
|   | L         | T  | R | L         | T  | R  |
| Movement                                    |           |    |   |           |    |    |
| Volume (veh/h)                              | 35        | 22 | 5 | 49        | 29 | 64 |
| %Thrus Left Lane                            |           |    |   |           |    |    |

| Approach         | Northbound |     |    | Southbound |     |    |
|------------------|------------|-----|----|------------|-----|----|
|                  | L          | T   | R  | L          | T   | R  |
| Movement         |            |     |    |            |     |    |
| Volume (veh/h)   | 8          | 535 | 25 | 74         | 137 | 38 |
| %Thrus Left Lane |            |     |    |            |     |    |

|                   | Eastbound  |    | Westbound  |    | Northbound |          | Southbound |           |
|-------------------|------------|----|------------|----|------------|----------|------------|-----------|
|                   | L1         | L2 | L1         | L2 | L1         | L2       | L1         | L2        |
| Configuration     | <i>LTR</i> |    | <i>LTR</i> |    | <i>L</i>   | <i>T</i> | <i>L</i>   | <i>TR</i> |
| PHF               | 1.00       |    | 1.00       |    | 1.00       | 1.00     | 1.00       | 1.00      |
| Flow Rate (veh/h) | 62         |    | 142        |    | 8          | 535      | 74         | 175       |
| % Heavy Vehicles  | 0          |    | 0          |    | 0          | 0        | 0          | 0         |
| No. Lanes         | 1          |    | 1          |    | 2          |          | 2          |           |
| Geometry Group    | 2          |    | 2          |    | 5          |          | 5          |           |
| Duration, T       | 0.25       |    |            |    |            |          |            |           |

| Saturation Headway Adjustment Worksheet |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|
| Prop. Left-Turns                        | 0.6  |      | 0.3  |      | 1.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns                       | 0.1  |      | 0.5  |      | 0.0  | 0.0  | 0.0  | 0.2  |
| Prop. Heavy Vehicle                     | 0.0  |      | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj                                 | 0.2  | 0.2  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj                                 | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj                                 | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed                          | 0.1  |      | -0.2 |      | 0.5  | 0.0  | 0.5  | -0.2 |

| Departure Headway and Service Time |      |  |      |  |      |      |      |      |
|------------------------------------|------|--|------|--|------|------|------|------|
| hd, initial value (s)              | 3.20 |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                         | 0.06 |  | 0.13 |  | 0.01 | 0.48 | 0.07 | 0.16 |
| hd, final value (s)                | 6.32 |  | 5.86 |  | 5.97 | 5.46 | 6.29 | 5.63 |
| x, final value                     | 0.11 |  | 0.23 |  | 0.01 | 0.81 | 0.13 | 0.27 |
| Move-up time, m (s)                | 2.0  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s)   | 4.3  |  | 3.9  |  | 3.7  | 3.2  | 4.0  | 3.3  |

| Capacity and Level of Service |           |    |           |    |            |       |            |       |
|-------------------------------|-----------|----|-----------|----|------------|-------|------------|-------|
|                               | Eastbound |    | Westbound |    | Northbound |       | Southbound |       |
|                               | L1        | L2 | L1        | L2 | L1         | L2    | L1         | L2    |
| Capacity (veh/h)              | 312       |    | 392       |    | 258        | 653   | 324        | 425   |
| Delay (s/veh)                 | 10.09     |    | 10.61     |    | 8.75       | 27.40 | 9.92       | 10.44 |
| LOS                           | B         |    | B         |    | A          | D     | A          | B     |
| Approach: Delay (s/veh)       | 10.09     |    | 10.61     |    | 27.13      |       | 10.28      |       |
| LOS                           | B         |    | B         |    | D          |       | B          |       |
| Intersection Delay (s/veh)    | 19.50     |    |           |    |            |       |            |       |
| Intersection LOS              | C         |    |           |    |            |       |            |       |

### ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 w Project w Improve      |
| Analysis Time Period | AM Peak Hr. |                  |                                |

Project ID BCyn&ColdS, 2030wPwl-AM

East/West Street: Cold Spring Ln.

North/South Street: Brea Canyon Rd.

#### Volume Adjustments and Site Characteristics

| Approach         | Eastbound |    |    | Westbound |    |    |
|------------------|-----------|----|----|-----------|----|----|
|                  | L         | T  | R  | L         | T  | R  |
| Movement         |           |    |    |           |    |    |
| Volume (veh/h)   | 39        | 67 | 39 | 109       | 76 | 74 |
| %Thrus Left Lane |           |    |    |           |    |    |

| Approach         | Northbound |     |    | Southbound |     |    |
|------------------|------------|-----|----|------------|-----|----|
|                  | L          | T   | R  | L          | T   | R  |
| Movement         |            |     |    |            |     |    |
| Volume (veh/h)   | 49         | 266 | 82 | 98         | 490 | 33 |
| %Thrus Left Lane |            |     |    |            |     |    |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     | LTR       |    | LTR       |    | L          | T    | L          | T    |
| PHF               | 0.98      |    | 0.98      |    | 0.98       | 0.98 | 0.98       | 0.98 |
| Flow Rate (veh/h) | 146       |    | 263       |    | 49         | 271  | 99         | 499  |
| % Heavy Vehicles  | 0         |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 1         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    | 2         |    | 2         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

#### Saturation Headway Adjustment Worksheet

|                     |      |      |      |      |      |      |      |      |
|---------------------|------|------|------|------|------|------|------|------|
| Prop. Left-Turns    | 0.3  |      | 0.4  |      | 1.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns   | 0.3  |      | 0.3  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| Prop. Heavy Vehicle | 0.0  |      | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj             | 0.2  | 0.2  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj             | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj             | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed      | -0.1 |      | -0.1 |      | 0.5  | 0.0  | 0.5  | 0.0  |

#### Departure Headway and Service Time

|                                  |      |  |      |  |      |      |      |      |
|----------------------------------|------|--|------|--|------|------|------|------|
| hd, initial value (s)            | 3.20 |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                       | 0.13 |  | 0.23 |  | 0.04 | 0.24 | 0.09 | 0.44 |
| hd, final value (s)              | 7.26 |  | 6.87 |  | 7.65 | 7.13 | 7.18 | 6.67 |
| x, final value                   | 0.29 |  | 0.50 |  | 0.10 | 0.54 | 0.20 | 0.92 |
| Move-up time, m (s)              | 2.0  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s) | 5.3  |  | 4.9  |  | 5.3  | 4.8  | 4.9  | 4.4  |

#### Capacity and Level of Service

|                            | Eastbound |    | Westbound |    | Northbound |       | Southbound |       |
|----------------------------|-----------|----|-----------|----|------------|-------|------------|-------|
|                            | L1        | L2 | L1        | L2 | L1         | L2    | L1         | L2    |
| Capacity (veh/h)           | 396       |    | 495       |    | 299        | 481   | 349        | 537   |
| Delay (s/veh)              | 13.27     |    | 16.58     |    | 11.23      | 17.80 | 11.63      | 47.59 |
| LOS                        | B         |    | C         |    | B          | C     | B          | E     |
| Approach: Delay (s/veh)    | 13.27     |    | 16.58     |    | 16.80      |       | 41.64      |       |
| LOS                        | B         |    | C         |    | C          |       | E          |       |
| Intersection Delay (s/veh) | 27.56     |    |           |    |            |       |            |       |
| Intersection LOS           | D         |    |           |    |            |       |            |       |

### ALL-WAY STOP CONTROL ANALYSIS

| General Information  |             | Site Information |                                |
|----------------------|-------------|------------------|--------------------------------|
| Analyst              | SSS         | Intersection     | Brea Cyn Rd. & Cold Spring Ln. |
| Agency/Co.           |             | Jurisdiction     |                                |
| Date Performed       |             | Analysis Year    | Y2030 w Project w Improve      |
| Analysis Time Period | PM Peak Hr. |                  |                                |

Project ID *BCyn&ColdS, 2030 wPwl-PM*

East/West Street: *Cold Spring Ln.*

North/South Street: *Brea Canyon Rd.*

#### Volume Adjustments and Site Characteristics

| Approach         | Eastbound |    |   | Westbound |    |    |
|------------------|-----------|----|---|-----------|----|----|
|                  | L         | T  | R | L         | T  | R  |
| Movement         |           |    |   |           |    |    |
| Volume (veh/h)   | 35        | 22 | 5 | 49        | 29 | 64 |
| %Thrus Left Lane |           |    |   |           |    |    |

| Approach         | Northbound |     |    | Southbound |     |    |
|------------------|------------|-----|----|------------|-----|----|
|                  | L          | T   | R  | L          | T   | R  |
| Movement         |            |     |    |            |     |    |
| Volume (veh/h)   | 8          | 535 | 25 | 74         | 137 | 38 |
| %Thrus Left Lane |            |     |    |            |     |    |

|                   | Eastbound |    | Westbound |    | Northbound |      | Southbound |      |
|-------------------|-----------|----|-----------|----|------------|------|------------|------|
|                   | L1        | L2 | L1        | L2 | L1         | L2   | L1         | L2   |
| Configuration     | LTR       |    | LTR       |    | L          | T    | L          | T    |
| PHF               | 1.00      |    | 1.00      |    | 1.00       | 1.00 | 1.00       | 1.00 |
| Flow Rate (veh/h) | 62        |    | 142       |    | 8          | 535  | 74         | 137  |
| % Heavy Vehicles  | 0         |    | 0         |    | 0          | 0    | 0          | 0    |
| No. Lanes         | 1         |    | 1         |    | 2          |      | 2          |      |
| Geometry Group    | 2         |    | 2         |    | 5          |      | 5          |      |
| Duration, T       | 0.25      |    |           |    |            |      |            |      |

#### Saturation Headway Adjustment Worksheet

|                     |      |      |      |      |      |      |      |      |
|---------------------|------|------|------|------|------|------|------|------|
| Prop. Left-Turns    | 0.6  |      | 0.3  |      | 1.0  | 0.0  | 1.0  | 0.0  |
| Prop. Right-Turns   | 0.1  |      | 0.5  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| Prop. Heavy Vehicle | 0.0  |      | 0.0  |      | 0.0  | 0.0  | 0.0  | 0.0  |
| hLT-adj             | 0.2  | 0.2  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  |
| hRT-adj             | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.7 | -0.7 | -0.7 |
| hHV-adj             | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| hadj, computed      | 0.1  |      | -0.2 |      | 0.5  | 0.0  | 0.5  | 0.0  |

#### Departure Headway and Service Time

|                                  |      |  |      |  |      |      |      |      |
|----------------------------------|------|--|------|--|------|------|------|------|
| hd, initial value (s)            | 3.20 |  | 3.20 |  | 3.20 | 3.20 | 3.20 | 3.20 |
| x, initial                       | 0.06 |  | 0.13 |  | 0.01 | 0.48 | 0.07 | 0.12 |
| hd, final value (s)              | 6.22 |  | 5.77 |  | 5.92 | 5.41 | 6.27 | 5.76 |
| x, final value                   | 0.11 |  | 0.23 |  | 0.01 | 0.80 | 0.13 | 0.22 |
| Move-up time, m (s)              | 2.0  |  | 2.0  |  | 2.3  |      | 2.3  |      |
| Service Time, t <sub>s</sub> (s) | 4.2  |  | 3.8  |  | 3.6  | 3.1  | 4.0  | 3.5  |

