

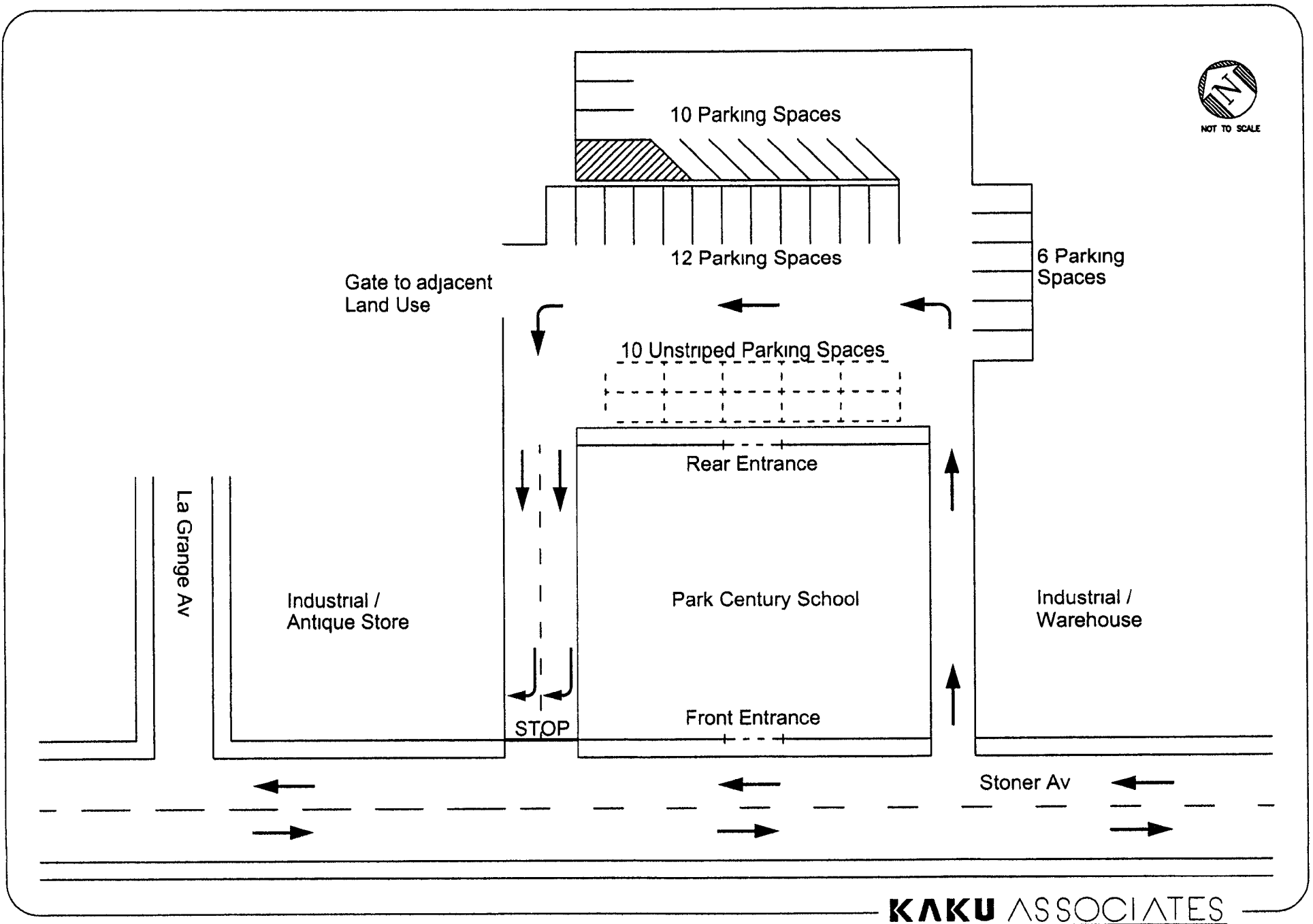


FIGURE 11  
EXISTING SITE AND PARKING LOT CIRCULATION

With the first-in-first-out driveway operations the drop-off traffic at the back door often interfered with the parking maneuvers of the staff vehicles and the non-school vehicles entering the neighboring properties. About 10 minutes prior to school start time (8:20 a.m.) a maximum queue of six vehicles was observed in the school driveway waiting to drop off their students at the back door.

In the afternoon during the school one-time dismissal at noon (12:00 p.m.) on Friday, June 11, 2004 (most congested traffic scenario for one-time dismissal at 2 p.m., occurring every Friday during the future school year) the driveway capacity was quickly filled as vehicles started to line up at the north exit of the driveway as early as 30 minutes before the dismissal time. A maximum queue of 20 vehicles was observed about five minutes before the school dismissal time, with 16 vehicles occupying the entire driveway and four vehicles queuing on the street waiting to enter the driveway. Access to the neighboring properties was completely blocked when the driveway was occupied by school vehicles. At noon, students were dismissed and the queue started to discharge from the north exit of the driveway. About 15 minutes after the dismissal time, the queue on the driveway was discharged completely. School traffic exiting the driveway after student pick-up was sometimes affected by the heavy afternoon traffic on Stoner Avenue.

As indicated, the current pick-up and drop-off operations under the existing circulation pattern of school creates some congestion on the school driveway, which results in queuing on Stoner Avenue and the parking lot in the back of the building. The queue also affected the access to the adjacent parcels sharing the entrance and exit driveway. Figure 12 illustrates the existing school traffic queue diagrams for morning drop-off and midday dismissal.

### **Future Conditions**

The proposed site plan designed for 120 students and 47 staff, as shown in Figure 2, would allow parents to turn right onto the school campus from Landmark Street and proceed in a counterclockwise direction around the parking lot to approach the designated drop-off area. The site plan features a drop-off area located immediately adjacent to the school so that the number of children walking across the parking lot would be minimized. The site plan allows a logical traffic flow pattern that would be obvious to parents picking up and dropping off children.

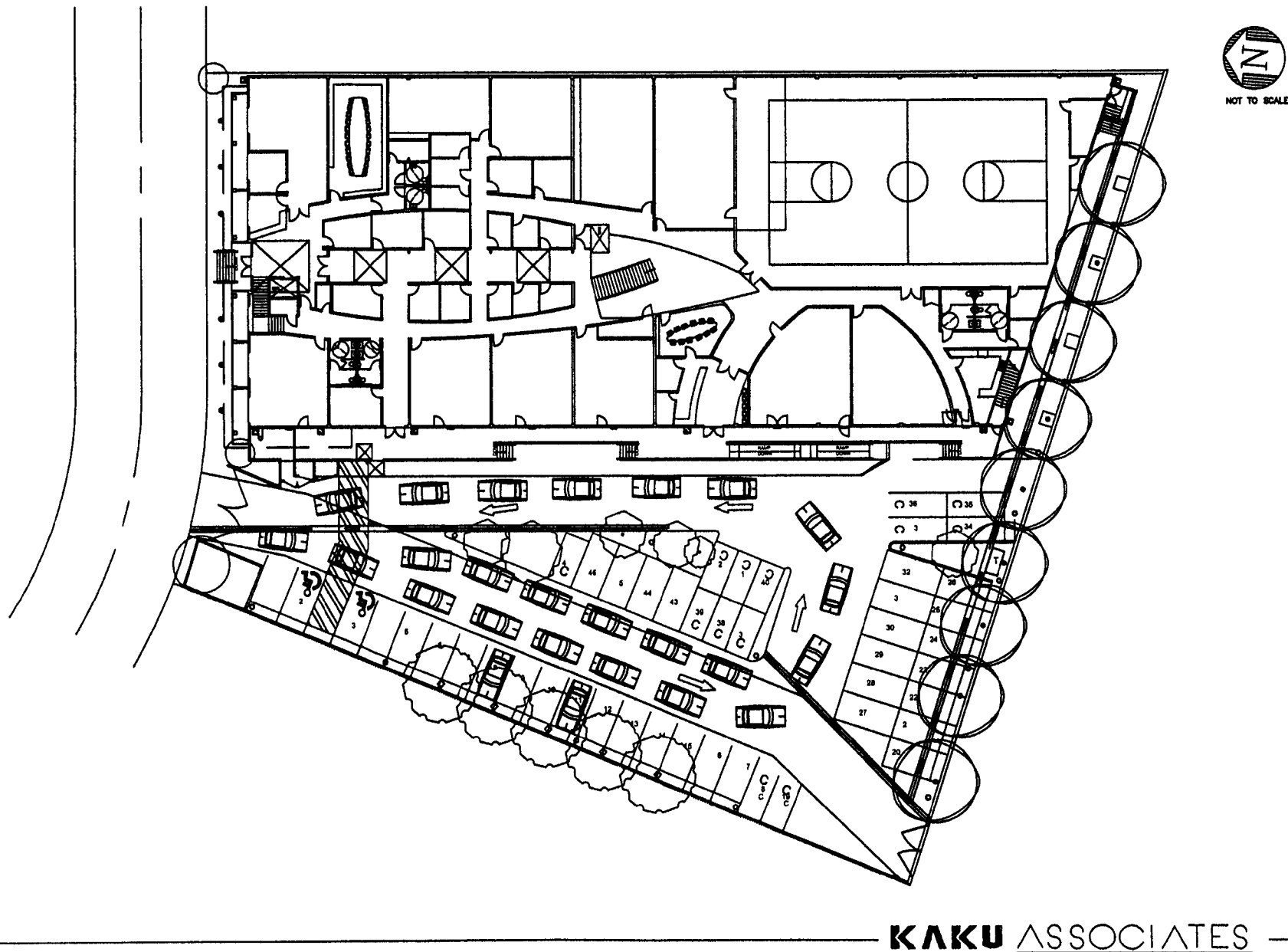


FIGURE 12  
23 CARS QUEUING IN THE PARKING LOT

**KAKU ASSOCIATES**

The loading/unloading area immediately adjacent to the building entrance would enhance pedestrian safety. The plan, as shown in Figure 12, provides seven active loading/unloading spaces adjacent to the building and sufficient room for a queue of 16 cars waiting behind the active loading/unloading area. Including both the passenger loading zone and the approach aisle, it is estimated that the site would have the capacity to queue 23 vehicles.

Existing school traffic queue diagrams for 60 students and 36 staff, shown in Figure 13A, were factored proportionally to reflect the school traffic queue diagrams for 120 students and 47 staff. These diagrams take into consideration the offset start and stop schedule for 47 staff members and 120 student groups with the proposed 72/48 splits and 30-minute separation between the two student groups. The resultant queue diagrams for morning student drop off and midday dismissal are illustrated in Figure 13B. As shown in Figure 13B, with the application of the proposed start and stop schedules for three faculty and student groups, a maximum queue of seven vehicles is projected for the future morning drop off at 8:05 a.m., while a maximum queue of 24 vehicles is projected for pick up at 1:40 p.m. As the future project site could only accommodate 23 queue vehicles on campus, the school drop-off traffic would potentially affect the access to the neighboring light industrial use or car dealerships.

Therefore, additional queuing analysis was conducted to develop two staggered alternatives that would not generate more than 23 vehicles on site. These two alternatives are:

- Alternative 1 - 67/53 split and 30-minute separation between two student groups
- Alternative 2 - 70/50 split and 35-minute separation between two student groups

Both Alternative 1 and Alternative 2 were estimated to generate a maximum queue length of 23 vehicles, as illustrated in Figures 13C and 13D. From the standpoint of traffic operations, both Alternative 1 and Alternative 2 would generate less school traffic when compared to the proposed 72/48 split, in which 72 students would arrive and leave for the same school start and dismissal time. As the previous intersection impact analysis indicated, the proposed 72/48 split would only have a significant impact at the Washington/Landmark intersection. With fewer trips coming to/from the school, neither Alternative 1 nor Alternative 2 would create a significant impact at any other study intersection.