#### Capacity and Level of Service

|                            | Eastbound |    | Westbound |    | Northbound |       | Southbound |       |
|----------------------------|-----------|----|-----------|----|------------|-------|------------|-------|
|                            | L1        | L2 | L1        | L2 | L1         | L2    | L1         | L2    |
| Capacity (veh/h)           | 312       |    | 392       |    | 258        | 659   | 324        | 387   |
| Delay (s/veh)              | 9.97      |    | 10.46     |    | 8.69       | 26.50 | 9.89       | 10.08 |
| LOS                        | A         |    | B         |    | A          | D     | A          | B     |
| Approach: Delay (s/veh)    | 9.97      |    | 10.46     |    | 26.24      |       | 10.01      |       |
| LOS                        | A         |    | B         |    | D          |       | B          |       |
| Intersection Delay (s/veh) | 19.27     |    |           |    |            |       |            |       |
| Intersection LOS           | C         |    |           |    |            |       |            |       |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Cold Spring Ln.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 22     | 0.014 *   | 1                    | 1600     | 0          | 22        | 0.014 *   | 1                                       | 1600     | 0          | 22        | 0.014 *   |
| NB Thru            | 2                     | 3200     | 659    | 0.213     | 2                    | 3200     | 15         | 674       | 0.217     | 3                                       | 4800     | 0          | 674       | 0.145     |
| NB Right           | 0                     | 0        | 21     |           | 0                    | 0        | 0          | 21        |           | 0                                       | 0        | 0          | 21        |           |
| SB Left            | 1                     | 1600     | 66     | 0.041     | 1                    | 1600     | 0          | 66        | 0.041     | 1                                       | 1600     | 0          | 66        | 0.041     |
| SB Thru            | 2                     | 3200     | 1634   | 0.544 *   | 2                    | 3200     | 3          | 1637      | 0.545 *   | 3                                       | 4800     | 0          | 1637      | 0.363 *   |
| SB Right           | 0                     | 0        | 106    |           | 0                    | 0        | 0          | 106       |           | 0                                       | 0        | 0          | 106       |           |
| EB Left            | 1                     | 1600     | 59     | 0.037 *   | 1                    | 1600     | 0          | 59        | 0.037 *   | 1                                       | 1600     | 0          | 59        | 0.037 *   |
| EB Thru            | 1                     | 1600     | 67     | 0.060     | 1                    | 1600     | 0          | 67        | 0.060     | 1                                       | 1600     | 0          | 67        | 0.060     |
| EB Right           | 0                     | 0        | 29     |           | 0                    | 0        | 0          | 29        |           | 0                                       | 0        | 0          | 29        |           |
| WB Left            | 1                     | 1600     | 80     | 0.050     | 1                    | 1600     | 0          | 80        | 0.050     | 1                                       | 1600     | 0          | 80        | 0.050     |
| WB Thru            | 1                     | 1600     | 114    | 0.113 *   | 1                    | 1600     | 0          | 114       | 0.113 *   | 1                                       | 1600     | 0          | 114       | 0.113 *   |
| WB Right           | 0                     | 0        | 67     |           | 0                    | 0        | 0          | 67        |           | 0                                       | 0        | 0          | 67        |           |
| N/S Critical Sum = |                       |          |        | 0.558     | N/S Critical Sum =   |          |            |           | 0.559     | N/S Critical Sum =                      |          |            |           | 0.377     |
| E/W Critical Sum = |                       |          |        | 0.150     | E/W Critical Sum =   |          |            |           | 0.150     | E/W Critical Sum =                      |          |            |           | 0.150     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.070    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.738     | Total ICU =          |          |            |           | 0.739     | Total ICU =                             |          |            |           | 0.557     |
| LOS =              |                       |          |        | C         | LOS =                |          |            |           | C         | LOS =                                   |          |            |           | A         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Cold Spring Ln.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 47     | 0.029     | 1                    | 1600     | 0          | 47        | 0.029     | 1                                       | 1600     | 0          | 47        | 0.029     |
| NB Thru            | 2                     | 3200     | 2241   | 0.720 *   | 2                    | 3200     | 7          | 2248      | 0.722 *   | 3                                       | 4800     | 0          | 2248      | 0.481 *   |
| NB Right           | 0                     | 0        | 62     |           | 0                    | 0        | 0          | 62        |           | 0                                       | 0        | 0          | 62        |           |
| SB Left            | 1                     | 1600     | 116    | 0.073 *   | 1                    | 1600     | 0          | 116       | 0.073 *   | 1                                       | 1600     | 0          | 116       | 0.073 *   |
| SB Thru            | 2                     | 3200     | 951    | 0.319     | 2                    | 3200     | 14         | 965       | 0.324     | 3                                       | 4800     | 0          | 965       | 0.216     |
| SB Right           | 0                     | 0        | 71     |           | 0                    | 0        | 0          | 71        |           | 0                                       | 0        | 0          | 71        |           |
| EB Left            | 1                     | 1600     | 82     | 0.051 *   | 1                    | 1600     | 0          | 82        | 0.051 *   | 1                                       | 1600     | 0          | 82        | 0.051 *   |
| EB Thru            | 1                     | 1600     | 66     | 0.073     | 1                    | 1600     | 0          | 66        | 0.073     | 1                                       | 1600     | 0          | 66        | 0.073     |
| EB Right           | 0                     | 0        | 50     |           | 0                    | 0        | 0          | 50        |           | 0                                       | 0        | 0          | 50        |           |
| WB Left            | 1                     | 1600     | 40     | 0.025     | 1                    | 1600     | 0          | 40        | 0.025     | 1                                       | 1600     | 0          | 40        | 0.025     |
| WB Thru            | 1                     | 1600     | 28     | 0.057 *   | 1                    | 1600     | 0          | 28        | 0.057 *   | 1                                       | 1600     | 0          | 28        | 0.057 *   |
| WB Right           | 0                     | 0        | 63     |           | 0                    | 0        | 0          | 63        |           | 0                                       | 0        | 0          | 63        |           |
| N/S Critical Sum = |                       |          |        | 0.793     | N/S Critical Sum =   |          |            |           | 0.795     | N/S Critical Sum =                      |          |            |           | 0.554     |
| E/W Critical Sum = |                       |          |        | 0.108     | E/W Critical Sum =   |          |            |           | 0.108     | E/W Critical Sum =                      |          |            |           | 0.108     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.070    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.931     | Total ICU =          |          |            |           | 0.933     | Total ICU =                             |          |            |           | 0.692     |
| LOS =              |                       |          |        | E         | LOS =                |          |            |           | E         | LOS =                                   |          |            |           | B         |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Pathfinder Rd. & Brea Canyon Cutoff Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 82     | 0.051     | 1                    | 1600     | 0          | 82        | 0.051     | 1                                       | 1600     | 0          | 82        | 0.051 *   |
| NB Thru            | 2                     | 3200     | 392    | 0.260 *   | 2                    | 3200     | 8          | 400       | 0.263 *   | 2                                       | 3200     | 0          | 400       | 0.125     |
| NB Right           | 0                     | 0        | 440    |           | 0                    | 0        | 0          | 440       |           | 1                                       | 1600     | 0          | 440       | 0.275     |
| SB Left            | 1                     | 1600     | 132    | 0.083 *   | 1                    | 1600     | 0          | 132       | 0.083 *   | 1                                       | 1600     | 0          | 132       | 0.083     |
| SB Thru            | 2                     | 3200     | 608    | 0.246     | 2                    | 3200     | 2          | 610       | 0.246     | 2                                       | 3200     | 0          | 610       | 0.191 *   |
| SB Right           | 0                     | 0        | 178    |           | 0                    | 0        | 0          | 178       |           | 1                                       | 1600     | 0          | 178       | 0.111     |
| EB Left            | 1                     | 1600     | 39     | 0.024     | 1                    | 1600     | 0          | 39        | 0.024     | 1                                       | 1600     | 0          | 39        | 0.024     |
| EB Thru            | 1                     | 1600     | 609    | 0.426 *   | 1                    | 1600     | 0          | 609       | 0.426 *   | 2                                       | 3200     | 0          | 609       | 0.190 *   |
| EB Right           | 0                     | 0        | 73     |           | 0                    | 0        | 0          | 73        |           | 1                                       | 1600     | 0          | 73        | 0.046     |
| WB Left            | 1                     | 1600     | 262    | 0.164 *   | 1                    | 1600     | 0          | 262       | 0.164 *   | 1                                       | 1600     | 0          | 262       | 0.164 *   |
| WB Thru            | 1                     | 1600     | 513    | 0.321     | 1                    | 1600     | 0          | 513       | 0.321     | 2                                       | 3200     | 0          | 513       | 0.160     |
| WB Right           | 1                     | 1600     | 55     | 0.034     | 1                    | 1600     | 0          | 55        | 0.034     | 1                                       | 1600     | 0          | 55        | 0.034     |
| N/S Critical Sum = |                       |          |        | 0.343     | N/S Critical Sum =   |          |            |           | 0.346     | N/S Critical Sum =                      |          |            |           | 0.242     |
| E/W Critical Sum = |                       |          |        | 0.590     | E/W Critical Sum =   |          |            |           | 0.590     | E/W Critical Sum =                      |          |            |           | 0.354     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 1.033     | Total ICU =          |          |            |           | 1.036     | Total ICU =                             |          |            |           | 0.696     |
| LOS =              |                       |          |        | F         | LOS =                |          |            |           | F         | LOS =                                   |          |            |           | B         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Pathfinder Rd. & Brea Canyon Cutoff Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 173    | 0.108     | 1                    | 1600     | 0          | 173       | 0.108     | 1                                       | 1600     | 0          | 173       | 0.108 *   |
| NB Thru            | 2                     | 3200     | 676    | 0.329 *   | 2                    | 3200     | 4          | 680       | 0.330 *   | 2                                       | 3200     | 0          | 680       | 0.213     |
| NB Right           | 0                     | 0        | 377    |           | 0                    | 0        | 0          | 377       |           | 1                                       | 1600     | 0          | 377       | 0.236     |
| SB Left            | 1                     | 1600     | 19     | 0.012 *   | 1                    | 1600     | 0          | 19        | 0.012 *   | 1                                       | 1600     | 0          | 19        | 0.012     |
| SB Thru            | 2                     | 3200     | 603    | 0.229     | 2                    | 3200     | 7          | 610       | 0.231     | 2                                       | 3200     | 0          | 610       | 0.191 *   |
| SB Right           | 0                     | 0        | 130    |           | 0                    | 0        | 0          | 130       |           | 1                                       | 1600     | 0          | 130       | 0.081     |
| EB Left            | 1                     | 1600     | 161    | 0.101     | 1                    | 1600     | 0          | 161       | 0.101     | 1                                       | 1600     | 0          | 161       | 0.101     |
| EB Thru            | 1                     | 1600     | 742    | 0.536 *   | 1                    | 1600     | 0          | 742       | 0.536 *   | 2                                       | 3200     | 0          | 742       | 0.232 *   |
| EB Right           | 0                     | 0        | 116    |           | 0                    | 0        | 0          | 116       |           | 1                                       | 1600     | 0          | 116       | 0.073     |
| WB Left            | 1                     | 1600     | 384    | 0.240 *   | 1                    | 1600     | 0          | 384       | 0.240 *   | 1                                       | 1600     | 0          | 384       | 0.240 *   |
| WB Thru            | 1                     | 1600     | 810    | 0.506     | 1                    | 1600     | 0          | 810       | 0.506     | 2                                       | 3200     | 0          | 810       | 0.253     |
| WB Right           | 1                     | 1600     | 119    | 0.074     | 1                    | 1600     | 0          | 119       | 0.074     | 1                                       | 1600     | 0          | 119       | 0.074     |
| N/S Critical Sum = |                       |          |        | 0.341     | N/S Critical Sum =   |          |            |           | 0.342     | N/S Critical Sum =                      |          |            |           | 0.299     |
| E/W Critical Sum = |                       |          |        | 0.776     | E/W Critical Sum =   |          |            |           | 0.776     | E/W Critical Sum =                      |          |            |           | 0.472     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 1.217     | Total ICU =          |          |            |           | 1.218     | Total ICU =                             |          |            |           | 0.871     |
| LOS =              |                       |          |        | F         | LOS =                |          |            |           | F         | LOS =                                   |          |            |           | D         |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Fallow Field-Diamond Canyon Rd. & Brea Canyon Cutoff Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 28     | 0.018 *   | 1                    | 1600     | 0          | 28        | 0.018 *   | 1                                       | 1600     | 0          | 28        | 0.018 *   |
| NB Thru            | 1                     | 1600     | 22     | 0.041     | 1                    | 1600     | 0          | 22        | 0.041     | 1                                       | 1600     | 0          | 22        | 0.041     |
| NB Right           | 0                     | 0        | 44     |           | 0                    | 0        | 0          | 44        |           | 0                                       | 0        | 0          | 44        |           |
| SB Left            | 8                     | 2880     | 35     | 0.012     | 8                    | 2880     | 0          | 35        | 0.012     | 8                                       | 2880     | 0          | 35        | 0.012     |
| SB Thru            | 1                     | 1600     | 25     | 0.079 *   | 1                    | 1600     | 0          | 25        | 0.079 *   | 1                                       | 1600     | 0          | 25        | 0.079 *   |
| SB Right           | 0                     | 0        | 101    |           | 0                    | 0        | 0          | 101       |           | 0                                       | 0        | 0          | 101       |           |
| EB Left            | 1                     | 1600     | 148    | 0.093     | 1                    | 1600     | 0          | 148       | 0.093     | 1                                       | 1600     | 0          | 148       | 0.093     |
| EB Thru            | 2                     | 3200     | 1108   | 0.361 *   | 2                    | 3200     | 2          | 1110      | 0.361 *   | 2                                       | 3200     | 0          | 1110      | 0.361 *   |
| EB Right           | 0                     | 0        | 46     |           | 0                    | 0        | 0          | 46        |           | 0                                       | 0        | 0          | 46        |           |
| WB Left            | 1                     | 1600     | 114    | 0.071 *   | 1                    | 1600     | 0          | 114       | 0.071 *   | 1                                       | 1600     | 0          | 114       | 0.071 *   |
| WB Thru            | 2                     | 3200     | 834    | 0.269     | 2                    | 3200     | 8          | 842       | 0.272     | 2                                       | 3200     | 0          | 842       | 0.272     |
| WB Right           | 0                     | 0        | 27     |           | 0                    | 0        | 0          | 27        |           | 0                                       | 0        | 0          | 27        |           |
| N/S Critical Sum = |                       |          |        | 0.097     | N/S Critical Sum =   |          |            |           | 0.097     | N/S Critical Sum =                      |          |            |           | 0.097     |
| E/W Critical Sum = |                       |          |        | 0.432     | E/W Critical Sum =   |          |            |           | 0.432     | E/W Critical Sum =                      |          |            |           | 0.432     |
| [Adjustment] =     |                       |          |        | 0.022     | [Adjustment] =       |          |            |           | 0.022     | [Adjustment] =                          |          |            |           | 0.022     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.651     | Total ICU =          |          |            |           | 0.651     | Total ICU =                             |          |            |           | 0.651     |
| LOS =              |                       |          |        | <b>B</b>  | LOS =                |          |            |           | <b>B</b>  | LOS =                                   |          |            |           | <b>B</b>  |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Fallow Field-Diamond Canyon Rd. & Brea Canyon Cutoff Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 57     | 0.036     | 1                    | 1600     | 0          | 57        | 0.036     | 1                                       | 1600     | 0          | 57        | 0.036     |
| NB Thru            | 1                     | 1600     | 8      | 0.051 *   | 1                    | 1600     | 0          | 8         | 0.051 *   | 1                                       | 1600     | 0          | 8         | 0.051 *   |
| NB Right           | 0                     | 0        | 74     |           | 0                    | 0        | 0          | 74        |           | 0                                       | 0        | 0          | 74        |           |
| SB Left            | 8                     | 2880     | 39     | 0.014 *   | 8                    | 2880     | 0          | 39        | 0.014 *   | 8                                       | 2880     | 0          | 39        | 0.014 *   |
| SB Thru            | 1                     | 1600     | 5      | 0.028     | 1                    | 1600     | 0          | 5         | 0.028     | 1                                       | 1600     | 0          | 5         | 0.028     |
| SB Right           | 0                     | 0        | 39     |           | 0                    | 0        | 0          | 39        |           | 0                                       | 0        | 0          | 39        |           |
| EB Left            | 1                     | 1600     | 29     | 0.018 *   | 1                    | 1600     | 0          | 29        | 0.018 *   | 1                                       | 1600     | 0          | 29        | 0.018 *   |
| EB Thru            | 2                     | 3200     | 1050   | 0.343     | 2                    | 3200     | 7          | 1057      | 0.345     | 2                                       | 3200     | 0          | 1057      | 0.345     |
| EB Right           | 0                     | 0        | 48     |           | 0                    | 0        | 0          | 48        |           | 0                                       | 0        | 0          | 48        |           |
| WB Left            | 1                     | 1600     | 55     | 0.034     | 1                    | 1600     | 0          | 55        | 0.034     | 1                                       | 1600     | 0          | 55        | 0.034     |
| WB Thru            | 2                     | 3200     | 1254   | 0.402 *   | 2                    | 3200     | 4          | 1258      | 0.403 *   | 2                                       | 3200     | 0          | 1258      | 0.403 *   |
| WB Right           | 0                     | 0        | 31     |           | 0                    | 0        | 0          | 31        |           | 0                                       | 0        | 0          | 31        |           |
| N/S Critical Sum = |                       |          |        | 0.065     | N/S Critical Sum =   |          |            |           | 0.065     | N/S Critical Sum =                      |          |            |           | 0.065     |
| E/W Critical Sum = |                       |          |        | 0.420     | E/W Critical Sum =   |          |            |           | 0.421     | E/W Critical Sum =                      |          |            |           | 0.421     |
| [Adjustment] =     |                       |          |        | 0.023     | [Adjustment] =       |          |            |           | 0.024     | [Adjustment] =                          |          |            |           | 0.024     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.608     | Total ICU =          |          |            |           | 0.610     | Total ICU =                             |          |            |           | 0.610     |
| LOS =              |                       |          |        | <b>B</b>  | LOS =                |          |            |           | <b>B</b>  | LOS =                                   |          |            |           | <b>B</b>  |