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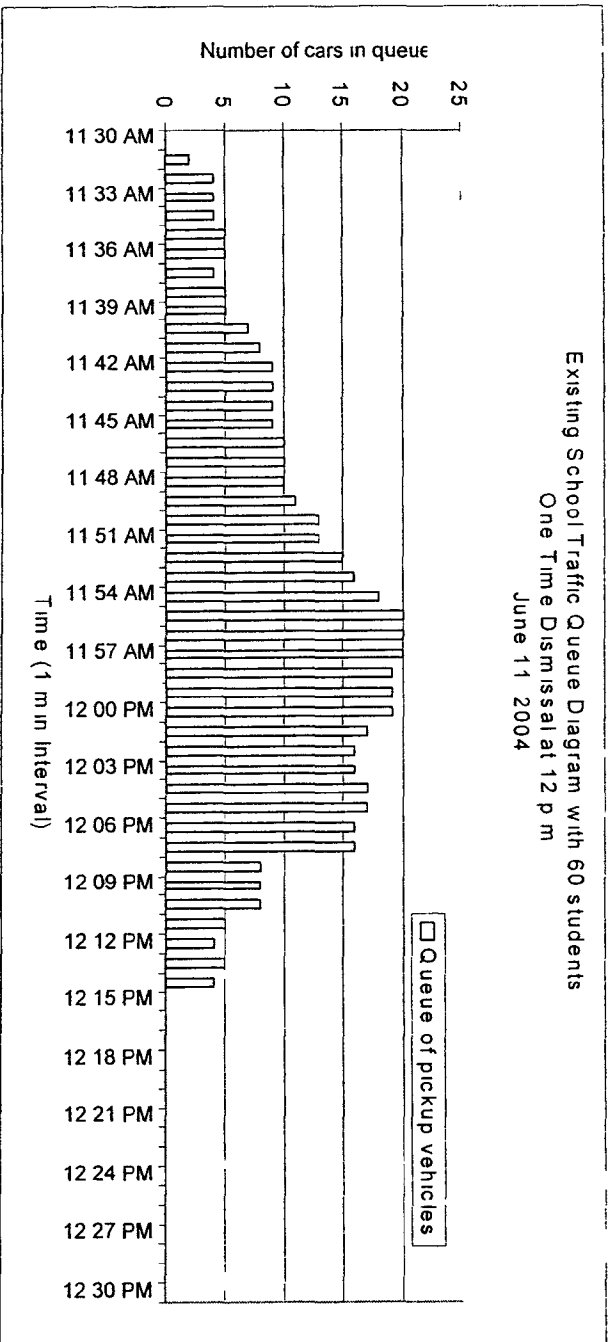
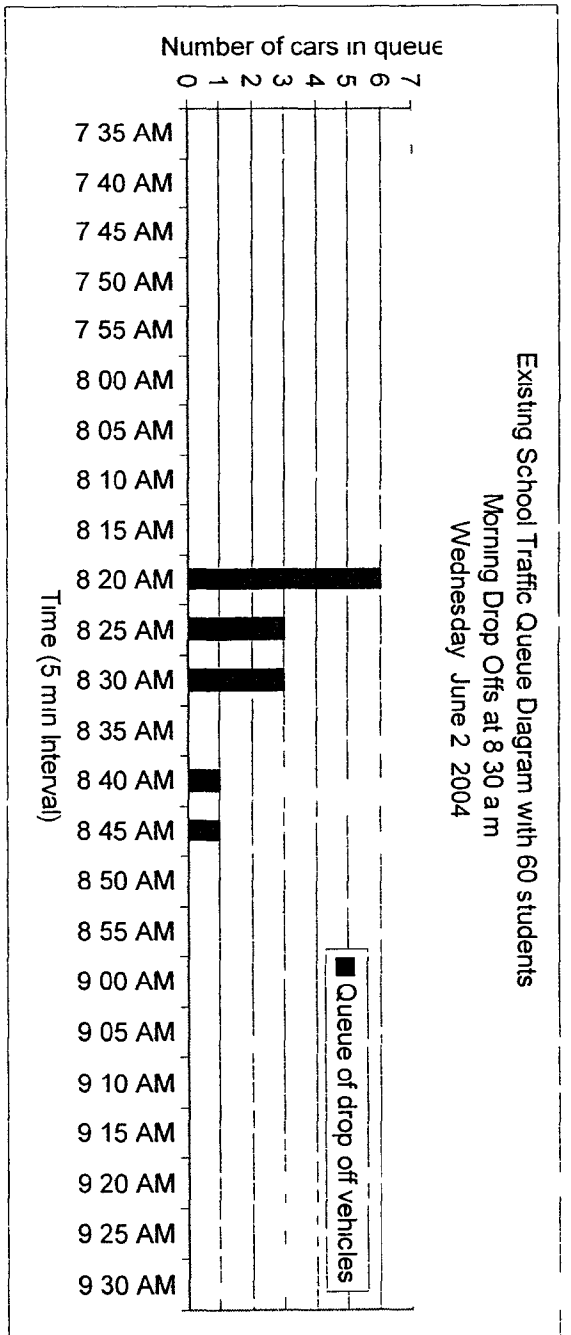
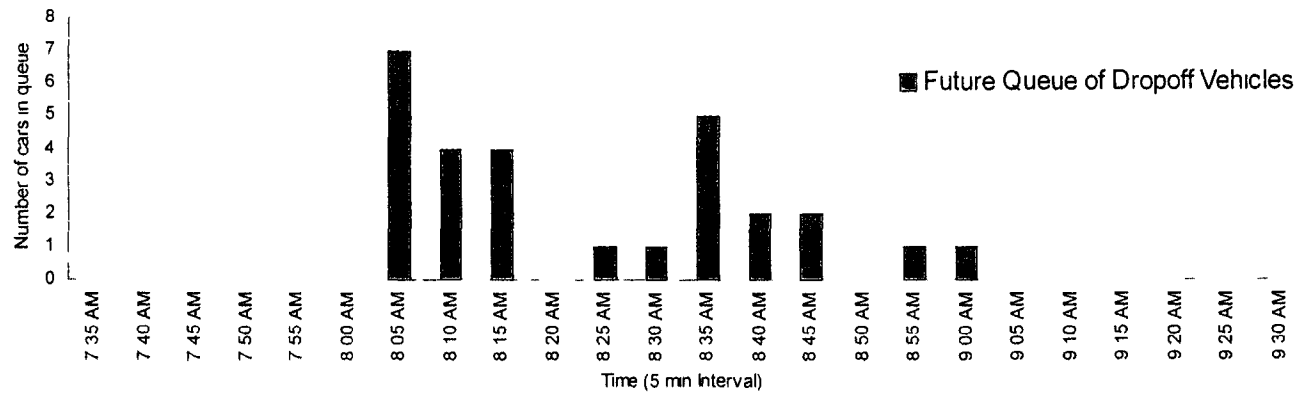


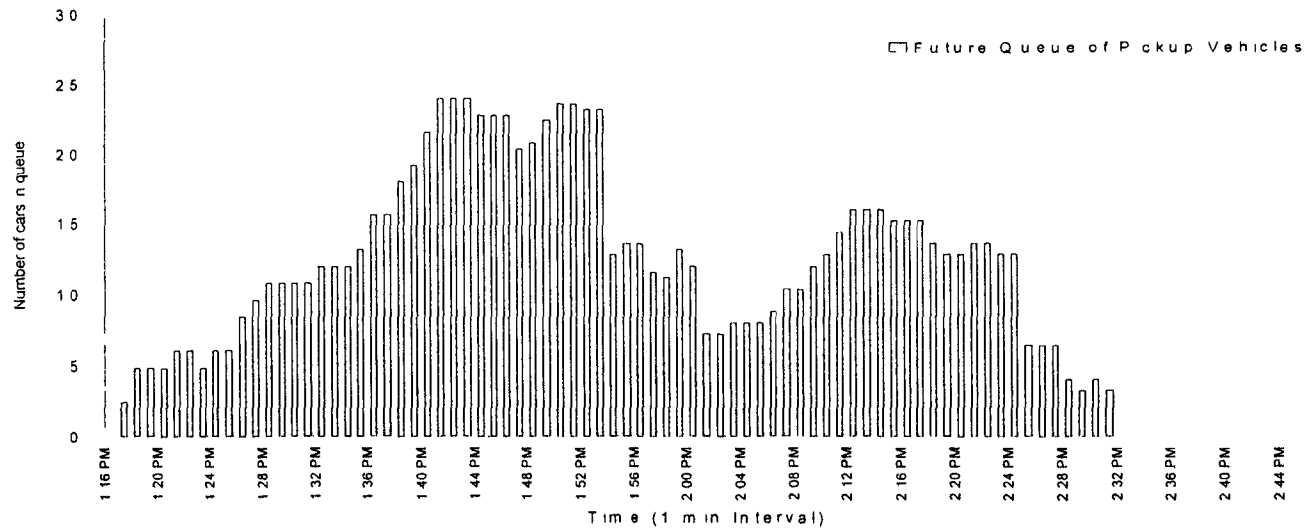
FIGURE 13A  
EXISTING SCHOOL TRAFFIC QUEUE DIAGRAM WITH 60 STUDENTS

96

Year 2008 School Traffic Queue Diagram  
Morning dropoffs for 72 students at 8 15 a m Start And 48 students at 8 45 a m Start