## TWO-WAY STOP CONTROL SUMMARY

| General Information  |             | Site Information |                      |
|----------------------|-------------|------------------|----------------------|
| Analyst              | SSS         | Intersection     | SR-57 SB & BC Cutoff |
| Agency/Co.           |             | Jurisdiction     |                      |
| Date Performed       |             | Analysis Year    | Y2030 w/o Project    |
| Analysis Time Period | AM Peak Hr. |                  |                      |

Project Description 57-SB&amp;BC cut, 2030w-oP-AM

East/West Street: Brea Canyon Cutoff Rd.

North/South Street: SR-57 SB Ramps

Intersection Orientation: East-West

Study Period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street                  | Eastbound              |      |      | Westbound |      |      |
|-------------------------------|------------------------|------|------|-----------|------|------|
|                               | 1                      | 2    | 3    | 4         | 5    | 6    |
| Movement                      | L                      | T    | R    | L         | T    | R    |
| Volume (veh/h)                |                        | 757  | 545  | 495       | 907  |      |
| Peak-Hour Factor, PHF         | 1.00                   | 0.98 | 0.98 | 0.98      | 0.98 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 0                      | 772  | 556  | 505       | 925  | 0    |
| Percent Heavy Vehicles        | 0                      | --   | --   | 0         | --   | --   |
| Median Type                   | Two Way Left Turn Lane |      |      |           |      |      |
| RT Channelized                |                        |      | 1    |           |      | 0    |
| Lanes                         | 0                      | 2    | 1    | 1         | 2    | 0    |
| Configuration                 |                        | T    | R    | L         | T    |      |
| Upstream Signal               |                        | 0    |      |           | 0    |      |

| Minor Street                  | Northbound |      |      | Southbound |      |      |
|-------------------------------|------------|------|------|------------|------|------|
|                               | 7          | 8    | 9    | 10         | 11   | 12   |
| Movement                      | L          | T    | R    | L          | T    | R    |
| Volume (veh/h)                |            |      |      | 62         | 0    | 67   |
| Peak-Hour Factor, PHF         | 1.00       | 1.00 | 1.00 | 0.99       | 0.99 | 0.99 |
| Hourly Flow Rate, HFR (veh/h) | 0          | 0    | 0    | 62         | 0    | 67   |
| Percent Heavy Vehicles        | 0          | 0    | 0    | 0          | 0    | 0    |
| Percent Grade (%)             |            | 0    |      |            | 0    |      |
| Flared Approach               |            | N    |      |            | N    |      |
| Storage                       |            | 0    |      |            | 0    |      |
| RT Channelized                |            |      | 0    |            |      | 0    |
| Lanes                         | 0          | 0    | 0    | 0          | 1    | 1    |
| Configuration                 |            |      |      | LT         |      | R    |

### Delay, Queue Length, and Level of Service

| Approach               | Eastbound | Westbound | Northbound |   |   | Southbound |    |      |
|------------------------|-----------|-----------|------------|---|---|------------|----|------|
|                        | 1         | 4         | 7          | 8 | 9 | 10         | 11 | 12   |
| Movement               |           | L         |            |   |   | LT         |    | R    |
| v (veh/h)              |           | 505       |            |   |   | 62         |    | 67   |
| C (m) (veh/h)          |           | 852       |            |   |   | 0          |    | 552  |
| v/c                    |           | 0.59      |            |   |   |            |    | 0.12 |
| 95% queue length       |           | 4.00      |            |   |   |            |    | 0.41 |
| Control Delay (s/veh)  |           | 15.2      |            |   |   |            |    | 12.4 |
| LOS                    |           | C         |            |   |   | F          |    | B    |
| Approach Delay (s/veh) | --        | --        |            |   |   |            |    |      |
| Approach LOS           | --        | --        |            |   |   |            |    |      |

## TWO-WAY STOP CONTROL SUMMARY

| General Information  |             | Site Information |                      |
|----------------------|-------------|------------------|----------------------|
| Analyst              | SSS         | Intersection     | SR-57 SB & BC Cutoff |
| Agency/Co.           |             | Jurisdiction     |                      |
| Date Performed       |             | Analysis Year    | Y2030 w/o Project    |
| Analysis Time Period | PM Peak Hr. |                  |                      |

Project Description 57-SB&amp;BC cut, 2030 w/oP-PM

East/West Street: Brea Canyon Cutoff Rd.

North/South Street: SR-57 SB Ramps

Intersection Orientation: East-West

Study Period (hrs): 0.25

### Vehicle Volumes and Adjustments

| Major Street                  | Eastbound |      |      | Westbound |      |      |   |
|-------------------------------|-----------|------|------|-----------|------|------|---|
|                               | Movement  | 1    | 2    | 3         | 4    | 5    | 6 |
|                               | L         | T    | R    | L         | T    | R    |   |
| Volume (veh/h)                |           | 512  | 620  | 288       | 1323 |      |   |
| Peak-Hour Factor, PHF         | 1.00      | 0.97 | 0.97 | 0.97      | 0.96 | 1.00 |   |
| Hourly Flow Rate, HFR (veh/h) | 0         | 527  | 639  | 296       | 1378 | 0    |   |
| Percent Heavy Vehicles        | 0         | --   | --   | 0         | --   | --   |   |
| Median Type                   | Undivided |      |      |           |      |      |   |
| RT Channelized                |           |      | 1    |           |      | 0    |   |
| Lanes                         | 0         | 2    | 1    | 1         | 2    | 0    |   |
| Configuration                 |           | T    | R    | L         | T    |      |   |
| Upstream Signal               |           | 0    |      |           | 0    |      |   |

| Minor Street                  | Northbound |      |      | Southbound |      |      |    |
|-------------------------------|------------|------|------|------------|------|------|----|
|                               | Movement   | 7    | 8    | 9          | 10   | 11   | 12 |
|                               | L          | T    | R    | L          | T    | R    |    |
| Volume (veh/h)                |            |      |      | 128        | 0    | 25   |    |
| Peak-Hour Factor, PHF         | 1.00       | 1.00 | 1.00 | 0.96       | 0.96 | 0.96 |    |
| Hourly Flow Rate, HFR (veh/h) | 0          | 0    | 0    | 133        | 0    | 26   |    |
| Percent Heavy Vehicles        | 0          | 0    | 0    | 0          | 0    | 0    |    |
| Percent Grade (%)             |            | 0    |      |            | 0    |      |    |
| Flared Approach               |            | N    |      |            | N    |      |    |
| Storage                       |            | 0    |      |            | 0    |      |    |
| RT Channelized                |            |      | 0    |            |      | 0    |    |
| Lanes                         | 0          | 0    | 0    | 0          | 1    | 1    |    |
| Configuration                 |            |      |      | LT         |      | R    |    |

### Delay, Queue Length, and Level of Service

| Approach               | Eastbound | Westbound | Northbound |   |   | Southbound |    |      |
|------------------------|-----------|-----------|------------|---|---|------------|----|------|
|                        | 1         | 4         | 7          | 8 | 9 | 10         | 11 | 12   |
| Movement               |           | L         |            |   |   | LT         |    | R    |
| v (veh/h)              |           | 296       |            |   |   | 133        |    | 26   |
| C (m) (veh/h)          |           | 1050      |            |   |   | 27         |    | 393  |
| v/c                    |           | 0.28      |            |   |   | 4.93       |    | 0.07 |
| 95% queue length       |           | 1.16      |            |   |   | 16.31      |    | 0.21 |
| Control Delay (s/veh)  |           | 9.8       |            |   |   | 2059       |    | 14.8 |
| LOS                    |           | A         |            |   |   | F          |    | B    |
| Approach Delay (s/veh) | --        | --        |            |   |   | 1725       |    |      |
| Approach LOS           | --        | --        |            |   |   | F          |    |      |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                         |             |           |            | Site Information                   |                      |            |      |
|---|-------------|-----------|------------|------------------------------------|----------------------|------------|------|
| Analyst                                     | SSS         |           |            | Intersection                       | SR-57 SB & BC Cutoff |            |      |
| Agency/Co.                                  |             |           |            | Jurisdiction                       |                      |            |      |
| Date Performed                              |             |           |            | Analysis Year                      | Y2030 w Project      |            |      |
| Analysis Time Period                        | AM Peak Hr. |           |            |                                    |                      |            |      |
| Project Description 57-SB&BC cut, 2030wP-AM |             |           |            |                                    |                      |            |      |
| East/West Street: Brea Canyon Cutoff Rd.    |             |           |            | North/South Street: SR-57 SB Ramps |                      |            |      |
| Intersection Orientation: East-West         |             |           |            | Study Period (hrs): 0.25           |                      |            |      |
| Vehicle Volumes and Adjustments             |             |           |            |                                    |                      |            |      |
| Major Street                                | Eastbound   |           |            | Westbound                          |                      |            |      |
| Movement                                    | 1           | 2         | 3          | 4                                  | 5                    | 6          |      |
|   | L           | T         | R          | L                                  | T                    | R          |      |
| Volume (veh/h)                              |             | 759       | 545        | 517                                | 915                  |            |      |
| Peak-Hour Factor, PHF                       | 1.00        | 0.98      | 0.98       | 0.98                               | 0.98                 | 1.00       |      |
| Hourly Flow Rate, HFR (veh/h)               | 0           | 774       | 556        | 527                                | 933                  | 0          |      |
| Percent Heavy Vehicles                      | 0           | --        | --         | 0                                  | --                   | --         |      |
| Median Type                                 | Undivided   |           |            |                                    |                      |            |      |
| RT Channelized                              |             |           | 1          |                                    |                      | 0          |      |
| Lanes                                       | 0           | 2         | 1          | 1                                  | 2                    | 0          |      |
| Configuration                               |             | T         | R          | L                                  | T                    |            |      |
| Upstream Signal                             |             | 0         |            |                                    | 0                    |            |      |
| Minor Street                                | Northbound  |           |            | Southbound                         |                      |            |      |
| Movement                                    | 7           | 8         | 9          | 10                                 | 11                   | 12         |      |
|   | L           | T         | R          | L                                  | T                    | R          |      |
| Volume (veh/h)                              |             |           |            | 66                                 | 0                    | 67         |      |
| Peak-Hour Factor, PHF                       | 1.00        | 1.00      | 1.00       | 0.99                               | 0.99                 | 0.99       |      |
| Hourly Flow Rate, HFR (veh/h)               | 0           | 0         | 0          | 66                                 | 0                    | 67         |      |
| Percent Heavy Vehicles                      | 0           | 0         | 0          | 0                                  | 0                    | 0          |      |
| Percent Grade (%)                           |             | 0         |            |                                    | 0                    |            |      |
| Flared Approach                             |             | N         |            |                                    | N                    |            |      |
| Storage                                     |             | 0         |            |                                    | 0                    |            |      |
| RT Channelized                              |             |           | 0          |                                    |                      | 0          |      |
| Lanes                                       | 0           | 0         | 0          | 0                                  | 1                    | 1          |      |
| Configuration                               |             |           |            | LT                                 |                      | R          |      |
| Delay, Queue Length, and Level of Service   |             |           |            |                                    |                      |            |      |
| Approach                                    | Eastbound   | Westbound | Northbound |                                    |                      | Southbound |      |
| Movement                                    | 1           | 4         | 7          | 8                                  | 9                    | 10         | 11   |
| Lane Configuration                          |             | L         |            |                                    |                      | LT         | R    |
| v (veh/h)                                   |             | 527       |            |                                    |                      | 66         | 67   |
| C (m) (veh/h)                               |             | 851       |            |                                    |                      | 11         | 549  |
| v/c   |             | 0.62      |            |                                    |                      | 6.00       | 0.12 |
| 95% queue length                            |             | 4.40      |            |                                    |                      | 9.48       | 0.41 |
| Control Delay (s/veh)                       |             | 15.9      |            |                                    |                      | 2923       | 12.5 |
| LOS   |             | C         |            |                                    |                      | F          | B    |
| Approach Delay (s/veh)                      | --          | --        |            |                                    |                      | 1457       |      |
| Approach LOS                                | --          | --        |            |                                    |                      | F          |      |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                         |             | Site Information                   |                      |
|---|-------------|------------------------------------|----------------------|
| Analyst                                     | SSS         | Intersection                       | SR-57 SB & BC Cutoff |
| Agency/Co.                                  |             | Jurisdiction                       |                      |
| Date Performed                              |             | Analysis Year                      | Y2030 w Project      |
| Analysis Time Period                        | PM Peak Hr. |                                    |                      |
| Project Description 57-SB&BC cut, 2030wP-PM |             |                                    |                      |
| East/West Street: Brea Canyon Cutoff Rd.    |             | North/South Street: SR-57 SB Ramps |                      |
| Intersection Orientation: East-West         |             | Study Period (hrs): 0.25           |                      |

### Vehicle Volumes and Adjustments

| Major Street                  | Eastbound |      |      | Westbound |      |      |
|-------------------------------|-----------|------|------|-----------|------|------|
|                               | 1         | 2    | 3    | 4         | 5    | 6    |
| Movement                      | L         | T    | R    | L         | T    | R    |
| Volume (veh/h)                |           | 519  | 620  | 298       | 1327 |      |
| Peak-Hour Factor, PHF         | 1.00      | 0.97 | 0.97 | 0.97      | 0.96 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 0         | 535  | 639  | 307       | 1382 | 0    |
| Percent Heavy Vehicles        | 0         | --   | --   | 0         | --   | --   |
| Median Type                   | Undivided |      |      |           |      |      |
| RT Channelized                |           |      | 1    |           |      | 0    |
| Lanes                         | 0         | 2    | 1    | 1         | 2    | 0    |
| Configuration                 |           | T    | R    | L         | T    |      |
| Upstream Signal               |           | 0    |      |           | 0    |      |

| Minor Street                  | Northbound |      |      | Southbound |      |      |
|-------------------------------|------------|------|------|------------|------|------|
|                               | 7          | 8    | 9    | 10         | 11   | 12   |
| Movement                      | L          | T    | R    | L          | T    | R    |
| Volume (veh/h)                |            |      |      | 149        | 0    | 25   |
| Peak-Hour Factor, PHF         | 1.00       | 1.00 | 1.00 | 0.96       | 0.96 | 0.96 |
| Hourly Flow Rate, HFR (veh/h) | 0          | 0    | 0    | 155        | 0    | 26   |
| Percent Heavy Vehicles        | 0          | 0    | 0    | 0          | 0    | 0    |
| Percent Grade (%)             | 0          |      |      | 0          |      |      |
| Flared Approach               |            | N    |      |            | N    |      |
| Storage                       |            | 0    |      |            | 0    |      |
| RT Channelized                |            |      | 0    |            |      | 0    |
| Lanes                         | 0          | 0    | 0    | 0          | 1    | 1    |
| Configuration                 |            |      |      | LT         |      | R    |

### Delay, Queue Length, and Level of Service

| Approach               | Eastbound | Westbound | Northbound |   |   | Southbound |    |      |
|------------------------|-----------|-----------|------------|---|---|------------|----|------|
|                        | 1         | 4         | 7          | 8 | 9 | 10         | 11 | 12   |
| Movement               |           | L         |            |   |   | LT         |    | R    |
| v (veh/h)              |           | 307       |            |   |   | 155        |    | 26   |
| C (m) (veh/h)          |           | 1043      |            |   |   | 25         |    | 392  |
| v/c                    |           | 0.29      |            |   |   | 6.20       |    | 0.07 |
| 95% queue length       |           | 1.23      |            |   |   | 19.27      |    | 0.21 |
| Control Delay (s/veh)  |           | 9.9       |            |   |   | 2650       |    | 14.8 |
| LOS                    |           | A         |            |   |   | F          |    | B    |
| Approach Delay (s/veh) | --        | --        |            |   |   | 2271       |    |      |
| Approach LOS           | --        | --        |            |   |   | F          |    |      |

## Table X

### AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
SR-57 SB Ramps & Brea Canyon Cutoff Rd.

| Movement | YEAR 2030 w/o Project |          |        |                    | YEAR 2030 w/ Project |          |            |                    |           | YEAR 2030 w/ Project, with Improvements |          |            |                    |           |
|----------|-----------------------|----------|--------|--------------------|----------------------|----------|------------|--------------------|-----------|---|----------|------------|--------------------|-----------|
|          | Lanes                 | Capacity | Volume | V/C Ratio          | Lanes                | Capacity | Added Vol. | Tot. Vol.          | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol.          | V/C Ratio |
| NB Left  | 8                     | 2880     | 0      | 0.000              | 8                    | 2880     | 0          | 0                  | 0.000     | 8                                       | 2880     | 0          | 0                  | 0.000     |
| NB Thru  | 8                     | 6400     | 0      | 0.000 *            | 8                    | 6400     | 0          | 0                  | 0.000 *   | 8                                       | 6400     | 0          | 0                  | 0.000 *   |
| NB Right | 0                     | 0        | 0      |                    | 0                    | 0        | 0          | 0                  |           | 0                                       | 0        | 0          | 0                  |           |
| SB Left  | 1                     | 1600     | 62     | 0.039 *            | 1                    | 1600     | 4          | 66                 | 0.041 *   | 1                                       | 1600     | 0          | 66                 | 0.041 *   |
| SB Thru  | 8                     | 6400     | 0      | 0.000              | 8                    | 6400     | 0          | 0                  | 0.000     | 8                                       | 6400     | 0          | 0                  | 0.000     |
| SB Right | 1                     | 1600     | 67     | 0.042              | 1                    | 1600     | 0          | 67                 | 0.042     | 1                                       | 1600     | 0          | 67                 | 0.042     |
| EB Left  | 8                     | 2880     | 0      | 0.000              | 8                    | 2880     | 0          | 0                  | 0.000     | 8                                       | 2880     | 0          | 0                  | 0.000     |
| EB Thru  | 2                     | 3200     | 757    | 0.237 *            | 2                    | 3200     | 2          | 759                | 0.237 *   | 2                                       | 3200     | 0          | 759                | 0.237 *   |
| EB Right | 1                     | 1600     | 545    | 0.341              | 1                    | 1600     | 0          | 545                | 0.341     | 1                                       | 1600     | 0          | 545                | 0.341     |
| WB Left  | 1                     | 1600     | 495    | 0.309 *            | 1                    | 1600     | 22         | 517                | 0.323 *   | 1                                       | 1600     | 0          | 517                | 0.323 *   |
| WB Thru  | 2                     | 3200     | 907    | 0.283              | 2                    | 3200     | 8          | 915                | 0.286     | 2                                       | 3200     | 0          | 915                | 0.286     |
| WB Right | 0                     | 0        | 0      |                    | 0                    | 0        | 0          | 0                  |           | 0                                       | 0        | 0          | 0                  |           |
|          |                       |          |        | N/S Critical Sum = | 0.039                |          |            | N/S Critical Sum = | 0.041     |   |          |            | N/S Critical Sum = | 0.041     |
|          |                       |          |        | E/W Critical Sum = | 0.546                |          |            | E/W Critical Sum = | 0.560     |   |          |            | E/W Critical Sum = | 0.560     |
|          |                       |          |        | [Adjustment] =     | 0.104                |          |            | [Adjustment] =     | 0.104     |   |          |            | [Adjustment] =     | 0.104     |
|          |                       |          |        | Clearance =        | 0.100                |          |            | Clearance =        | 0.100     |   |          |            | Clearance =        | 0.100     |
|          |                       |          |        | Total ICU =        | 0.789                |          |            | Total ICU =        | 0.805     |   |          |            | Total ICU =        | 0.805     |
|          |                       |          |        | LOS =              | C                    |          |            | LOS =              | D         |   |          |            | LOS =              | D         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

SR-57 SB Ramps & Brea Canyon Cutoff Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| NB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| SB Left            | 1                     | 1600     | 128    | 0.080 *   | 1                    | 1600     | 21         | 149       | 0.093 *   | 1                                       | 1600     | 0          | 149       | 0.093 *   |
| SB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| SB Right           | 1                     | 1600     | 25     | 0.016     | 1                    | 1600     | 0          | 25        | 0.016     | 1                                       | 1600     | 0          | 25        | 0.016     |
| EB Left            | 8                     | 2880     | 0      | 0.000 *   | 8                    | 2880     | 0          | 0         | 0.000 *   | 8                                       | 2880     | 0          | 0         | 0.000 *   |
| EB Thru            | 2                     | 3200     | 512    | 0.160     | 2                    | 3200     | 7          | 519       | 0.162     | 2                                       | 3200     | 0          | 519       | 0.162     |
| EB Right           | 1                     | 1600     | 620    | 0.388     | 1                    | 1600     | 0          | 620       | 0.388     | 1                                       | 1600     | 0          | 620       | 0.388     |
| WB Left            | 1                     | 1600     | 288    | 0.180     | 1                    | 1600     | 10         | 298       | 0.186     | 1                                       | 1600     | 0          | 298       | 0.186     |
| WB Thru            | 2                     | 3200     | 1323   | 0.413 *   | 2                    | 3200     | 4          | 1327      | 0.415 *   | 2                                       | 3200     | 0          | 1327      | 0.415 *   |
| WB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| N/S Critical Sum = |                       |          |        | 0.080     | N/S Critical Sum =   |          |            |           | 0.093     | N/S Critical Sum =                      |          |            |           | 0.093     |
| E/W Critical Sum = |                       |          |        | 0.413     | E/W Critical Sum =   |          |            |           | 0.415     | E/W Critical Sum =                      |          |            |           | 0.415     |
| [Adjustment] =     |                       |          |        | 0.155     | [Adjustment] =       |          |            |           | 0.166     | [Adjustment] =                          |          |            |           | 0.166     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.748     | Total ICU =          |          |            |           | 0.774     | Total ICU =                             |          |            |           | 0.774     |
| LOS =              |                       |          |        | C         | LOS =                |          |            |           | C         | LOS =                                   |          |            |           | C         |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 SR-57 NB Ramps & Brea Canyon Cutoff Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 341    | 0.213 *   | 1                    | 1600     | 0          | 341       | 0.213 *   | 2                                       | 2880     | 0          | 341       | 0.118 *   |
| NB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| NB Right           | 1                     | 1600     | 102    | 0.064     | 1                    | 1600     | 4          | 106       | 0.066     | 1                                       | 1600     | 0          | 106       | 0.066     |
| SB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| SB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| EB Left            | 1                     | 1600     | 47     | 0.029 *   | 1                    | 1600     | 0          | 47        | 0.029 *   | 1                                       | 1600     | 0          | 47        | 0.029 *   |
| EB Thru            | 2                     | 3200     | 835    | 0.261     | 2                    | 3200     | 6          | 841       | 0.263     | 2                                       | 3200     | 0          | 841       | 0.263     |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| WB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 2                     | 3200     | 1063   | 0.332 *   | 2                    | 3200     | 30         | 1093      | 0.342 *   | 2                                       | 3200     | 0          | 1093      | 0.342 *   |
| WB Right           | Free                  | NC       | 157    | 0.000     | Free                 | NC       | 22         | 179       | 0.000     | Free                                    | NC       | 0          | 179       | 0.000     |
| N/S Critical Sum = |                       |          |        | 0.213     | N/S Critical Sum =   |          |            |           | 0.213     | N/S Critical Sum =                      |          |            |           | 0.118     |
| E/W Critical Sum = |                       |          |        | 0.361     | E/W Critical Sum =   |          |            |           | 0.371     | E/W Critical Sum =                      |          |            |           | 0.371     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.674     | Total ICU =          |          |            |           | 0.684     | Total ICU =                             |          |            |           | 0.589     |
| LOS =              |                       |          |        | <b>B</b>  | LOS =                |          |            |           | <b>B</b>  | LOS =                                   |          |            |           | <b>A</b>  |