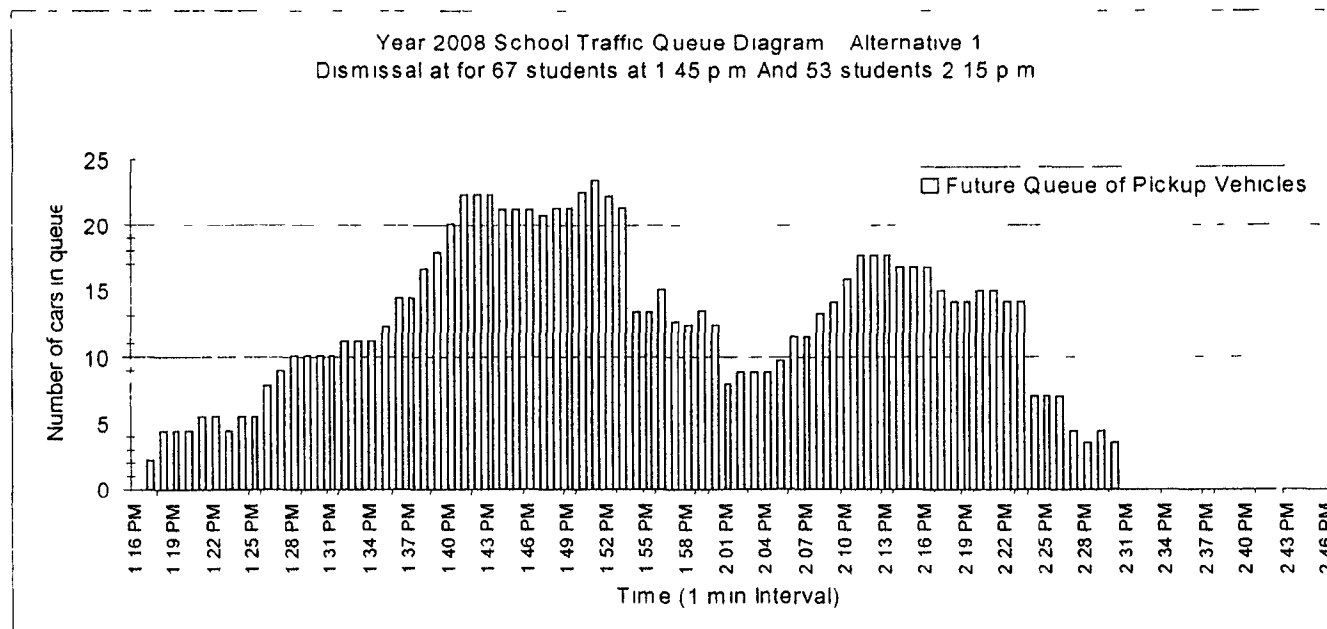
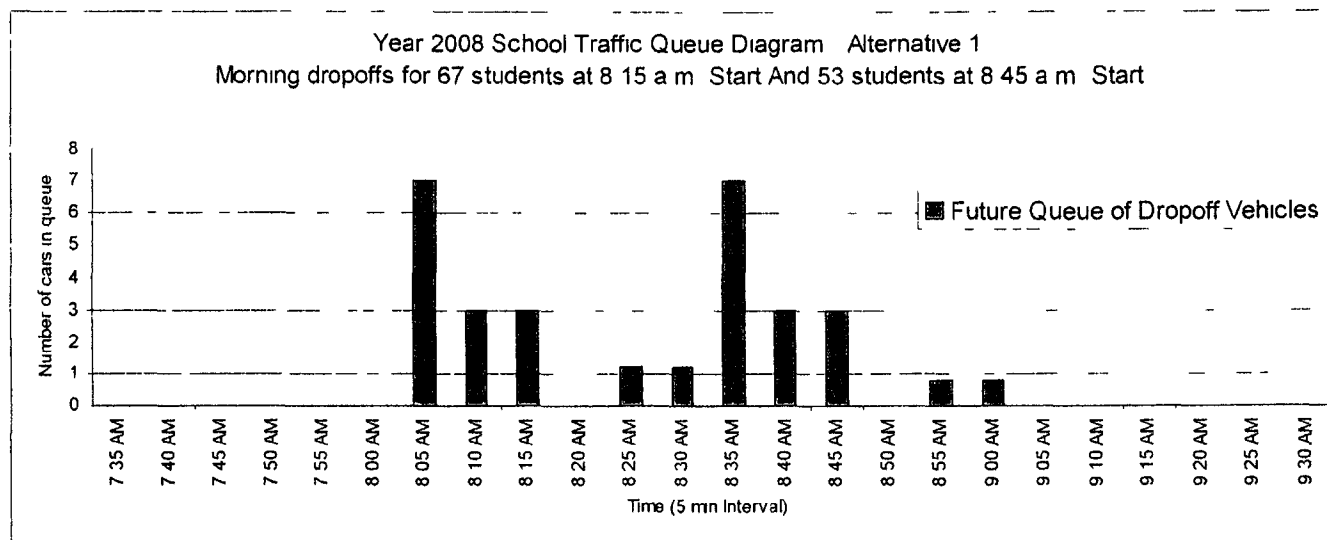
Year 2008 School Traffic Queue Diagram  
Dismissal at for 72 students at 1 45 p m And 48 students 2 15 p m



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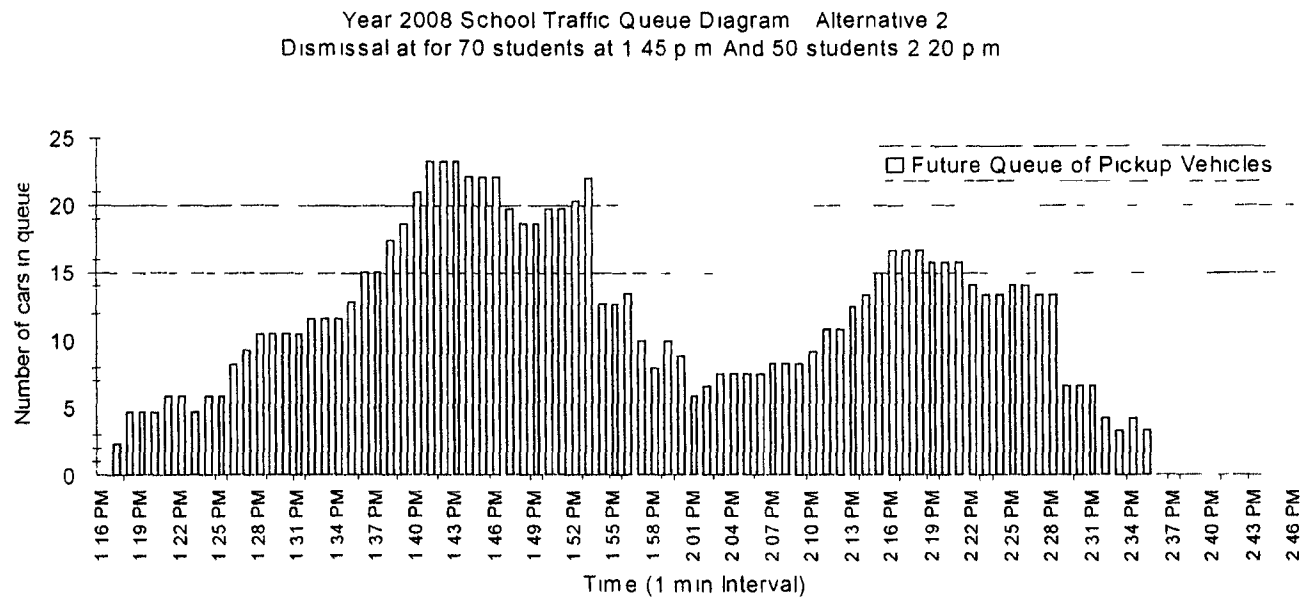
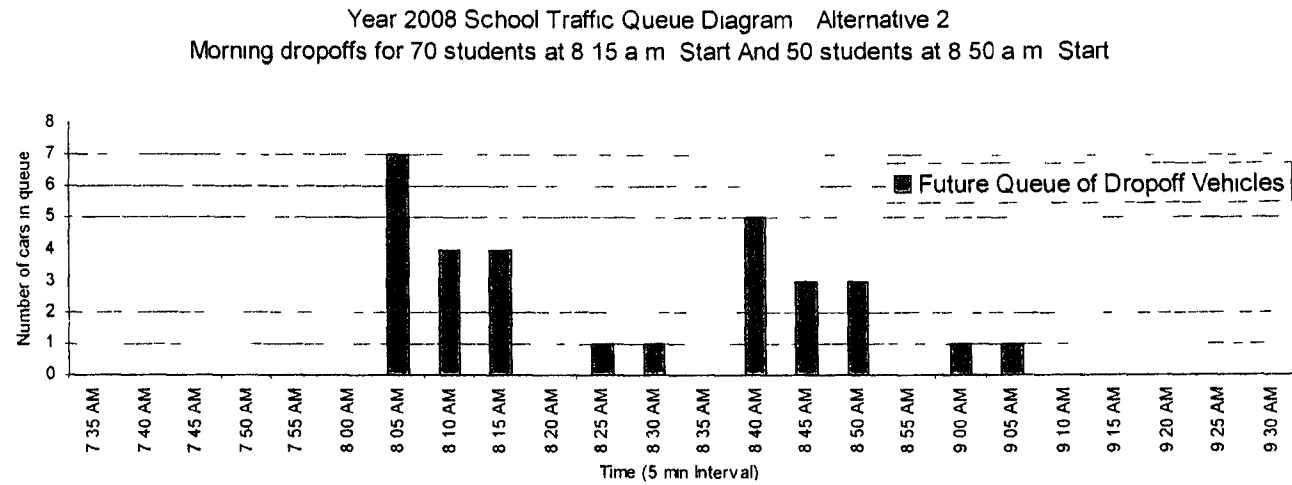
**KAKU ASSOCIATES**

**FIGURE 13B**  
**YEAR 2008 SCHOOL TRAFFIC QUEUE DIAGRAM - PROPOSED**  
**WITH 72/48 SPLIT AND 30 MIN SEPARATION BETWEEN STUDENT GROUPS**



**KAKU ASSOCIATES**

FIGURE 13C  
YEAR 2008 SCHOOL TRAFFIC QUEUE DIAGRAM - ALTERNATIVE 1  
WITH 67/53 SPLIT AND 30 MIN SEPARATION BETWEEN STUDENT GROUPS



**KAKU ASSOCIATES**

**FIGURE 13D**  
**YEAR 2008 SCHOOL TRAFFIC QUEUE DIAGRAM - ALTERNATIVE 2**  
**WITH 70/50 SPLIT AND 35 MIN SEPARATION BETWEEN STUDENT GROUPS**

The proposed 72/48 split with the proposed mitigation measures at the Washington/Landmark intersection would mitigate the project traffic to insignificant levels at all seven study intersections. The grouping of 72 students in one start/dismissal time however could exceed the on-site capacity for queue length storage and therefore it is recommended that either Alternative 1 (67/53 split and 30 minute separation between student groups) or Alternative 2 (70/50 split and 35 minutes separation between student groups) be implemented when the school enrollment exceeds 70 students. The two alternative staggered schedules with the proposed mitigation measures at the Washington/Landmark intersection would ensure that future school pick-up and drop-off traffic create minimal disruption for traffic operations on the neighborhood's street system.

Additionally, it is recommended that a traffic monitor be implemented to facilitate the loading/unloading of students to/from vehicles. The school should continue the school traffic supervision to ensure the inbound line of cars moving all the way forward in the queue. The monitor and staff deployment should alleviate the peak period congestion on campus with minimal impact on the neighborhood street system and safely and adequately facilitate future pick-up and drop-off operations.

## VI REGIONAL TRANSPORTATION SYSTEM IMPACT ANALYSIS

This section presents an analysis of potential project impacts on the regional transportation system. This analysis was conducted in accordance with the transportation impact analysis (TIA) procedures outlined in the *2004 Congestion Management Program for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority July 2004). The Congestion Management Program (CMP) requires that when an environmental impact report is prepared for a project, traffic impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use these facilities.

### CMP SIGNIFICANT TRAFFIC IMPACT CRITERIA

The CMP TIA guidelines indicate that if a proposed development project would add 150 or more trips in either direction during either the morning or evening peak hour to the mainline freeway monitoring location, then a CMP freeway analysis must be conducted. If a proposed project would add 50 or more peak hour trips (of adjacent street traffic) to a CMP arterial intersection, then a CMP arterial intersection analysis must be conducted.

For the purpose of a CMP TIA, a project impact is considered to be significant if the proposed project increases traffic demand on a CMP facility by 2% of capacity ( $V/C \geq 0.02$ ) causing or worsening LOS F ( $V/C > 1.00$ ). Under this criteria, a project would not be considered to have a regionally significant impact if the analyzed facility is operating at LOS E or better after the addition of project traffic regardless of the increase in V/C ratio caused by the project. If the facility is operating at LOS F with project traffic and the incremental change in the V/C ratio caused by the project is 0.02 or greater, however, the project would be considered to have a significant impact.

### **Selection of Arterial Monitoring Intersections for Analysis**

The nearest CMP arterial monitoring intersections to the project site are at

- Overland Avenue & Venice Boulevard (Culver City)
- La Cienega Boulevard & Jefferson Boulevard (City of Los Angeles)
- La Cienega Boulevard & Centinela Avenue (City of Los Angeles)
- La Cienega Boulevard & Stocker Street (County of Los Angeles)

The 50-trip CMP analysis intersection threshold represents approximately 31% of the 162 morning peak hour trips projected to be generated by the project. The proposed project would also result in trip reductions of 25 afternoon peak hour trips (eight inbound, 17 outbound). Based on the project trip distribution patterns shown in Figures 6 and 7, the project would not add more than 50 morning or afternoon peak hour trips at any of the CMP analysis arterial monitoring stations listed above. Thus, no further analysis was required for the CMP arterial monitoring stations.