## Table Y PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

SR-57 NB Ramps & Brea Canyon Cutoff Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 671    | 0.419 *   | 1                    | 1600     | 0          | 671       | 0.419 *   | 2                                       | 2880     | 0          | 671       | 0.233 *   |
| NB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                       | 6400     | 0          | 0         | 0.000     |
| NB Right           | 1                     | 1600     | 791    | 0.494     | 1                    | 1600     | 21         | 812       | 0.508     | 1                                       | 1600     | 0          | 812       | 0.508     |
| SB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 8                     | 6400     | 0      | 0.000 *   | 8                    | 6400     | 0          | 0         | 0.000 *   | 8                                       | 6400     | 0          | 0         | 0.000 *   |
| SB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| EB Left            | 1                     | 1600     | 26     | 0.016 *   | 1                    | 1600     | 0          | 26        | 0.016 *   | 1                                       | 1600     | 0          | 26        | 0.016 *   |
| EB Thru            | 2                     | 3200     | 579    | 0.181     | 2                    | 3200     | 28         | 607       | 0.190     | 2                                       | 3200     | 0          | 607       | 0.190     |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                       | 0        | 0          | 0         |           |
| WB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| WB Thru            | 2                     | 3200     | 920    | 0.288 *   | 2                    | 3200     | 14         | 934       | 0.292 *   | 2                                       | 3200     | 0          | 934       | 0.292 *   |
| WB Right           | Free                  | NC       | 126    | 0.000     | Free                 | NC       | 10         | 136       | 0.000     | Free                                    | NC       | 0          | 136       | 0.000     |
| N/S Critical Sum = |                       |          |        | 0.419     | N/S Critical Sum =   |          |            |           | 0.419     | N/S Critical Sum =                      |          |            |           | 0.233     |
| E/W Critical Sum = |                       |          |        | 0.304     | E/W Critical Sum =   |          |            |           | 0.308     | E/W Critical Sum =                      |          |            |           | 0.308     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.102     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.823     | Total ICU =          |          |            |           | 0.827     | Total ICU =                             |          |            |           | 0.743     |
| LOS =              |                       |          |        | D         | LOS =                |          |            |           | D         | LOS =                                   |          |            |           | C         |

## Table X

### AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Brea Canyon Rd. & Diamond Bar Blvd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 2                     | 2880     | 192    | 0.067 *   | 2                    | 2880     | 0          | 192       | 0.067 *   | 2                                       | 2880     | 0          | 192       | 0.067 *   |
| NB Thru            | 1                     | 1600     | 160    | 0.100     | 1                    | 1600     | 0          | 160       | 0.100     | 1                                       | 1600     | 0          | 160       | 0.100     |
| NB Right           | 1                     | 1600     | 400    | 0.250     | 1                    | 1600     | 1          | 401       | 0.251     | 2                                       | 3200     | 0          | 401       | 0.125     |
| SB Left            | 1                     | 1600     | 16     | 0.010     | 1                    | 1600     | 1          | 17        | 0.011     | 1                                       | 1600     | 0          | 17        | 0.011     |
| SB Thru            | 2                     | 3200     | 412    | 0.165 *   | 2                    | 3200     | 0          | 412       | 0.165 *   | 2                                       | 3200     | 0          | 412       | 0.165 *   |
| SB Right           | 0                     | 0        | 116    |           | 0                    | 0        | 0          | 116       |           | 0                                       | 0        | 0          | 116       |           |
| EB Left            | 1                     | 1600     | 138    | 0.086     | 1                    | 1600     | 0          | 138       | 0.086     | 1                                       | 1600     | 0          | 138       | 0.086     |
| EB Thru            | 2                     | 3200     | 295    | 0.225 *   | 2                    | 3200     | 10         | 305       | 0.228 *   | 3                                       | 4800     | 0          | 305       | 0.152 *   |
| EB Right           | 0                     | 0        | 424    |           | 0                    | 0        | 0          | 424       |           | 0                                       | 0        | 0          | 424       |           |
| WB Left            | 1                     | 1600     | 980    | 0.613 *   | 1                    | 1600     | 4          | 984       | 0.615 *   | 2                                       | 2880     | 0          | 984       | 0.342 *   |
| WB Thru            | 2                     | 3200     | 782    | 0.257     | 2                    | 3200     | 52         | 834       | 0.274     | 2                                       | 3200     | 0          | 834       | 0.274     |
| WB Right           | 0                     | 0        | 40     |           | 0                    | 0        | 4          | 44        |           | 0                                       | 0        | 0          | 44        |           |
| N/S Critical Sum = |                       |          |        | 0.232     | N/S Critical Sum =   |          |            |           | 0.232     | N/S Critical Sum =                      |          |            |           | 0.232     |
| E/W Critical Sum = |                       |          |        | 0.838     | E/W Critical Sum =   |          |            |           | 0.843     | E/W Critical Sum =                      |          |            |           | 0.494     |
| [RT Adjustment] =  |                       |          |        | -0.070    | [RT Adjustment] =    |          |            |           | -0.070    | [RT Adjustment] =                       |          |            |           | -0.070    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 1.100     | Total ICU =          |          |            |           | 1.105     | Total ICU =                             |          |            |           | 0.756     |
| LOS =              |                       |          |        | F         | LOS =                |          |            |           | F         | LOS =                                   |          |            |           | C         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Brea Canyon Rd. & Diamond Bar Blvd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 2                     | 2880     | 550    | 0.191     | 2                    | 2880     | 0          | 550       | 0.191     | 2                                       | 2880     | 0          | 550       | 0.191     |
| NB Thru            | 1                     | 1600     | 488    | 0.305 *   | 1                    | 1600     | 0          | 488       | 0.305 *   | 1                                       | 1600     | 0          | 488       | 0.305 *   |
| NB Right           | 1                     | 1600     | 1185   | 0.741     | 1                    | 1600     | 4          | 1189      | 0.743     | 2                                       | 3200     | 0          | 1189      | 0.372     |
| SB Left            | 1                     | 1600     | 62     | 0.039 *   | 1                    | 1600     | 4          | 66        | 0.041 *   | 1                                       | 1600     | 0          | 66        | 0.041 *   |
| SB Thru            | 2                     | 3200     | 75     | 0.049     | 2                    | 3200     | 0          | 75        | 0.049     | 2                                       | 3200     | 0          | 75        | 0.049     |
| SB Right           | 0                     | 0        | 81     |           | 0                    | 0        | 0          | 81        |           | 0                                       | 0        | 0          | 81        |           |
| EB Left            | 1                     | 1600     | 171    | 0.107     | 1                    | 1600     | 0          | 171       | 0.107     | 1                                       | 1600     | 0          | 171       | 0.107     |
| EB Thru            | 2                     | 3200     | 1048   | 0.389 *   | 2                    | 3200     | 49         | 1097      | 0.405 *   | 3                                       | 4800     | 0          | 1097      | 0.270 *   |
| EB Right           | 0                     | 0        | 198    |           | 0                    | 0        | 0          | 198       |           | 0                                       | 0        | 0          | 198       |           |
| WB Left            | 1                     | 1600     | 563    | 0.352 *   | 1                    | 1600     | 2          | 565       | 0.353 *   | 2                                       | 2880     | 0          | 565       | 0.196 *   |
| WB Thru            | 2                     | 3200     | 461    | 0.156     | 2                    | 3200     | 24         | 485       | 0.164     | 2                                       | 3200     | 0          | 485       | 0.164     |
| WB Right           | 0                     | 0        | 39     |           | 0                    | 0        | 2          | 41        |           | 0                                       | 0        | 0          | 41        |           |
| N/S Critical Sum = |                       |          |        | 0.344     | N/S Critical Sum =   |          |            |           | 0.346     | N/S Critical Sum =                      |          |            |           | 0.346     |
| E/W Critical Sum = |                       |          |        | 0.741     | E/W Critical Sum =   |          |            |           | 0.758     | E/W Critical Sum =                      |          |            |           | 0.466     |
| [Adjustment] =     |                       |          |        | 0.014     | [Adjustment] =       |          |            |           | 0.016     | [Adjustment] =                          |          |            |           | -0.070    |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 1.199     | Total ICU =          |          |            |           | 1.220     | Total ICU =                             |          |            |           | 0.842     |
| LOS =              |                       |          |        | F         | LOS =                |          |            |           | F         | LOS =                                   |          |            |           | D         |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                                     |             | Site Information                             |                     |
|---|-------------|--|---------------------|
| Analyst   | SSS         | Intersection                                 | DBB & Crooked Creek |
| Agency/Co.  |             | Jurisdiction                                 |                     |
| Date Performed  |             | Analysis Year                                | Y2030 w/o Project   |
| Analysis Time Period                                    | AM Peak Hr. |  |                     |
| Project Description <i>DBB&amp;CrookC, 2030 w/oP-AM</i> |             |  |                     |
| East/West Street: <i>Crooked Creek Dr.</i>              |             | North/South Street: <i>Diamond Bar Blvd.</i> |                     |
| Intersection Orientation: <i>North-South</i>            |             | Study Period (hrs): <i>0.25</i>              |                     |

### Vehicle Volumes and Adjustments

| Major Street                  | Northbound         |      |      | Southbound |      |      |
|-------------------------------|--------------------|------|------|------------|------|------|
| Movement                      | 1                  | 2    | 3    | 4          | 5    | 6    |
|                               | L                  | T    | R    | L          | T    | R    |
| Volume (veh/h)                | 8                  | 579  |      |            | 1774 | 2    |
| Peak-Hour Factor, PHF         | 1.00               | 1.00 | 1.00 | 1.00       | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 2                  | 0    | 45   | 0          | 0    | 0    |
| Percent Heavy Vehicles        | 0                  | --   | --   | 0          | --   | --   |
| Median Type                   | <i>Raised curb</i> |      |      |            |      |      |
| RT Channelized                |                    |      | 0    |            |      | 0    |
| Lanes                         | 1                  | 2    | 0    | 0          | 2    | 0    |
| Configuration                 | L                  | T    |      |            | T    | TR   |
| Upstream Signal               |                    | 0    |      |            | 0    |      |

| Minor Street                  | Eastbound |      |      | Westbound |      |      |
|-------------------------------|-----------|------|------|-----------|------|------|
| Movement                      | 7         | 8    | 9    | 10        | 11   | 12   |
|                               | L         | T    | R    | L         | T    | R    |
| Volume (veh/h)                | 2         | 0    | 45   |           |      |      |
| Peak-Hour Factor, PHF         | 1.00      | 1.00 | 1.00 | 1.00      | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 0         | 1774 | 2    | 8         | 579  | 0    |
| Percent Heavy Vehicles        | 0         | 0    | 0    | 0         | 0    | 0    |
| Percent Grade (%)             |           | 0    |      |           | 0    |      |
| Flared Approach               |           | N    |      |           | N    |      |
| Storage                       |           | 0    |      |           | 0    |      |
| RT Channelized                |           |      | 0    |           |      | 0    |
| Lanes                         | 0         | 1    | 0    | 0         | 0    | 0    |
| Configuration                 |           | LTR  |      |           |      |      |

### Delay, Queue Length, and Level of Service

| Approach               | Northbound | Southbound | Westbound |   |   | Eastbound |      |    |
|------------------------|------------|------------|-----------|---|---|-----------|------|----|
| Movement               | 1          | 4          | 7         | 8 | 9 | 10        | 11   | 12 |
| Lane Configuration     | L          |            |           |   |   |           | LTR  |    |
| v (veh/h)              | 8          |            |           |   |   |           | 47   |    |
| C (m) (veh/h)          | 355        |            |           |   |   |           | 271  |    |
| v/c                    | 0.02       |            |           |   |   |           | 0.17 |    |
| 95% queue length       | 0.07       |            |           |   |   |           | 0.62 |    |
| Control Delay (s/veh)  | 15.4       |            |           |   |   |           | 21.1 |    |
| LOS                    | C          |            |           |   |   |           | C    |    |
| Approach Delay (s/veh) | --         | --         |           |   |   |           | 21.1 |    |
| Approach LOS           | --         | --         |           |   |   |           | C    |    |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                                     |             | Site Information                             |                     |
|---|-------------|--|---------------------|
| Analyst   | SSS         | Intersection                                 | DBB & Crooked Creek |
| Agency/Co.  |             | Jurisdiction                                 |                     |
| Date Performed  |             | Analysis Year                                | Y2030 w/o Project   |
| Analysis Time Period                                    | PM Peak Hr. |  |                     |
| Project Description <i>DBB&amp;CrookC, 2030 w/oP-PM</i> |             |  |                     |
| East/West Street: <i>Crooked Creek Dr.</i>              |             | North/South Street: <i>Diamond Bar Blvd.</i> |                     |
| Intersection Orientation: <i>North-South</i>            |             | Study Period (hrs): <i>0.25</i>              |                     |

| Vehicle Volumes and Adjustments |                    |      |      |            |      |      |
|---------------------------------|--------------------|------|------|------------|------|------|
| Major Street                    | Northbound         |      |      | Southbound |      |      |
| Movement                        | 1                  | 2    | 3    | 4          | 5    | 6    |
|                                 | L                  | T    | R    | L          | T    | R    |
| Volume (veh/h)                  | 30                 | 2292 |      |            | 1049 | 0    |
| Peak-Hour Factor, PHF           | 1.00               | 1.00 | 1.00 | 1.00       | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h)   | 0                  | 0    | 13   | 0          | 0    | 0    |
| Percent Heavy Vehicles          | 0                  | --   | --   | 0          | --   | --   |
| Median Type                     | <i>Raised curb</i> |      |      |            |      |      |
| RT Channelized                  |                    |      | 0    |            |      | 0    |
| Lanes                           | 1                  | 2    | 0    | 0          | 2    | 0    |
| Configuration                   | L                  | T    |      |            | T    | TR   |
| Upstream Signal                 |                    | 0    |      |            | 0    |      |

| Minor Street                  | Eastbound |      |      | Westbound |      |      |
|-------------------------------|-----------|------|------|-----------|------|------|
| Movement                      | 7         | 8    | 9    | 10        | 11   | 12   |
|                               | L         | T    | R    | L         | T    | R    |
| Volume (veh/h)                | 0         | 0    | 13   |           |      |      |
| Peak-Hour Factor, PHF         | 1.00      | 1.00 | 1.00 | 1.00      | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 0         | 1049 | 0    | 30        | 2292 | 0    |
| Percent Heavy Vehicles        | 0         | 0    | 0    | 0         | 0    | 0    |
| Percent Grade (%)             |           | 0    |      |           | 0    |      |
| Flared Approach               |           | N    |      |           | N    |      |
| Storage                       |           | 0    |      |           | 0    |      |
| RT Channelized                |           |      | 0    |           |      | 0    |
| Lanes                         | 0         | 1    | 0    | 0         | 0    | 0    |
| Configuration                 |           | LTR  |      |           |      |      |

| Delay, Queue Length, and Level of Service |            |            |           |   |   |           |      |    |
|---|------------|------------|-----------|---|---|-----------|------|----|
| Approach                                  | Northbound | Southbound | Westbound |   |   | Eastbound |      |    |
| Movement                                  | 1          | 4          | 7         | 8 | 9 | 10        | 11   | 12 |
| Lane Configuration                        | L          |            |           |   |   |           | LTR  |    |
| v (veh/h)                                 | 30         |            |           |   |   |           | 13   |    |
| C (m) (veh/h)                             | 671        |            |           |   |   |           | 503  |    |
| v/c                                       | 0.04       |            |           |   |   |           | 0.03 |    |
| 95% queue length                          | 0.14       |            |           |   |   |           | 0.08 |    |
| Control Delay (s/veh)                     | 10.6       |            |           |   |   |           | 12.3 |    |
| LOS                                       | B          |            |           |   |   |           | B    |    |
| Approach Delay (s/veh)                    | --         | --         |           |   |   |           | 12.3 |    |
| Approach LOS                              | --         | --         |           |   |   |           | B    |    |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                              |                    |            |           | Site Information                             |                     |           |      |    |
|--|--------------------|------------|-----------|--|---------------------|-----------|------|----|
| Analyst  | SSS                |            |           | Intersection                                 | DBB & Crooked Creek |           |      |    |
| Agency/Co.                                       |                    |            |           | Jurisdiction                                 |                     |           |      |    |
| Date Performed                                   |                    |            |           | Analysis Year                                | Y2030 w Project     |           |      |    |
| Analysis Time Period                             | AM Peak Hr.        |            |           |  |                     |           |      |    |
| Project Description <i>DBB&amp;CrookC, wP-AM</i> |                    |            |           |  |                     |           |      |    |
| East/West Street: <i>Crooked Creek Dr.</i>       |                    |            |           | North/South Street: <i>Diamond Bar Blvd.</i> |                     |           |      |    |
| Intersection Orientation: <i>North-South</i>     |                    |            |           | Study Period (hrs): <i>0.25</i>              |                     |           |      |    |
| Vehicle Volumes and Adjustments                  |                    |            |           |  |                     |           |      |    |
| Major Street                                     | Northbound         |            |           | Southbound                                   |                     |           |      |    |
| Movement   | 1                  | 2          | 3         | 4  | 5                   | 6         |      |    |
|  | L                  | T          | R         | L  | T                   | R         |      |    |
| Volume (veh/h)                                   | 8                  | 579        | 12        | 3  | 1774                | 2         |      |    |
| Peak-Hour Factor, PHF                            | 1.00               | 1.00       | 1.00      | 1.00   | 1.00                | 1.00      |      |    |
| Hourly Flow Rate, HFR (veh/h)                    | 2                  | 0          | 45        | 60   | 0                   | 15        |      |    |
| Percent Heavy Vehicles                           | 0                  | --         | --        | 0  | --                  | --        |      |    |
| Median Type                                      | <i>Raised curb</i> |            |           |  |                     |           |      |    |
| RT Channelized                                   |                    |            | 0         |  |                     |           | 0    |    |
| Lanes  | 1                  | 2          | 0         | 1  | 2                   | 0         |      |    |
| Configuration                                    | L                  | T          | TR        | L  | T                   | TR        |      |    |
| Upstream Signal                                  |                    | 0          |           |  | 0                   |           |      |    |
| Minor Street                                     | Eastbound          |            |           | Westbound                                    |                     |           |      |    |
| Movement   | 7                  | 8          | 9         | 10   | 11                  | 12        |      |    |
|  | L                  | T          | R         | L  | T                   | R         |      |    |
| Volume (veh/h)                                   | 2                  | 0          | 45        | 60   | 0                   | 15        |      |    |
| Peak-Hour Factor, PHF                            | 1.00               | 1.00       | 1.00      | 1.00   | 1.00                | 1.00      |      |    |
| Hourly Flow Rate, HFR (veh/h)                    | 3                  | 1774       | 2         | 8  | 579                 | 12        |      |    |
| Percent Heavy Vehicles                           | 0                  | 0          | 0         | 0  | 0                   | 0         |      |    |
| Percent Grade (%)                                |                    | 0          |           |  | 0                   |           |      |    |
| Flared Approach                                  |                    | N          |           |  | N                   |           |      |    |
| Storage  |                    | 0          |           |  | 0                   |           |      |    |
| RT Channelized                                   |                    |            | 0         |  |                     |           | 0    |    |
| Lanes  | 0                  | 1          | 0         | 0  | 1                   | 0         |      |    |
| Configuration                                    |                    | LTR        |           |  | LTR                 |           |      |    |
| Delay, Queue Length, and Level of Service        |                    |            |           |  |                     |           |      |    |
| Approach   | Northbound         | Southbound | Westbound |  |                     | Eastbound |      |    |
| Movement   | 1                  | 4          | 7         | 8  | 9                   | 10        | 11   | 12 |
| Lane Configuration                               | L                  | L          |           | LTR  |                     |           | LTR  |    |
| v (veh/h)  | 8                  | 3          |           | 75   |                     |           | 47   |    |
| C (m) (veh/h)                                    | 355                | 995        |           | 208  |                     |           | 259  |    |
| v/c  | 0.02               | 0.00       |           | 0.36   |                     |           | 0.18 |    |
| 95% queue length                                 | 0.07               | 0.01       |           | 1.55   |                     |           | 0.65 |    |
| Control Delay (s/veh)                            | 15.4               | 8.6        |           | 31.8   |                     |           | 22.0 |    |
| LOS  | C                  | A          |           | D  |                     |           | C    |    |
| Approach Delay (s/veh)                           | --                 | --         |           | 31.8   |                     |           | 22.0 |    |
| Approach LOS                                     | --                 | --         |           | D  |                     |           | C    |    |

## TWO-WAY STOP CONTROL SUMMARY

| General Information                                   |             |  | Site Information                             |                     |  |
|---|-------------|--|--|---------------------|--|
| Analyst   | SSS         |  | Intersection                                 | DBB & Crooked Creek |  |
| Agency/Co.  |             |  | Jurisdiction                                 |                     |  |
| Date Performed  |             |  | Analysis Year                                | Y2030 w Project     |  |
| Analysis Time Period                                  | PM Peak Hr. |  |  |                     |  |
| Project Description <i>DBB&amp;CrookC, 2030 wP-PM</i> |             |  |  |                     |  |
| East/West Street: <i>Crooked Creek Dr.</i>            |             |  | North/South Street: <i>Diamond Bar Blvd.</i> |                     |  |
| Intersection Orientation: <i>North-South</i>          |             |  | Study Period (hrs): <i>0.25</i>              |                     |  |

| Vehicle Volumes and Adjustments |                    |      |      |            |      |      |
|---------------------------------|--------------------|------|------|------------|------|------|
| Major Street                    | Northbound         |      |      | Southbound |      |      |
| Movement                        | 1                  | 2    | 3    | 4          | 5    | 6    |
|                                 | L                  | T    | R    | L          | T    | R    |
| Volume (veh/h)                  | 30                 | 2292 | 57   | 14         | 1049 | 0    |
| Peak-Hour Factor, PHF           | 1.00               | 1.00 | 1.00 | 1.00       | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h)   | 0                  | 0    | 13   | 28         | 0    | 7    |
| Percent Heavy Vehicles          | 0                  | -    | -    | 0          | -    | -    |
| Median Type                     | <i>Raised curb</i> |      |      |            |      |      |
| RT Channelized                  |                    |      | 0    |            |      | 0    |
| Lanes                           | 1                  | 2    | 0    | 1          | 2    | 0    |
| Configuration                   | L                  | T    | TR   | L          | T    | TR   |
| Upstream Signal                 |                    | 0    |      |            | 0    |      |

| Minor Street                  | Eastbound |      |      | Westbound |      |      |
|-------------------------------|-----------|------|------|-----------|------|------|
| Movement                      | 7         | 8    | 9    | 10        | 11   | 12   |
|                               | L         | T    | R    | L         | T    | R    |
| Volume (veh/h)                | 0         | 0    | 13   | 28        | 0    | 7    |
| Peak-Hour Factor, PHF         | 1.00      | 1.00 | 1.00 | 1.00      | 1.00 | 1.00 |
| Hourly Flow Rate, HFR (veh/h) | 14        | 1049 | 0    | 30        | 2292 | 57   |
| Percent Heavy Vehicles        | 0         | 0    | 0    | 0         | 0    | 0    |
| Percent Grade (%)             |           | 0    |      |           | 0    |      |
| Flared Approach               |           | N    |      |           | N    |      |
| Storage                       |           | 0    |      |           | 0    |      |
| RT Channelized                |           |      | 0    |           |      | 0    |
| Lanes                         | 0         | 1    | 0    | 0         | 1    | 0    |
| Configuration                 |           | LTR  |      |           | LTR  |      |

| Delay, Queue Length, and Level of Service |            |            |           |       |   |           |      |    |
|---|------------|------------|-----------|-------|---|-----------|------|----|
| Approach                                  | Northbound | Southbound | Westbound |       |   | Eastbound |      |    |
| Movement                                  | 1          | 4          | 7         | 8     | 9 | 10        | 11   | 12 |
| Lane Configuration                        | L          | L          |           | LTR   |   |           | LTR  |    |
| v (veh/h)                                 | 30         | 14         |           | 35    |   |           | 13   |    |
| C (m) (veh/h)                             | 671        | 212        |           | 35    |   |           | 503  |    |
| v/c                                       | 0.04       | 0.07       |           | 1.00  |   |           | 0.03 |    |
| 95% queue length                          | 0.14       | 0.21       |           | 3.62  |   |           | 0.08 |    |
| Control Delay (s/veh)                     | 10.6       | 23.2       |           | 323.0 |   |           | 12.3 |    |
| LOS                                       | B          | C          |           | F     |   |           | B    |    |
| Approach Delay (s/veh)                    | --         | --         |           | 323.0 |   |           | 12.3 |    |
| Approach LOS                              | --         | --         |           | F     |   |           | B    |    |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Crooked Creek