### **Selection of Freeway Segments for Analysis**

The nearest mainline freeway monitoring locations to the project site are as follows:

- I-10 east of Overland Avenue
- I-10 east of La Brea Avenue
- I-405 north of La Tijera Boulevard
- I-405 north of Venice Boulevard

As the project is estimated to generate only 162 morning peak hour trips (80 inbound, 82 outbound) and to reduce 25 afternoon peak hour trips (eight inbound, 17 outbound), the project would not add more than 150 morning or afternoon peak hour trips in either direction on the section of any of the CMP analysis segments listed above. Thus, no further analysis was required for the CMP mainline freeway monitoring locations.

## VII SUMMARY AND CONCLUSIONS

This study was undertaken to analyze potential traffic and parking impacts of the proposed Park Century School Project at 3939 Landmark Street in Culver City California. The following summarizes the key findings of the study:

- The proposed project involves the conversion of an existing industrial warehouse building to a private elementary school. The industrial building is now being used as studio production and office space. The school is currently located at 2040 Stoner Avenue in the City of Los Angeles. It serves an enrollment of 60 students with learning disabilities. The school would open with an enrollment of 80 and ultimately serve a student population of 120. When the school enrollment exceeds 80 students, an offset start and dismissal time schedule would be required. The staggered schedule for the students and the staff would minimize the effect of project traffic on the local traffic conditions during the morning peak hour as well as improve the on-site queuing conditions during the afternoon school dismissal hour. It is expected that the maximum enrollment of 120 students would not be reached until 2008.
- With an offset start and dismissal time schedule for 47 staff, 72 students and 48 students, the proposed conversion project is projected to generate approximately 365 net daily trips, including about 162 morning peak hour trips (80 inbound, 82 outbound) and 152 midday peak hour trips (70 inbound, 82 outbound). The proposed project would also improve the afternoon peak hour traffic conditions at the study intersections, as the school would produce eight inbound trips and 17 outbound trips, fewer than the existing office and studio production use.
- Seven intersections were analyzed for this project: Robertson Boulevard & National Boulevard, Exposition Boulevard/Robertson Boulevard & Venice Boulevard, Robertson Boulevard/Higuera Street & Washington Boulevard, National Boulevard & Venice Boulevard, National Boulevard & Washington Boulevard, Landmark Street & Washington Boulevard, and Culver Boulevard & Washington Boulevard/Main Street. Three of these intersections in the vicinity of the project site currently operate at LOS D or better during the weekday morning, midday, and afternoon peak periods.
- Based on impact criteria determined by City of Culver City and City of Los Angeles analysis of projected year 2008 cumulative plus project conditions, representing future conditions with the proposed project, indicates that the proposed project would have significant impact on the intersection of Landmark Street and Washington Boulevard. To mitigate the impact of project traffic at this location, the project would be responsible for the cost of the proposed traffic signal at Washington/Landmark intersection and a restriping of Landmark Street south of Washington Boulevard to provide two northbound lanes (one right turn only lane and one left-turn only lane). The City has requested an

additional improvement to restripe Washington Boulevard to provide a westbound left-turn lane at the Washington/Landmark intersection

- Future pick up and drop-off operations were evaluated with an offset start and dismissal time schedule for 47 staff 72 students and 48 students (72/48 split) Queuing analysis was conducted for the proposed 72/48 split schedule with a 30-minute separation between two student groups during the afternoon dismissal hour The analysis indicated that the proposed 72/48 split for student groups would generate a maximum queue length of 24 vehicles on site which would exceed the 23-vehicle limit from the proposed site plan Therefore a queuing analysis was conducted to develop two alternative staggered schedule options for 120 students Alternative 1 - 67/53 split and a 30-minute separation between student groups and Alternative 2 - 70/50 split and a 35-minute separation between student groups From the traffic operation standpoint neither the proposed 72/48 and nor the two alternative split schedules would create any significant impact at the seven study intersections except the Washington/Landmark intersection It is recommended however that either Alternative 1 or Alternative 2 be implemented when the school enrollment exceeds 70 students The two alternative staggered schedules with the proposed mitigation measures at Washington/Landmark intersection would ensure that future school pick-up and drop-off traffic create minimal disruption on traffic operations on the neighborhood's street system
- The proposed parking supply of 47 spaces was found to meet the City Zoning Code requirement for expected staff numbers of 47 members by year 2008 The proposed project parking supply would be adequate to meet the projected peak demand
- Analysis of potential impacts on the regional transportation system conducted in accordance with CMP requirements determined that the project would not have a significant impact on either the CMP arterial highway network or the mainline freeway system

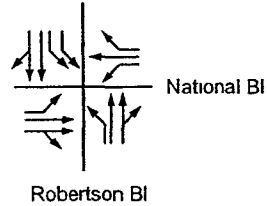
**APPENDIX A**  
**INTERSECTION CONFIGURATIONS**

# INTERSECTION LANE CONFIGURATIONS

## EXISTING CONDITIONS

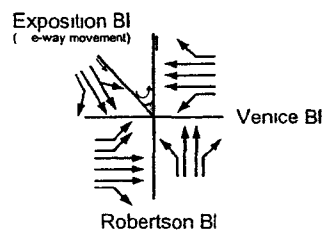
## FUTURE CONDITIONS WITH MITIGATION

- 1 Robertson BI &  
National BI



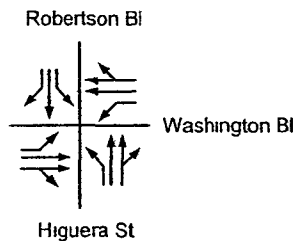
Same As Existing

- 2 Exposition BI/Robertson BI &  
Venice BI



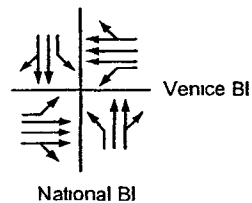
Same As Existing

- 3 Robertson BI/Higuera St &  
Washington BI



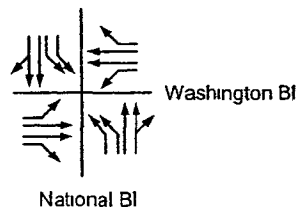
Same As Existing

- 4 National BI &  
Venice BI



Same As Existing

- 5 National BI &  
Washington BI



Same As Existing

### LEGEND

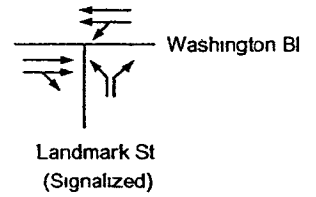
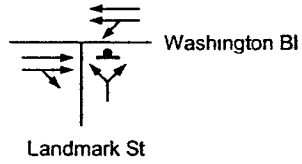
- Stop Controlled  
\* Yield Sign

# INTERSECTION LANE CONFIGURATIONS

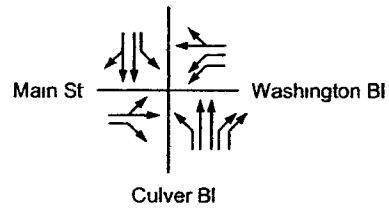
## EXISTING CONDITIONS

## FUTURE CONDITIONS WITH MITIGATION

6 Landmark St &  
Washington Bl



7 Culver Bl &  
Washington Bl/Main St



Same As Existing

### LEGEND

Stop Controlled

100

**APPENDIX B**  
**TRAFFIC COUNT SHEETS**

# WILTEC

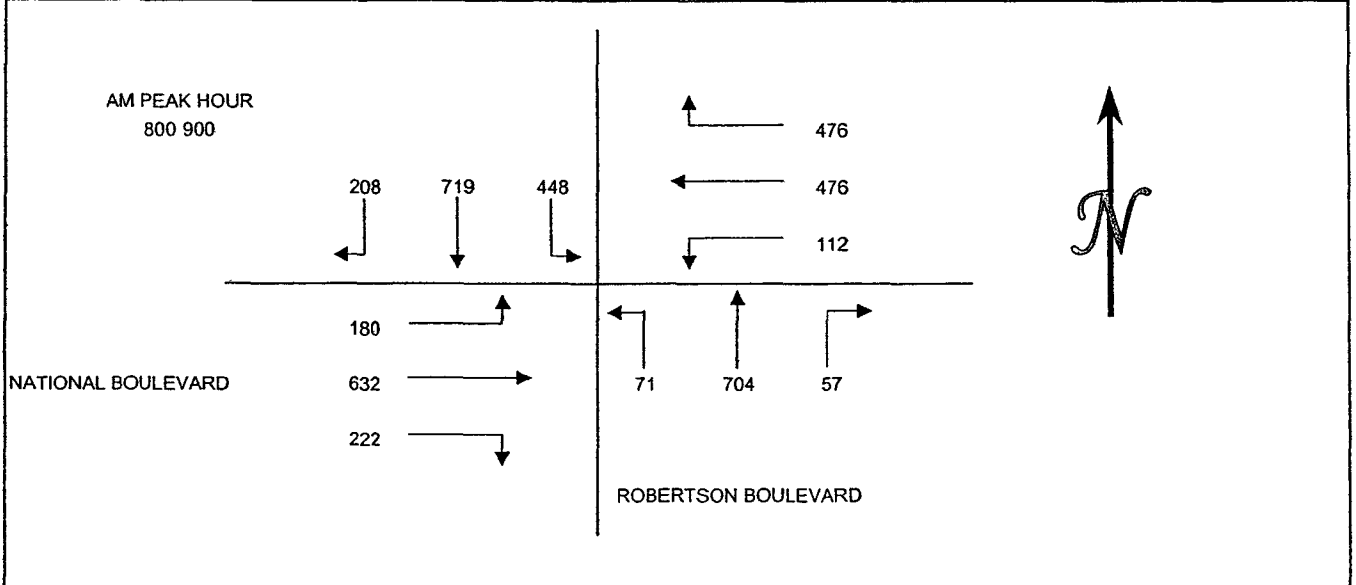
Phone (626) 564 1944 Fax (626) 564 0969

## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT CUPER CITY TRAFFIC COUNTS  
 DATE THURSDAY OCTOBER 7TH 2004  
 PERIOD 7 00 AM TO 9 00 AM  
 INTERSECTION N/S ROBERTSON BOULEVARD  
 E/W NATIONAL BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-715       | 34        | 133       | 93        | 80        | 95        | 32        | 16        | 87        | 11        | 53         | 83         | 31         | 748   |
| 715-730       | 47        | 174       | 92        | 98        | 102       | 31        | 8         | 121       | 13        | 51         | 119        | 39         | 895   |
| 730-745       | 49        | 218       | 143       | 154       | 133       | 30        | 12        | 153       | 19        | 79         | 136        | 52         | 1178  |
| 745-800       | 75        | 170       | 136       | 124       | 97        | 20        | 14        | 122       | 15        | 44         | 178        | 46         | 1041  |
| 800-815       | 57        | 168       | 123       | 112       | 115       | 29        | 13        | 144       | 16        | 49         | 147        | 42         | 1015  |
| 815-830       | 46        | 164       | 101       | 105       | 110       | 26        | 14        | 168       | 17        | 59         | 192        | 44         | 1046  |
| 830-845       | 51        | 190       | 110       | 134       | 119       | 31        | 13        | 198       | 20        | 64         | 146        | 49         | 1125  |
| 845-900       | 54        | 197       | 114       | 125       | 132       | 26        | 17        | 194       | 18        | 50         | 147        | 45         | 1119  |

| HOUR TOTALS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD      | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-800     | 205       | 695       | 464       | 456       | 427       | 113       | 50        | 483       | 58        | 227        | 516        | 168        | 3862  |
| 715-815     | 228       | 730       | 494       | 488       | 447       | 110       | 47        | 540       | 63        | 223        | 580        | 179        | 4129  |
| 730-830     | 227       | 720       | 503       | 495       | 455       | 105       | 53        | 587       | 67        | 231        | 653        | 184        | 4280  |
| 745-845     | 229       | 692       | 470       | 475       | 441       | 106       | 54        | 632       | 68        | 216        | 663        | 181        | 4227  |
| 800-900     | 208       | 719       | 448       | 476       | 476       | 112       | 57        | 704       | 71        | 222        | 632        | 180        | 4305  |