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000 *   | 1                    | 1600     | 60         | 60        | 0.038 *   | 1                                       | 1600     | 0          | 60        | 0.038 *   |
| NB Thru            | 8                     | 6400     | 0      | 0.000     | 1                    | 1600     | 0          | 0         | 0.009     | 1                                       | 1600     | 0          | 0         | 0.009     |
| NB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 15         | 15        |           | 0                                       | 0        | 0          | 15        |           |
| SB Left            | 8                     | 2880     | 2      | 0.001     | 8                    | 2880     | 0          | 2         | 0.001     | 8                                       | 2880     | 0          | 2         | 0.001     |
| SB Thru            | 1                     | 1600     | 0      | 0.028 *   | 1                    | 1600     | 0          | 0         | 0.028 *   | 1                                       | 1600     | 0          | 0         | 0.028 *   |
| SB Right           | 0                     | 0        | 45     |           | 0                    | 0        | 0          | 45        |           | 0                                       | 0        | 0          | 45        |           |
| EB Left            | 1                     | 1600     | 8      | 0.005 *   | 1                    | 1600     | 0          | 8         | 0.005 *   | 1                                       | 1600     | 0          | 8         | 0.005 *   |
| EB Thru            | 2                     | 3200     | 579    | 0.181     | 3                    | 4800     | 0          | 579       | 0.121     | 3                                       | 4800     | 0          | 579       | 0.121     |
| EB Right           | 1                     | 1600     | 0      | 0.000     | 1                    | 1600     | 12         | 12        | 0.008     | 1                                       | 1600     | 0          | 12        | 0.008     |
| WB Left            | 1                     | 1600     | 0      | 0.000     | 1                    | 1600     | 3          | 3         | 0.002     | 1                                       | 1600     | 0          | 3         | 0.002     |
| WB Thru            | 2                     | 3200     | 1774   | 0.554 *   | 2                    | 3200     | 0          | 1774      | 0.554 *   | 2                                       | 3200     | 0          | 1774      | 0.554 *   |
| WB Right           | 1                     | 1600     | 2      | 0.001     | 1                    | 1600     | 0          | 2         | 0.001     | 1                                       | 1600     | 0          | 2         | 0.001     |
| N/S Critical Sum = |                       |          |        | 0.028     | N/S Critical Sum =   |          |            |           | 0.066     | N/S Critical Sum =                      |          |            |           | 0.066     |
| E/W Critical Sum = |                       |          |        | 0.559     | E/W Critical Sum =   |          |            |           | 0.559     | E/W Critical Sum =                      |          |            |           | 0.559     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.687     | Total ICU =          |          |            |           | 0.725     | Total ICU =                             |          |            |           | 0.725     |
| LOS =              |                       |          |        | <b>B</b>  | LOS =                |          |            |           | <b>C</b>  | LOS =                                   |          |            |           | <b>C</b>  |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Diamond Bar Blvd. & Crooked Creek

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000 *   | 1                    | 1600     | 28         | 28        | 0.018 *   | 1                                       | 1600     | 0          | 28        | 0.018 *   |
| NB Thru            | 8                     | 6400     | 0      | 0.000     | 1                    | 1600     | 0          | 0         | 0.004     | 1                                       | 1600     | 0          | 0         | 0.004     |
| NB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 7          | 7         |           | 0                                       | 0        | 0          | 7         |           |
| SB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                       | 2880     | 0          | 0         | 0.000     |
| SB Thru            | 1                     | 1600     | 0      | 0.008 *   | 1                    | 1600     | 0          | 0         | 0.008 *   | 1                                       | 1600     | 0          | 0         | 0.008 *   |
| SB Right           | 0                     | 0        | 13     |           | 0                    | 0        | 0          | 13        |           | 0                                       | 0        | 0          | 13        |           |
| EB Left            | 1                     | 1600     | 30     | 0.019     | 1                    | 1600     | 0          | 30        | 0.019     | 1                                       | 1600     | 0          | 30        | 0.019     |
| EB Thru            | 2                     | 3200     | 2292   | 0.716 *   | 3                    | 4800     | 0          | 2292      | 0.478 *   | 3                                       | 4800     | 0          | 2292      | 0.478 *   |
| EB Right           | 1                     | 1600     | 0      | 0.000     | 1                    | 1600     | 57         | 57        | 0.036     | 1                                       | 1600     | 0          | 57        | 0.036     |
| WB Left            | 1                     | 1600     | 0      | 0.000 *   | 1                    | 1600     | 14         | 14        | 0.009 *   | 1                                       | 1600     | 0          | 14        | 0.009 *   |
| WB Thru            | 2                     | 3200     | 1049   | 0.328     | 2                    | 3200     | 0          | 1049      | 0.328     | 2                                       | 3200     | 0          | 1049      | 0.328     |
| WB Right           | 1                     | 1600     | 0      | 0.000     | 1                    | 1600     | 0          | 0         | 0.000     | 1                                       | 1600     | 0          | 0         | 0.000     |
| N/S Critical Sum = |                       |          |        | 0.008     | N/S Critical Sum =   |          |            |           | 0.026     | N/S Critical Sum =                      |          |            |           | 0.026     |
| E/W Critical Sum = |                       |          |        | 0.716     | E/W Critical Sum =   |          |            |           | 0.487     | E/W Critical Sum =                      |          |            |           | 0.487     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 0.824     | Total ICU =          |          |            |           | 0.613     | Total ICU =                             |          |            |           | 0.613     |
| LOS =              |                       |          |        | D         | LOS =                |          |            |           | B         | LOS =                                   |          |            |           | B         |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Brea Canyon Rd. & Silver Bullet Dr.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|--|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                  | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000 *   | 8                    | 2880     | 0          | 0         | 0.000 *   | 8                                      | 2880     | 0          | 0         | 0.000 *   |
| NB Thru            | 1                     | 1600     | 616    | 0.385     | 1                    | 1600     | 1          | 617       | 0.386     | 2                                      | 3200     | 0          | 617       | 0.193     |
| NB Right           | 1                     | 1600     | 8      | 0.005     | 1                    | 1600     | 0          | 8         | 0.005     | 1                                      | 1600     | 0          | 8         | 0.005     |
| SB Left            | 1                     | 1600     | 1      | 0.001     | 1                    | 1600     | 0          | 1         | 0.001     | 1                                      | 1600     | 0          | 1         | 0.001     |
| SB Thru            | 1                     | 1600     | 1924   | 1.203 *   | 1                    | 1600     | 4          | 1928      | 1.205 *   | 2                                      | 3200     | 0          | 1928      | 0.603 *   |
| SB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                      | 0        | 0          | 0         |           |
| EB Left            | 8                     | 2880     | 0      | 0.000 *   | 8                    | 2880     | 0          | 0         | 0.000 *   | 8                                      | 2880     | 0          | 0         | 0.000 *   |
| EB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                      | 6400     | 0          | 0         | 0.000     |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                      | 0        | 0          | 0         |           |
| WB Left            | 8                     | 2880     | 104    | 0.036     | 8                    | 2880     | 0          | 104       | 0.036     | 8                                      | 2880     | 0          | 104       | 0.036     |
| WB Thru            | 1                     | 1600     | 104    | 0.070 *   | 1                    | 1600     | 0          | 104       | 0.070 *   | 1                                      | 1600     | 0          | 104       | 0.070 *   |
| WB Right           | 0                     | 0        | 8      |           | 0                    | 0        | 0          | 8         |           | 0                                      | 0        | 0          | 8         |           |
| N/S Critical Sum = |                       |          |        | 1.203     | N/S Critical Sum =   |          |            |           | 1.205     | N/S Critical Sum =                     |          |            |           | 0.603     |
| E/W Critical Sum = |                       |          |        | 0.070     | E/W Critical Sum =   |          |            |           | 0.070     | E/W Critical Sum =                     |          |            |           | 0.070     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                      |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                            |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 1.373     | Total ICU =          |          |            |           | 1.375     | Total ICU =                            |          |            |           | 0.773     |
| LOS =              |                       |          |        | F         | LOS =                |          |            |           | F         | LOS =                                  |          |            |           | C         |

**Table Y**  
**PM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
 Brea Canyon Rd. & Silver Bullet Dr.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|--|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                  | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 8                     | 2880     | 0      | 0.000     | 8                    | 2880     | 0          | 0         | 0.000     | 8                                      | 2880     | 0          | 0         | 0.000     |
| NB Thru            | 1                     | 1600     | 2154   | 1.346 *   | 1                    | 1600     | 4          | 2158      | 1.349 *   | 2                                      | 3200     | 0          | 2158      | 0.674 *   |
| NB Right           | 1                     | 1600     | 45     | 0.028     | 1                    | 1600     | 0          | 45        | 0.028     | 1                                      | 1600     | 0          | 45        | 0.028     |
| SB Left            | 1                     | 1600     | 5      | 0.003 *   | 1                    | 1600     | 0          | 5         | 0.003 *   | 1                                      | 1600     | 0          | 5         | 0.003 *   |
| SB Thru            | 1                     | 1600     | 752    | 0.470     | 1                    | 1600     | 2          | 754       | 0.471     | 2                                      | 3200     | 0          | 754       | 0.236     |
| SB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                      | 0        | 0          | 0         |           |
| EB Left            | 8                     | 2880     | 0      | 0.000 *   | 8                    | 2880     | 0          | 0         | 0.000 *   | 8                                      | 2880     | 0          | 0         | 0.000 *   |
| EB Thru            | 8                     | 6400     | 0      | 0.000     | 8                    | 6400     | 0          | 0         | 0.000     | 8                                      | 6400     | 0          | 0         | 0.000     |
| EB Right           | 0                     | 0        | 0      |           | 0                    | 0        | 0          | 0         |           | 0                                      | 0        | 0          | 0         |           |
| WB Left            | 8                     | 2880     | 21     | 0.007     | 8                    | 2880     | 0          | 21        | 0.007     | 8                                      | 2880     | 0          | 21        | 0.007     |
| WB Thru            | 1                     | 1600     | 21     | 0.014 *   | 1                    | 1600     | 0          | 21        | 0.014 *   | 1                                      | 1600     | 0          | 21        | 0.014 *   |
| WB Right           | 0                     | 0        | 2      |           | 0                    | 0        | 0          | 2         |           | 0                                      | 0        | 0          | 2         |           |
| N/S Critical Sum = |                       |          |        | 1.349     | N/S Critical Sum =   |          |            |           | 1.352     | N/S Critical Sum =                     |          |            |           | 0.677     |
| E/W Critical Sum = |                       |          |        | 0.014     | E/W Critical Sum =   |          |            |           | 0.014     | E/W Critical Sum =                     |          |            |           | 0.014     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                      |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                            |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 1.463     | Total ICU =          |          |            |           | 1.466     | Total ICU =                            |          |            |           | 0.791     |
| LOS =              |                       |          |        | F         | LOS =                |          |            |           | F         | LOS =                                  |          |            |           | C         |