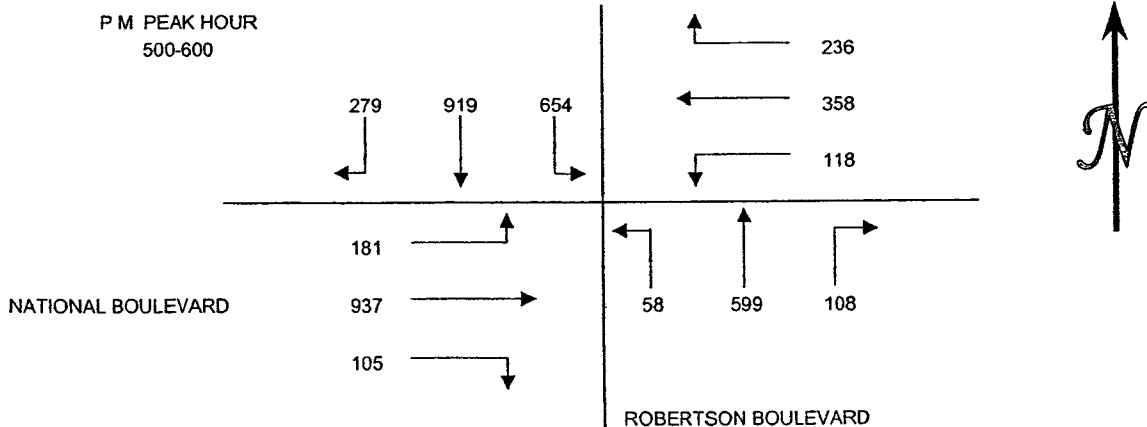


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## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT CUVER CITY TRAFFIC COUNTS  
 DATE THURSDAY OCTOBER 7TH 2004  
 PERIOD 2 00 PM TO 6 00 PM  
 INTERSECTION N/S ROBERTSON BOULEVARD  
 E/W NATIONAL BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-215       | 47        | 217       | 131       | 40        | 70        | 34        | 24        | 160       | 23        | 30         | 115        | 36         | 927   |
| 215-230       | 63        | 182       | 162       | 48        | 60        | 30        | 33        | 167       | 15        | 37         | 143        | 43         | 983   |
| 230-245       | 48        | 216       | 161       | 63        | 80        | 33        | 50        | 182       | 13        | 28         | 133        | 38         | 1045  |
| 245-300       | 61        | 205       | 186       | 53        | 52        | 25        | 25        | 126       | 23        | 33         | 182        | 44         | 1015  |
| 300-315       | 49        | 223       | 163       | 73        | 84        | 26        | 25        | 166       | 10        | 22         | 174        | 41         | 1056  |
| 315-330       | 74        | 256       | 186       | 78        | 92        | 34        | 20        | 146       | 12        | 21         | 170        | 32         | 1121  |
| 330-345       | 50        | 209       | 135       | 52        | 85        | 18        | 21        | 156       | 13        | 44         | 238        | 53         | 1074  |
| 345-400       | 67        | 196       | 137       | 48        | 54        | 29        | 23        | 165       | 19        | 26         | 196        | 44         | 1004  |
| 400-415       | 61        | 199       | 143       | 52        | 81        | 33        | 17        | 129       | 19        | 23         | 199        | 44         | 1000  |
| 415-430       | 68        | 228       | 178       | 49        | 76        | 25        | 27        | 112       | 18        | 27         | 212        | 42         | 1062  |
| 430-445       | 57        | 195       | 165       | 46        | 62        | 19        | 18        | 129       | 22        | 21         | 179        | 37         | 950   |
| 445-500       | 50        | 211       | 179       | 54        | 60        | 23        | 17        | 141       | 17        | 30         | 203        | 41         | 1026  |
| 500-515       | 63        | 215       | 151       | 68        | 102       | 32        | 30        | 121       | 15        | 26         | 217        | 44         | 1084  |
| 515-530       | 70        | 248       | 170       | 54        | 81        | 30        | 31        | 146       | 17        | 20         | 253        | 46         | 1166  |
| 530-545       | 74        | 205       | 164       | 60        | 83        | 25        | 22        | 172       | 8         | 25         | 240        | 46         | 1124  |
| 545-600       | 72        | 251       | 169       | 54        | 92        | 31        | 25        | 160       | 18        | 34         | 227        | 45         | 1178  |
| HOURLY TOTALS |           |           |           |           |           |           |           |           |           |            |            |            |       |
| TIME          | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-300       | 219       | 820       | 640       | 204       | 262       | 122       | 132       | 635       | 74        | 128        | 573        | 161        | 3970  |
| 215-315       | 221       | 826       | 672       | 237       | 276       | 114       | 133       | 641       | 61        | 120        | 632        | 166        | 4099  |
| 230-330       | 232       | 900       | 696       | 267       | 308       | 118       | 120       | 620       | 58        | 104        | 659        | 155        | 4237  |
| 245-345       | 234       | 893       | 670       | 256       | 313       | 103       | 91        | 594       | 58        | 120        | 764        | 170        | 4266  |
| 300-400       | 240       | 884       | 621       | 251       | 315       | 107       | 89        | 633       | 54        | 113        | 778        | 170        | 4255  |
| 315-415       | 252       | 860       | 601       | 230       | 312       | 114       | 81        | 596       | 63        | 114        | 803        | 173        | 4199  |
| 330-430       | 246       | 832       | 593       | 201       | 296       | 105       | 88        | 562       | 69        | 120        | 845        | 183        | 4140  |
| 345-445       | 253       | 818       | 623       | 195       | 273       | 106       | 85        | 535       | 78        | 97         | 786        | 167        | 4016  |
| 400-500       | 236       | 833       | 665       | 201       | 279       | 100       | 79        | 511       | 76        | 101        | 793        | 164        | 4038  |
| 415-515       | 238       | 849       | 673       | 217       | 300       | 99        | 92        | 503       | 72        | 104        | 811        | 164        | 4122  |
| 430-530       | 240       | 869       | 665       | 222       | 305       | 104       | 96        | 537       | 71        | 97         | 852        | 168        | 4226  |
| 445-545       | 257       | 879       | 664       | 236       | 326       | 110       | 100       | 580       | 57        | 101        | 913        | 177        | 4400  |
| 500-600       | 279       | 919       | 654       | 236       | 358       | 118       | 108       | 599       | 58        | 105        | 937        | 181        | 4552  |



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# WILTEC

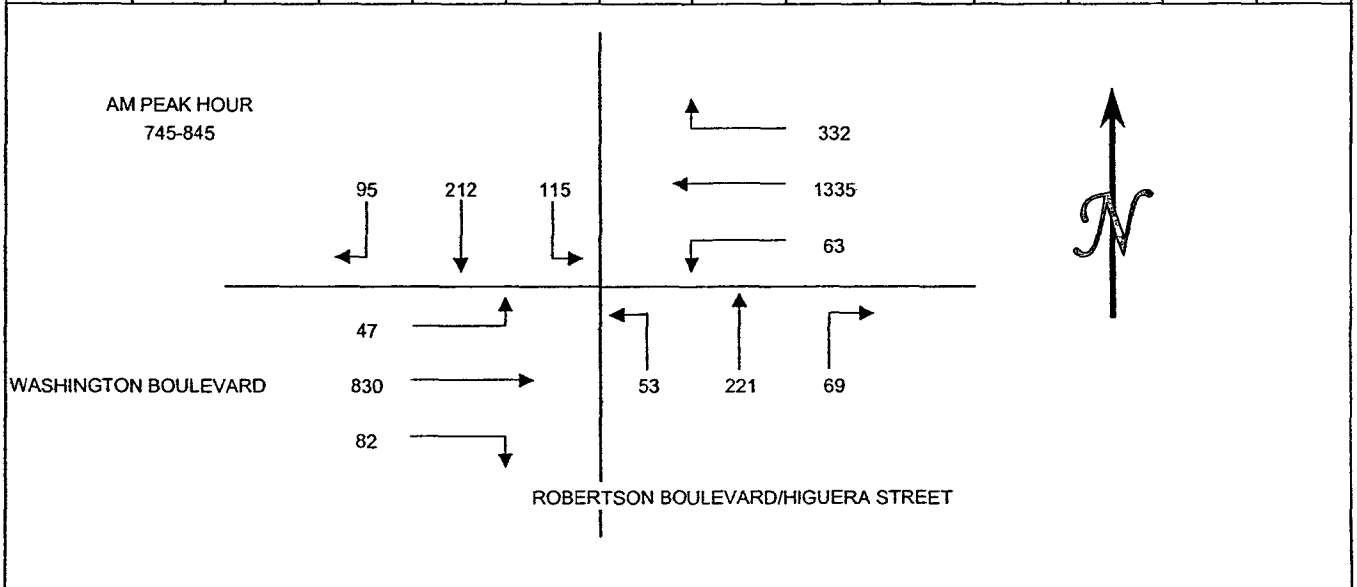
Phone (626) 564 1944 Fax (626) 564-0969

## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT CIVER CITY TRAFFIC COUNTS  
 DATE THURSDAY OCTOBER 7TH 2004  
 PERIOD 7 00 AM TO 9 00 AM  
 INTERSECTION N/S ROBERTSON BOULEVARD/HIGUERA STREET  
 E/W WASHINGTON BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-715       | 27        | 37        | 13        | 53        | 256       | 14        | 11        | 36        | 4         | 9          | 86         | 7          | 553   |
| 715-730       | 25        | 28        | 14        | 93        | 308       | 10        | 9         | 60        | 7         | 8          | 121        | 13         | 696   |
| 730-745       | 15        | 23        | 15        | 79        | 334       | 11        | 15        | 72        | 18        | 11         | 158        | 12         | 763   |
| 745-800       | 23        | 41        | 22        | 82        | 372       | 14        | 17        | 62        | 15        | 19         | 189        | 15         | 871   |
| 800-815       | 20        | 63        | 36        | 94        | 347       | 29        | 19        | 48        | 13        | 19         | 205        | 7          | 900   |
| 815-830       | 30        | 61        | 41        | 66        | 333       | 10        | 16        | 67        | 10        | 20         | 248        | 14         | 916   |
| 830-845       | 22        | 47        | 16        | 90        | 283       | 10        | 17        | 44        | 15        | 24         | 188        | 11         | 767   |
| 845-900       | 35        | 60        | 42        | 81        | 285       | 27        | 12        | 51        | 8         | 20         | 214        | 21         | 856   |

| HOUR TOTALS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD      | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-800     | 90        | 129       | 64        | 307       | 1270      | 49        | 52        | 230       | 44        | 47         | 554        | 47         | 2883  |
| 715-815     | 83        | 155       | 87        | 348       | 1361      | 64        | 60        | 242       | 53        | 57         | 673        | 47         | 3230  |
| 730-830     | 88        | 188       | 114       | 321       | 1386      | 64        | 67        | 249       | 56        | 69         | 800        | 48         | 3450  |
| 745-845     | 95        | 212       | 115       | 332       | 1335      | 63        | 69        | 221       | 53        | 82         | 830        | 47         | 3454  |
| 800-900     | 107       | 231       | 135       | 331       | 1248      | 76        | 64        | 210       | 46        | 83         | 855        | 53         | 3439  |

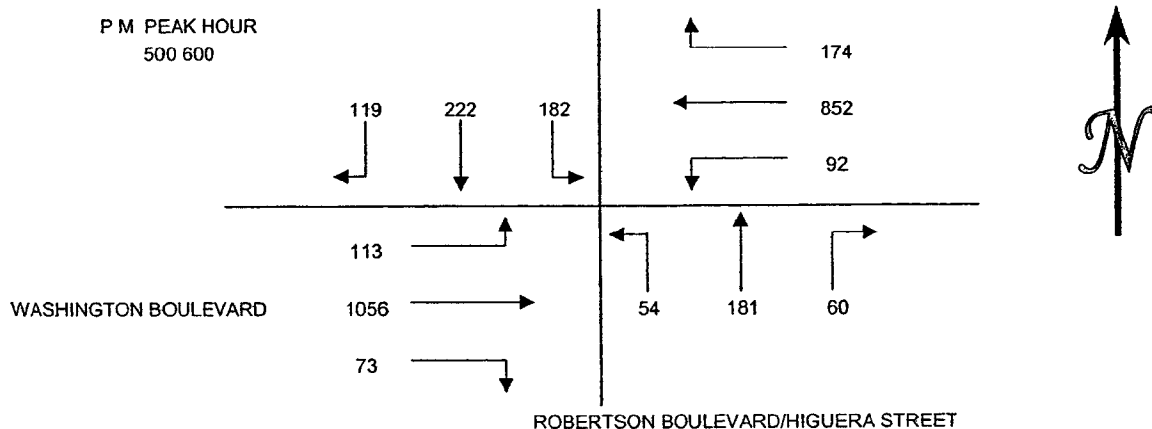


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## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT CUPER CITY TRAFFIC COUNTS  
 DATE THURSDAY OCTOBER 7TH 2004  
 PERIOD 2 00 PM TO 6 00 PM  
 INTERSECTION N/S ROBERTSON BOULEVARD/HIGUERA STREET  
 EW WASHINGTON BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-215       | 37        | 55        | 44        | 26        | 172       | 14        | 16        | 33        | 9         | 15         | 128        | 15         | 564   |
| 215-230       | 42        | 63        | 32        | 30        | 166       | 11        | 12        | 36        | 10        | 20         | 147        | 14         | 583   |
| 230-245       | 46        | 66        | 44        | 24        | 177       | 13        | 11        | 35        | 12        | 23         | 151        | 12         | 614   |
| 245-300       | 20        | 28        | 38        | 21        | 140       | 10        | 10        | 23        | 8         | 20         | 163        | 9          | 490   |
| 300-315       | 41        | 58        | 73        | 54        | 237       | 15        | 19        | 36        | 14        | 16         | 201        | 19         | 783   |
| 315-330       | 24        | 47        | 31        | 23        | 151       | 18        | 6         | 31        | 3         | 16         | 214        | 19         | 583   |
| 330-345       | 30        | 55        | 45        | 50        | 162       | 17        | 19        | 30        | 9         | 24         | 206        | 14         | 661   |
| 345-400       | 29        | 61        | 51        | 31        | 201       | 12        | 13        | 24        | 9         | 25         | 211        | 10         | 677   |
| 400-415       | 38        | 47        | 56        | 28        | 189       | 13        | 15        | 26        | 12        | 24         | 227        | 27         | 702   |
| 415-430       | 27        | 62        | 43        | 33        | 177       | 14        | 15        | 39        | 11        | 12         | 230        | 17         | 680   |
| 430-445       | 34        | 69        | 53        | 40        | 193       | 32        | 14        | 51        | 13        | 11         | 245        | 23         | 778   |
| 445-500       | 31        | 61        | 34        | 40        | 205       | 19        | 11        | 28        | 10        | 14         | 256        | 21         | 730   |
| 500-515       | 32        | 61        | 34        | 56        | 216       | 32        | 9         | 40        | 17        | 16         | 249        | 22         | 784   |
| 515-530       | 15        | 46        | 37        | 38        | 198       | 18        | 18        | 45        | 14        | 16         | 285        | 24         | 754   |
| 530-545       | 33        | 50        | 53        | 37        | 220       | 16        | 15        | 46        | 15        | 23         | 261        | 29         | 798   |
| 545-600       | 39        | 65        | 58        | 43        | 218       | 26        | 18        | 50        | 8         | 18         | 261        | 38         | 842   |
| HOUR TOTALS   |           |           |           |           |           |           |           |           |           |            |            |            |       |
| TIME          | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-300       | 145       | 212       | 158       | 101       | 655       | 48        | 49        | 127       | 39        | 78         | 589        | 50         | 2251  |
| 315-415       | 149       | 215       | 187       | 129       | 720       | 49        | 52        | 130       | 44        | 79         | 662        | 54         | 2470  |
| 430-530       | 131       | 199       | 186       | 122       | 705       | 56        | 46        | 125       | 37        | 75         | 729        | 59         | 2470  |
| 545-645       | 115       | 188       | 187       | 148       | 690       | 60        | 54        | 120       | 34        | 76         | 784        | 61         | 2517  |
| 600-700       | 124       | 221       | 200       | 158       | 751       | 62        | 57        | 121       | 35        | 81         | 832        | 62         | 2704  |
| 715-815       | 121       | 210       | 183       | 132       | 703       | 60        | 53        | 111       | 33        | 89         | 858        | 70         | 2623  |
| 830-930       | 124       | 225       | 195       | 142       | 729       | 56        | 62        | 119       | 41        | 85         | 874        | 68         | 2720  |
| 945-1045      | 128       | 239       | 203       | 132       | 760       | 71        | 57        | 140       | 45        | 72         | 913        | 77         | 2837  |
| 1100-1200     | 130       | 239       | 186       | 141       | 764       | 78        | 55        | 144       | 46        | 61         | 958        | 88         | 2890  |
| 1215-1315     | 124       | 253       | 164       | 169       | 791       | 97        | 49        | 158       | 51        | 53         | 980        | 83         | 2972  |
| 1330-1430     | 112       | 237       | 158       | 174       | 812       | 101       | 52        | 164       | 54        | 57         | 1035       | 90         | 3046  |
| 1445-1545     | 111       | 218       | 158       | 171       | 839       | 85        | 53        | 159       | 56        | 69         | 1051       | 96         | 3066  |
| 1600-1700     | 119       | 222       | 182       | 174       | 852       | 92        | 60        | 181       | 54        | 73         | 1056       | 113        | 3178  |



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## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT CUVER CITY TRAFFIC COUNTS  
 DATE THURSDAY OCTOBER 7TH 2004  
 PERIOD 7 00 AM TO 9 00 AM  
 INTERSECTION N/S NATIONAL BOULEVARD  
 E/W WASHINGTON BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-715       | 7         | 50        | 8         | 33        | 212       | 13        | 4         | 206       | 77        | 14         | 76         | 2          | 702   |
| 715-730       | 14        | 91        | 16        | 41        | 299       | 11        | 10        | 235       | 97        | 21         | 123        | 0          | 958   |
| 730-745       | 13        | 119       | 20        | 39        | 304       | 8         | 12        | 245       | 116       | 41         | 135        | 3          | 1055  |
| 745-800       | 16        | 228       | 29        | 38        | 360       | 18        | 21        | 255       | 126       | 57         | 161        | 6          | 1315  |
| 800-815       | 19        | 179       | 41        | 36        | 264       | 11        | 25        | 234       | 148       | 76         | 181        | 5          | 1219  |
| 815-830       | 11        | 200       | 36        | 43        | 276       | 22        | 27        | 205       | 103       | 61         | 204        | 8          | 1196  |
| 830-845       | 23        | 158       | 20        | 41        | 283       | 22        | 10        | 175       | 87        | 27         | 195        | 8          | 1049  |
| 845-900       | 20        | 167       | 33        | 55        | 326       | 23        | 22        | 210       | 86        | 59         | 199        | 7          | 1207  |
| HOUR TOTALS   |           |           |           |           |           |           |           |           |           |            |            |            |       |
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-800       | 50        | 488       | 73        | 151       | 1175      | 50        | 47        | 941       | 416       | 133        | 495        | 11         | 4080  |
| 715-815       | 62        | 617       | 106       | 154       | 1227      | 48        | 68        | 969       | 487       | 195        | 600        | 14         | 4547  |
| 730-830       | 59        | 726       | 126       | 156       | 1204      | 59        | 85        | 939       | 493       | 235        | 681        | 22         | 4785  |
| 745-845       | 69        | 765       | 126       | 158       | 1183      | 73        | 83        | 869       | 464       | 221        | 741        | 27         | 4779  |
| 800-900       | 73        | 704       | 130       | 175       | 1149      | 78        | 84        | 824       | 424       | 223        | 779        | 28         | 4671  |