**Table X**  
**AM Peak Hour ICU/LOS Worksheet**  
*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Grand Ave.

| Movement           | YEAR 230 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 2                    | 2880     | 456    | 0.158 *   | 2                    | 2880     | 4          | 460       | 0.160 *   | 2                                       | 2880     | 0          | 460       | 0.160 *   |
| NB Thru            | 2                    | 3200     | 1028   | 0.321     | 2                    | 3200     | 11         | 1039      | 0.325     | 3                                       | 4800     | 0          | 1039      | 0.216     |
| NB Right           | 1                    | 1600     | 311    | 0.194     | 1                    | 1600     | 0          | 311       | 0.194     | Free                                    | NC       | 0          | 311       | 0.000     |
| SB Left            | 2                    | 2880     | 137    | 0.048     | 2                    | 2880     | 0          | 137       | 0.048     | 2                                       | 2880     | 0          | 137       | 0.048     |
| SB Thru            | 2                    | 3200     | 937    | 0.293 *   | 2                    | 3200     | 2          | 939       | 0.293 *   | 3                                       | 4800     | 0          | 939       | 0.196 *   |
| SB Right           | 1                    | 1600     | 113    | 0.071     | 1                    | 1600     | 0          | 113       | 0.071     | 1                                       | 1600     | 0          | 113       | 0.071     |
| EB Left            | 2                    | 2880     | 143    | 0.050 *   | 2                    | 2880     | 0          | 143       | 0.050 *   | 2                                       | 2880     | 0          | 143       | 0.050 *   |
| EB Thru            | 2                    | 3200     | 557    | 0.174     | 2                    | 3200     | 0          | 557       | 0.174     | 4                                       | 6400     | 0          | 557       | 0.087     |
| EB Right           | 1                    | 1600     | 296    | 0.185     | 1                    | 1600     | 1          | 297       | 0.186     | 1                                       | 1600     | 0          | 297       | 0.186     |
| WB Left            | 2                    | 2880     | 701    | 0.243     | 2                    | 2880     | 0          | 701       | 0.243     | 2                                       | 2880     | 0          | 701       | 0.243     |
| WB Thru            | 2                    | 3200     | 1802   | 0.563 *   | 2                    | 3200     | 0          | 1802      | 0.563 *   | 3                                       | 4800     | 0          | 1802      | 0.375 *   |
| WB Right           | 1                    | 1600     | 67     | 0.042     | 1                    | 1600     | 0          | 67        | 0.042     | 1                                       | 1600     | 0          | 67        | 0.042     |
| N/S Critical Sum = |                      |          |        | 0.451     | N/S Critical Sum =   |          |            |           | 0.453     | N/S Critical Sum =                      |          |            |           | 0.356     |
| E/W Critical Sum = |                      |          |        | 0.613     | E/W Critical Sum =   |          |            |           | 0.613     | E/W Critical Sum =                      |          |            |           | 0.425     |
| [RT Adjustment] =  |                      |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                      |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                      |          |        | 1.164     | Total ICU =          |          |            |           | 1.166     | Total ICU =                             |          |            |           | 0.881     |
| LOS =              |                      |          |        | F         | LOS =                |          |            |           | F         | LOS =                                   |          |            |           | D         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Diamond Bar Blvd. & Grand Ave.

| Movement           | YEAR 230 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 2                    | 2880     | 390    | 0.135     | 2                    | 2880     | 2          | 392       | 0.136     | 2                                       | 2880     | 0          | 392       | 0.136     |
| NB Thru            | 2                    | 3200     | 1598   | 0.499 *   | 2                    | 3200     | 5          | 1603      | 0.501 *   | 3                                       | 4800     | 0          | 1603      | 0.334 *   |
| NB Right           | 1                    | 1600     | 886    | 0.554     | 1                    | 1600     | 0          | 886       | 0.554     | Free                                    | NC       | 0          | 886       | 0.000     |
| SB Left            | 2                    | 2880     | 319    | 0.111 *   | 2                    | 2880     | 0          | 319       | 0.111 *   | 2                                       | 2880     | 0          | 319       | 0.111 *   |
| SB Thru            | 2                    | 3200     | 1134   | 0.354     | 2                    | 3200     | 10         | 1144      | 0.358     | 3                                       | 4800     | 0          | 1144      | 0.238     |
| SB Right           | 1                    | 1600     | 106    | 0.066     | 1                    | 1600     | 0          | 106       | 0.066     | 1                                       | 1600     | 0          | 106       | 0.066     |
| EB Left            | 2                    | 2880     | 319    | 0.111     | 2                    | 2880     | 0          | 319       | 0.111     | 2                                       | 2880     | 0          | 319       | 0.111     |
| EB Thru            | 2                    | 3200     | 1518   | 0.474 *   | 2                    | 3200     | 0          | 1518      | 0.474 *   | 4                                       | 6400     | 0          | 1518      | 0.237 *   |
| EB Right           | 1                    | 1600     | 403    | 0.252     | 1                    | 1600     | 4          | 407       | 0.254     | 1                                       | 1600     | 0          | 407       | 0.254     |
| WB Left            | 2                    | 2880     | 503    | 0.175 *   | 2                    | 2880     | 0          | 503       | 0.175 *   | 2                                       | 2880     | 0          | 503       | 0.175 *   |
| WB Thru            | 2                    | 3200     | 654    | 0.204     | 2                    | 3200     | 0          | 654       | 0.204     | 3                                       | 4800     | 0          | 654       | 0.136     |
| WB Right           | 1                    | 1600     | 33     | 0.021     | 1                    | 1600     | 0          | 33        | 0.021     | 1                                       | 1600     | 0          | 33        | 0.021     |
| N/S Critical Sum = |                      |          |        | 0.610     | N/S Critical Sum =   |          |            |           | 0.612     | N/S Critical Sum =                      |          |            |           | 0.445     |
| E/W Critical Sum = |                      |          |        | 0.649     | E/W Critical Sum =   |          |            |           | 0.649     | E/W Critical Sum =                      |          |            |           | 0.412     |
| [RT Adjustment] =  |                      |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                      |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                      |          |        | 1.359     | Total ICU =          |          |            |           | 1.361     | Total ICU =                             |          |            |           | 0.957     |
| LOS =              |                      |          |        | F         | LOS =                |          |            |           | F         | LOS =                                   |          |            |           | E         |

## Table X AM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative

Colima Rd. & Fairway-Brea Canyon Cutoff Rd.

| Movement           | YEAR 2030 w/o Project |          |        |           | YEAR 2030 w/ Project |          |            |           |           | YEAR 2030 w/ Project, with Improvements |          |            |           |           |
|--------------------|-----------------------|----------|--------|-----------|----------------------|----------|------------|-----------|-----------|---|----------|------------|-----------|-----------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio |
| NB Left            | 1                     | 1600     | 301    | 0.188     | 1                    | 1600     | 0          | 301       | 0.188     | 2                                       | 2880     | 0          | 301       | 0.105     |
| NB Thru            | 2                     | 3200     | 714    | 0.310 *   | 2                    | 3200     | 8          | 722       | 0.313 *   | 2                                       | 3200     | 0          | 722       | 0.226 *   |
| NB Right           | 0                     | 0        | 278    |           | 0                    | 0        | 0          | 278       |           | 1                                       | 1600     | 0          | 278       | 0.174     |
| SB Left            | 1                     | 1600     | 230    | 0.144 *   | 1                    | 1600     | 0          | 230       | 0.144 *   | 2                                       | 2880     | 0          | 230       | 0.080 *   |
| SB Thru            | 2                     | 3200     | 530    | 0.212     | 2                    | 3200     | 2          | 532       | 0.213     | 2                                       | 3200     | 0          | 532       | 0.166     |
| SB Right           | 0                     | 0        | 149    |           | 0                    | 0        | 0          | 149       |           | 1                                       | 1600     | 0          | 149       | 0.093     |
| EB Left            | 1                     | 1600     | 307    | 0.192 *   | 1                    | 1600     | 0          | 307       | 0.192 *   | 2                                       | 2880     | 0          | 307       | 0.107 *   |
| EB Thru            | 3                     | 4800     | 534    | 0.138     | 3                    | 4800     | 0          | 534       | 0.138     | 3                                       | 4800     | 0          | 534       | 0.111     |
| EB Right           | 0                     | 0        | 129    |           | 0                    | 0        | 0          | 129       |           | 1                                       | 1600     | 0          | 129       | 0.081     |
| WB Left            | 1                     | 1600     | 227    | 0.142     | 1                    | 1600     | 0          | 227       | 0.142     | 2                                       | 2880     | 0          | 227       | 0.079     |
| WB Thru            | 3                     | 4800     | 1047   | 0.293 *   | 3                    | 4800     | 0          | 1047      | 0.293 *   | 3                                       | 4800     | 0          | 1047      | 0.218 *   |
| WB Right           | 0                     | 0        | 357    |           | 0                    | 0        | 0          | 357       |           | 1                                       | 1600     | 0          | 357       | 0.223     |
| N/S Critical Sum = |                       |          |        | 0.454     | N/S Critical Sum =   |          |            |           | 0.457     | N/S Critical Sum =                      |          |            |           | 0.306     |
| E/W Critical Sum = |                       |          |        | 0.485     | E/W Critical Sum =   |          |            |           | 0.485     | E/W Critical Sum =                      |          |            |           | 0.325     |
| [RT Adjustment] =  |                       |          |        | 0.000     | [RT Adjustment] =    |          |            |           | 0.000     | [RT Adjustment] =                       |          |            |           | 0.000     |
| Clearance =        |                       |          |        | 0.100     | Clearance =          |          |            |           | 0.100     | Clearance =                             |          |            |           | 0.100     |
| Total ICU =        |                       |          |        | 1.039     | Total ICU =          |          |            |           | 1.042     | Total ICU =                             |          |            |           | 0.731     |
| LOS =              |                       |          |        | F         | LOS =                |          |            |           | F         | LOS =                                   |          |            |           | C         |

## Table Y

### PM Peak Hour ICU/LOS Worksheet

*Sasaki Transportation Services*

Site D - Residential Alternative  
Colima Rd. & Fairway-Brea Canyon Cutoff Rd.

| Movement           | YEAR 2030 w/o Project |          |        |              | YEAR 2030 w/ Project |          |            |           |              | YEAR 2030 w/ Project, with Improvements |          |            |           |              |
|--------------------|-----------------------|----------|--------|--------------|----------------------|----------|------------|-----------|--------------|---|----------|------------|-----------|--------------|
|                    | Lanes                 | Capacity | Volume | V/C Ratio    | Lanes                | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    | Lanes                                   | Capacity | Added Vol. | Tot. Vol. | V/C Ratio    |
| NB Left            | 1                     | 1600     | 298    | 0.186 *      | 1                    | 1600     | 0          | 298       | 0.186 *      | 2                                       | 2880     | 0          | 298       | 0.103 *      |
| NB Thru            | 2                     | 3200     | 705    | 0.291        | 2                    | 3200     | 4          | 709       | 0.293        | 2                                       | 3200     | 0          | 709       | 0.222        |
| NB Right           | 0                     | 0        | 227    |              | 0                    | 0        | 0          | 227       |              | 1                                       | 1600     | 0          | 227       | 0.142        |
| SB Left            | 1                     | 1600     | 328    | 0.205        | 1                    | 1600     | 0          | 328       | 0.205        | 2                                       | 2880     | 0          | 328       | 0.114        |
| SB Thru            | 2                     | 3200     | 939    | 0.384 *      | 2                    | 3200     | 7          | 946       | 0.386 *      | 2                                       | 3200     | 0          | 946       | 0.296 *      |
| SB Right           | 0                     | 0        | 290    |              | 0                    | 0        | 0          | 290       |              | 1                                       | 1600     | 0          | 290       | 0.181        |
| EB Left            | 1                     | 1600     | 306    | 0.191        | 1                    | 1600     | 0          | 306       | 0.191        | 2                                       | 2880     | 0          | 306       | 0.106        |
| EB Thru            | 3                     | 4800     | 1030   | 0.257 *      | 3                    | 4800     | 0          | 1030      | 0.257 *      | 3                                       | 4800     | 0          | 1030      | 0.215 *      |
| EB Right           | 0                     | 0        | 203    |              | 0                    | 0        | 0          | 203       |              | 1                                       | 1600     | 0          | 203       | 0.127        |
| WB Left            | 1                     | 1600     | 235    | 0.147 *      | 1                    | 1600     | 0          | 235       | 0.147 *      | 2                                       | 2880     | 0          | 235       | 0.082 *      |
| WB Thru            | 3                     | 4800     | 769    | 0.181        | 3                    | 4800     | 0          | 769       | 0.181        | 3                                       | 4800     | 0          | 769       | 0.160        |
| WB Right           | 0                     | 0        | 98     |              | 0                    | 0        | 0          | 98        |              | 1                                       | 1600     | 0          | 98        | 0.061        |
| N/S Critical Sum = |                       |          |        | 0.570        | N/S Critical Sum =   |          |            |           | 0.572        | N/S Critical Sum =                      |          |            |           | 0.399        |
| E/W Critical Sum = |                       |          |        | 0.404        | E/W Critical Sum =   |          |            |           | 0.404        | E/W Critical Sum =                      |          |            |           | 0.297        |
| [RT Adjustment] =  |                       |          |        | 0.000        | [RT Adjustment] =    |          |            |           | 0.000        | [RT Adjustment] =                       |          |            |           | 0.000        |
| Clearance =        |                       |          |        | 0.100        | Clearance =          |          |            |           | 0.100        | Clearance =                             |          |            |           | 0.100        |
| Total ICU =        |                       |          |        | <b>1.074</b> | Total ICU =          |          |            |           | <b>1.076</b> | Total ICU =                             |          |            |           | <b>0.796</b> |
| LOS =              |                       |          |        | <b>F</b>     | LOS =                |          |            |           | <b>F</b>     | LOS =                                   |          |            |           | <b>C</b>     |