AM PEAK HOUR  
730-830

WASHINGTON BOULEVARD

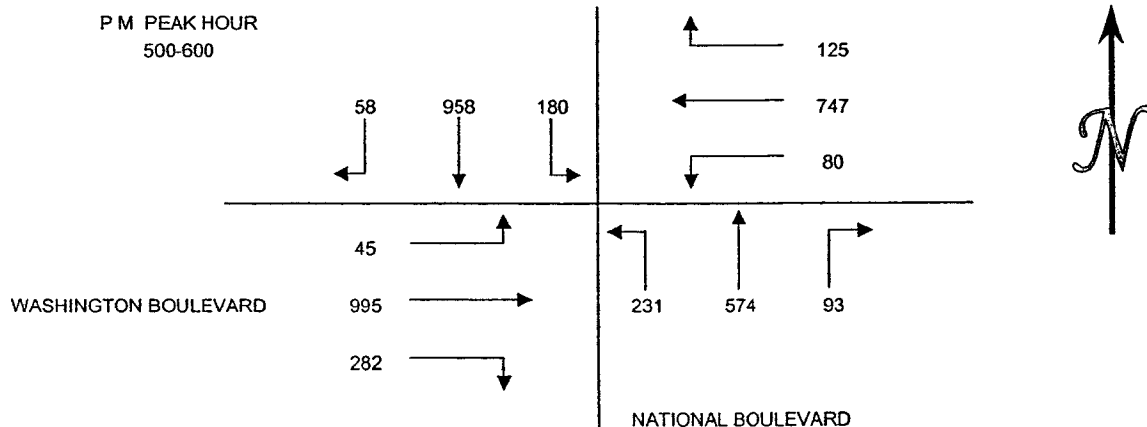
NATIONAL BOULEVARD

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## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT CUVER CITY TRAFFIC COUNTS  
 DATE THURSDAY OCTOBER 7TH 2004  
 PERIOD 2 00 PM TO 6 00 PM  
 INTERSECTION N/S NATIONAL BOULEVARD  
 E/W WASHINGTON BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-215       | 10        | 110       | 21        | 23        | 124       | 10        | 5         | 95        | 41        | 43         | 107        | 17         | 606   |
| 215-230       | 11        | 138       | 32        | 31        | 119       | 11        | 15        | 119       | 31        | 50         | 141        | 11         | 709   |
| 230-245       | 18        | 100       | 21        | 27        | 141       | 17        | 13        | 135       | 39        | 57         | 133        | 7          | 708   |
| 245-300       | 12        | 128       | 15        | 27        | 156       | 19        | 11        | 119       | 51        | 70         | 143        | 8          | 759   |
| 300-315       | 33        | 100       | 27        | 29        | 155       | 16        | 16        | 165       | 66        | 80         | 205        | 16         | 908   |
| 315-330       | 17        | 104       | 43        | 35        | 145       | 20        | 23        | 156       | 55        | 84         | 159        | 12         | 853   |
| 330-345       | 19        | 195       | 47        | 30        | 120       | 14        | 17        | 123       | 62        | 70         | 199        | 13         | 909   |
| 345-400       | 11        | 201       | 33        | 23        | 157       | 18        | 23        | 122       | 50        | 61         | 177        | 6          | 882   |
| 400-415       | 14        | 224       | 34        | 32        | 143       | 17        | 11        | 117       | 47        | 78         | 220        | 15         | 952   |
| 415-430       | 6         | 204       | 40        | 23        | 205       | 11        | 19        | 137       | 55        | 83         | 204        | 11         | 998   |
| 430-445       | 15        | 205       | 37        | 33        | 149       | 19        | 29        | 125       | 38        | 70         | 215        | 16         | 951   |
| 445-500       | 11        | 246       | 43        | 27        | 178       | 12        | 19        | 114       | 57        | 73         | 239        | 11         | 1030  |
| 500-515       | 12        | 245       | 32        | 39        | 159       | 16        | 23        | 152       | 77        | 62         | 234        | 12         | 1063  |
| 515-530       | 14        | 214       | 43        | 28        | 194       | 30        | 24        | 150       | 55        | 60         | 240        | 7          | 1059  |
| 530-545       | 17        | 266       | 54        | 28        | 217       | 21        | 17        | 134       | 51        | 82         | 265        | 12         | 1164  |
| 545-600       | 15        | 233       | 51        | 30        | 177       | 13        | 29        | 138       | 48        | 78         | 256        | 14         | 1082  |
| HOUR TOTALS   |           |           |           |           |           |           |           |           |           |            |            |            |       |
| TIME          | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-300       | 51        | 476       | 89        | 108       | 540       | 57        | 44        | 468       | 162       | 220        | 524        | 43         | 2782  |
| 215-315       | 74        | 466       | 95        | 114       | 571       | 63        | 55        | 538       | 187       | 257        | 622        | 42         | 3084  |
| 230-330       | 80        | 432       | 106       | 118       | 597       | 72        | 63        | 575       | 211       | 291        | 640        | 43         | 3228  |
| 245-345       | 81        | 527       | 132       | 121       | 576       | 69        | 67        | 563       | 234       | 304        | 706        | 49         | 3429  |
| 300-400       | 80        | 600       | 150       | 117       | 577       | 68        | 79        | 566       | 233       | 295        | 740        | 47         | 3552  |
| 315-415       | 61        | 724       | 157       | 120       | 565       | 69        | 74        | 518       | 214       | 293        | 755        | 46         | 3596  |
| 330-430       | 50        | 824       | 154       | 108       | 625       | 60        | 70        | 499       | 214       | 292        | 800        | 45         | 3741  |
| 345-445       | 46        | 834       | 144       | 111       | 654       | 65        | 82        | 501       | 190       | 292        | 816        | 48         | 3783  |
| 400-500       | 46        | 879       | 154       | 115       | 675       | 59        | 78        | 493       | 197       | 304        | 878        | 53         | 3931  |
| 415-515       | 44        | 900       | 152       | 122       | 691       | 58        | 90        | 528       | 227       | 288        | 892        | 50         | 4042  |
| 430-530       | 52        | 910       | 155       | 127       | 680       | 77        | 95        | 541       | 227       | 265        | 928        | 46         | 4103  |
| 445-545       | 54        | 971       | 172       | 122       | 748       | 79        | 83        | 550       | 240       | 277        | 978        | 42         | 4316  |
| 500-600       | 58        | 958       | 180       | 125       | 747       | 80        | 93        | 574       | 231       | 282        | 995        | 45         | 4368  |



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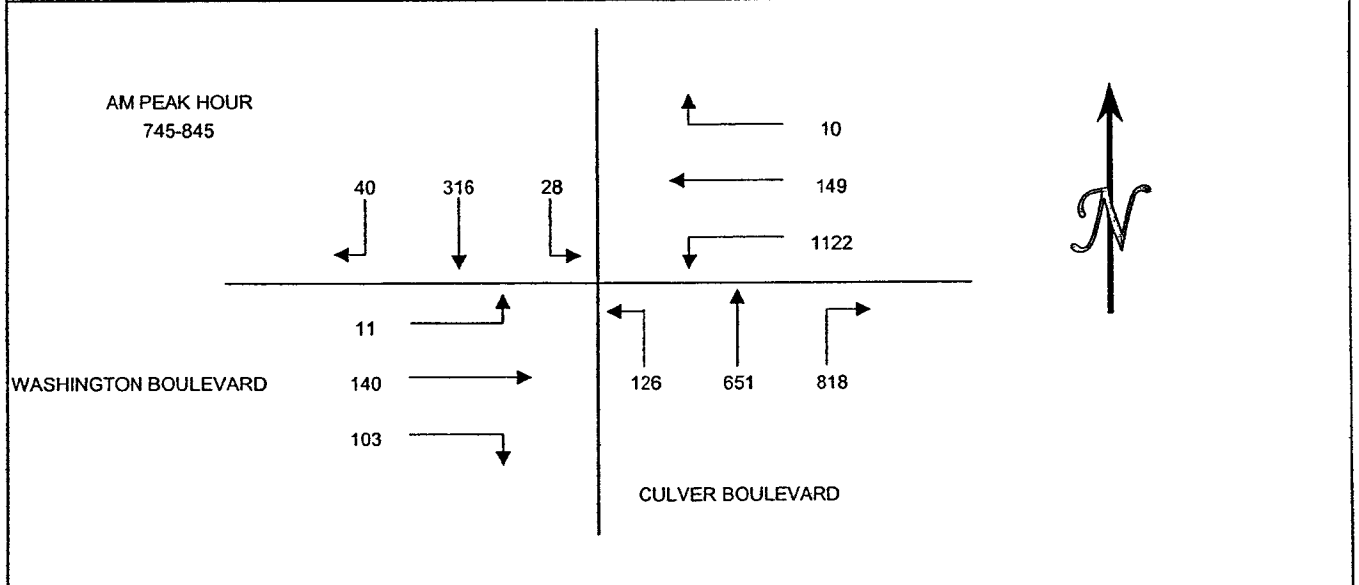
# WILTEC

Phone (626) 564 1944 Fax (626) 564 0969

## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT CULVER CITY TRAFFIC COUNTS  
 DATE THURSDAY OCTOBER 7TH 2004  
 PERIOD 7 00 AM TO 9 00 AM  
 INTERSECTION N/S CULVER BOULEVARD  
 E/W WASHINGTON BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-715       | 2         | 38        | 9         | 3         | 17        | 187       | 87        | 87        | 7         | 4          | 10         | 2          | 453   |
| 715-730       | 4         | 54        | 11        | 6         | 41        | 259       | 120       | 97        | 15        | 20         | 12         | 0          | 639   |
| 730-745       | 3         | 69        | 7         | 0         | 42        | 298       | 155       | 139       | 29        | 18         | 20         | 3          | 783   |
| 745-800       | 8         | 94        | 6         | 1         | 45        | 296       | 150       | 152       | 44        | 28         | 35         | 2          | 861   |
| 800-815       | 8         | 69        | 9         | 4         | 35        | 291       | 201       | 154       | 20        | 27         | 28         | 4          | 850   |
| 815-830       | 13        | 90        | 5         | 2         | 35        | 283       | 238       | 172       | 25        | 20         | 40         | 2          | 925   |
| 830-845       | 11        | 63        | 8         | 3         | 34        | 252       | 229       | 173       | 37        | 28         | 37         | 3          | 878   |
| 845-900       | 2         | 83        | 7         | 2         | 37        | 235       | 185       | 158       | 27        | 25         | 31         | 5          | 797   |
| HOUR TOTALS   |           |           |           |           |           |           |           |           |           |            |            |            |       |
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-800       | 17        | 255       | 33        | 10        | 145       | 1040      | 512       | 475       | 95        | 70         | 77         | 7          | 2736  |
| 715-815       | 23        | 286       | 33        | 11        | 163       | 1144      | 626       | 542       | 108       | 93         | 95         | 9          | 3133  |
| 730-830       | 32        | 322       | 27        | 7         | 157       | 1168      | 744       | 617       | 118       | 93         | 123        | 11         | 3419  |
| 745-845       | 40        | 316       | 28        | 10        | 149       | 1122      | 818       | 651       | 126       | 103        | 140        | 11         | 3514  |
| 800-900       | 34        | 305       | 29        | 11        | 141       | 1061      | 853       | 657       | 109       | 100        | 136        | 14         | 3450  |

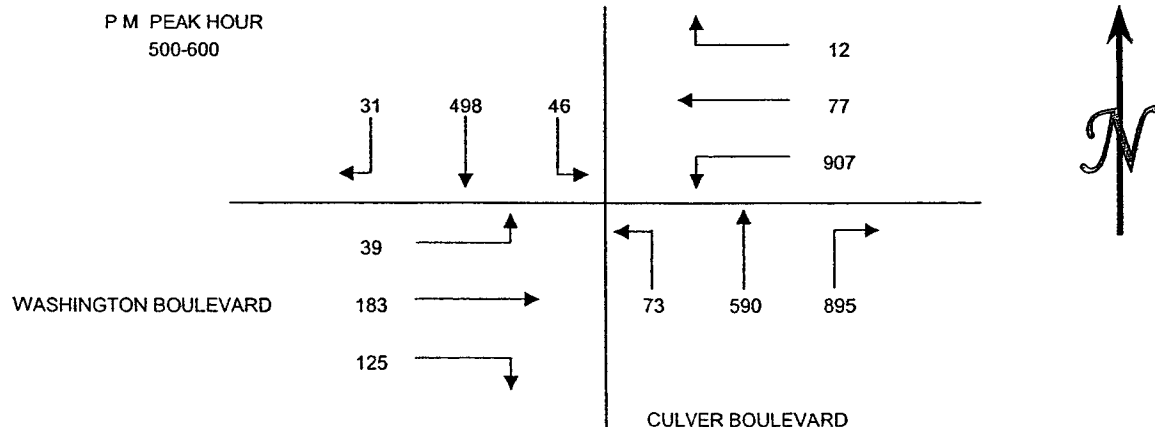


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## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT COVER CITY TRAFFIC COUNTS  
 DATE THURSDAY OCTOBER 7TH 2004  
 PERIOD 2 00 PM TO 6 00 PM  
 INTERSECTION N/S CULVER BOULEVARD  
 E/W WASHINGTON BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200 215       | 4         | 81        | 13        | 3         | 17        | 199       | 116       | 96        | 14        | 31         | 34         | 6          | 614   |
| 215-230       | 6         | 76        | 19        | 7         | 12        | 147       | 163       | 114       | 10        | 27         | 20         | 3          | 604   |
| 230 245       | 5         | 79        | 9         | 1         | 19        | 175       | 192       | 155       | 20        | 29         | 38         | 8          | 730   |
| 245-300       | 14        | 83        | 14        | 4         | 16        | 188       | 157       | 102       | 10        | 25         | 21         | 5          | 639   |
| 300 315       | 3         | 92        | 9         | 3         | 20        | 190       | 180       | 116       | 18        | 33         | 39         | 4          | 707   |
| 315-330       | 3         | 93        | 9         | 1         | 16        | 179       | 164       | 98        | 18        | 30         | 30         | 3          | 644   |
| 330-345       | 5         | 84        | 9         | 3         | 21        | 163       | 184       | 115       | 15        | 27         | 43         | 6          | 675   |
| 345-400       | 7         | 85        | 12        | 0         | 14        | 191       | 201       | 141       | 13        | 25         | 33         | 2          | 724   |
| 400-415       | 6         | 90        | 12        | 3         | 16        | 212       | 187       | 129       | 16        | 17         | 37         | 5          | 730   |
| 415-430       | 7         | 103       | 6         | 3         | 10        | 201       | 203       | 152       | 13        | 27         | 41         | 5          | 771   |
| 430-445       | 9         | 129       | 11        | 1         | 20        | 194       | 211       | 134       | 13        | 24         | 38         | 5          | 789   |
| 445-500       | 4         | 110       | 4         | 2         | 19        | 192       | 249       | 161       | 13        | 25         | 42         | 3          | 824   |
| 500-515       | 7         | 115       | 17        | 1         | 18        | 215       | 211       | 153       | 24        | 34         | 51         | 7          | 853   |
| 515-530       | 4         | 131       | 10        | 3         | 23        | 239       | 240       | 150       | 15        | 31         | 52         | 4          | 902   |
| 530-545       | 9         | 126       | 8         | 4         | 19        | 228       | 220       | 143       | 23        | 24         | 43         | 10         | 857   |
| 545-600       | 11        | 126       | 11        | 4         | 17        | 225       | 224       | 144       | 11        | 36         | 37         | 18         | 864   |
| HOUR TOTALS   |           |           |           |           |           |           |           |           |           |            |            |            |       |
| TIME          | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200 300       | 29        | 319       | 55        | 15        | 64        | 709       | 628       | 467       | 54        | 112        | 113        | 22         | 2587  |
| 215-315       | 28        | 330       | 51        | 15        | 67        | 700       | 692       | 487       | 58        | 114        | 118        | 20         | 2680  |
| 230 330       | 25        | 347       | 41        | 9         | 71        | 732       | 693       | 471       | 66        | 117        | 128        | 20         | 2720  |
| 245-345       | 25        | 352       | 41        | 11        | 73        | 720       | 685       | 431       | 61        | 115        | 133        | 18         | 2665  |
| 300-400       | 18        | 354       | 39        | 7         | 71        | 723       | 729       | 470       | 64        | 115        | 145        | 15         | 2750  |
| 315-415       | 21        | 352       | 42        | 7         | 67        | 745       | 736       | 483       | 62        | 99         | 143        | 16         | 2773  |
| 330-430       | 25        | 362       | 39        | 9         | 61        | 767       | 775       | 537       | 57        | 96         | 154        | 18         | 2900  |
| 345-445       | 29        | 407       | 41        | 7         | 60        | 798       | 802       | 556       | 55        | 93         | 149        | 17         | 3014  |
| 400 500       | 26        | 432       | 33        | 9         | 65        | 799       | 850       | 576       | 55        | 93         | 158        | 18         | 3114  |
| 415-515       | 27        | 457       | 38        | 7         | 67        | 802       | 874       | 600       | 63        | 110        | 172        | 20         | 3237  |
| 430 530       | 24        | 485       | 42        | 7         | 80        | 840       | 911       | 598       | 65        | 114        | 183        | 19         | 3368  |
| 445-545       | 24        | 482       | 39        | 10        | 79        | 874       | 920       | 607       | 75        | 114        | 188        | 24         | 3436  |
| 500-600       | 31        | 498       | 46        | 12        | 77        | 907       | 895       | 590       | 73        | 125        | 183        | 39         | 3476  |



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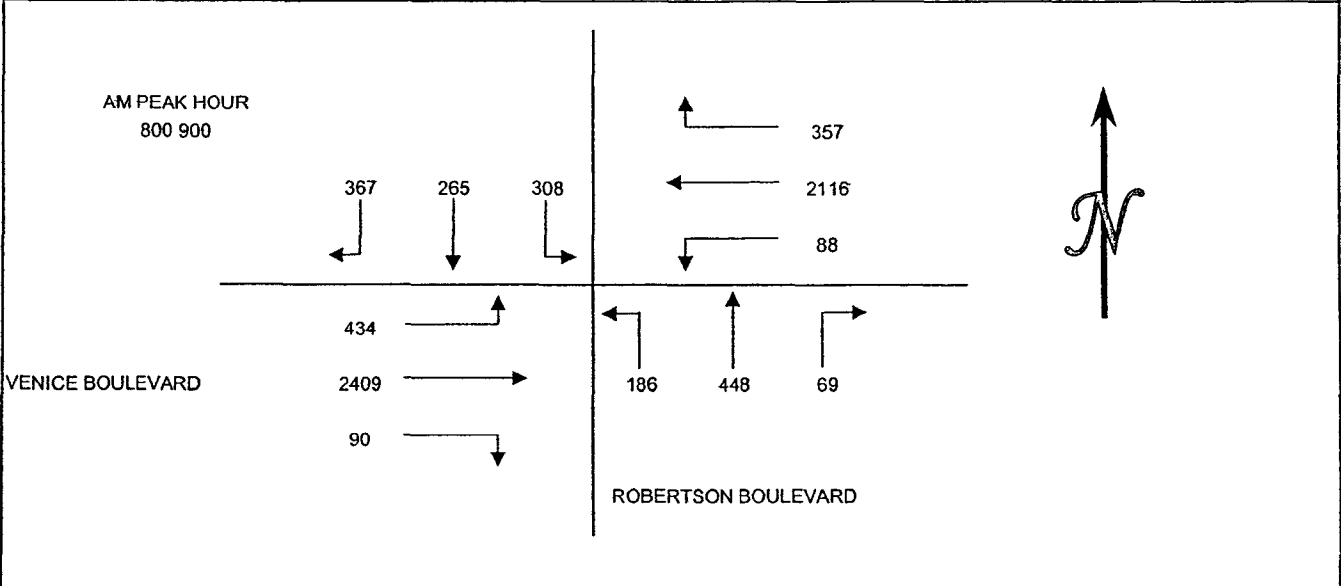
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## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT COVER CITY TRAFFIC COUNTS  
 DATE WEDNESDAY SEPTEMBER 22ND 2004  
 PERIOD 7 00 AM TO 9 00 AM  
 INTERSECTION N/S ROBERTSON BOULEVARD  
 E/W VENICE BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-715       | 62        | 43        | 28        | 89        | 380       | 15        | 5         | 91        | 22        | 11         | 321        | 43         | 1110  |
| 715-730       | 71        | 42        | 40        | 90        | 450       | 21        | 7         | 85        | 33        | 12         | 413        | 56         | 1320  |
| 730-745       | 88        | 63        | 65        | 121       | 478       | 13        | 14        | 96        | 37        | 15         | 544        | 94         | 1628  |
| 745-800       | 112       | 76        | 78        | 110       | 523       | 21        | 15        | 119       | 45        | 18         | 582        | 90         | 1789  |
| 800-815       | 102       | 96        | 106       | 83        | 550       | 13        | 15        | 103       | 48        | 22         | 571        | 99         | 1808  |
| 815-830       | 92        | 58        | 83        | 98        | 528       | 19        | 17        | 101       | 40        | 23         | 576        | 103        | 1738  |
| 830-845       | 90        | 46        | 53        | 94        | 505       | 20        | 17        | 132       | 53        | 23         | 624        | 115        | 1772  |
| 845-900       | 83        | 65        | 66        | 82        | 533       | 36        | 20        | 112       | 45        | 22         | 638        | 117        | 1819  |

| HOOR TOTALS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD      | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-800     | 333       | 224       | 211       | 410       | 1831      | 70        | 41        | 391       | 137       | 56         | 1860       | 283        | 5847  |
| 715-815     | 373       | 277       | 289       | 404       | 2001      | 68        | 51        | 403       | 163       | 67         | 2110       | 339        | 6545  |
| 730-830     | 394       | 293       | 332       | 412       | 2079      | 66        | 61        | 419       | 170       | 78         | 2273       | 386        | 6963  |
| 745-845     | 396       | 276       | 320       | 385       | 2106      | 73        | 64        | 455       | 186       | 86         | 2353       | 407        | 7107  |
| 800-900     | 367       | 265       | 308       | 357       | 2116      | 88        | 69        | 448       | 186       | 90         | 2409       | 434        | 7137  |

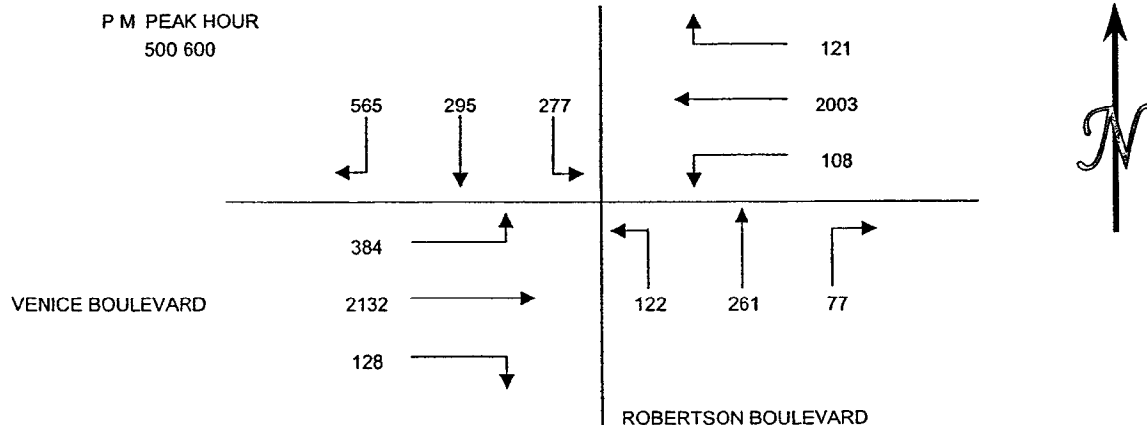


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## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT CUVER CITY TRAFFIC COUNTS  
 DATE WEDNESDAY SEPTEMBER 22ND 2004  
 PERIOD 2 00 PM TO 6 00 PM  
 INTERSECTION N/S ROBERTSON BOULEVARD  
 E/W VENICE BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-215       | 129       | 74        | 72        | 43        | 368       | 13        | 12        | 43        | 20        | 42         | 454        | 90         | 1360  |
| 215-230       | 118       | 61        | 58        | 20        | 345       | 24        | 21        | 50        | 31        | 34         | 428        | 63         | 1253  |
| 230-245       | 109       | 82        | 67        | 42        | 390       | 23        | 14        | 45        | 21        | 24         | 451        | 87         | 1355  |
| 245-300       | 108       | 68        | 76        | 25        | 372       | 33        | 17        | 43        | 19        | 34         | 456        | 74         | 1325  |
| 300-315       | 104       | 75        | 59        | 25        | 353       | 17        | 18        | 58        | 25        | 25         | 471        | 93         | 1323  |
| 315-330       | 115       | 78        | 64        | 35        | 408       | 29        | 19        | 60        | 20        | 24         | 528        | 94         | 1474  |
| 330-345       | 95        | 79        | 67        | 30        | 450       | 22        | 20        | 45        | 25        | 26         | 491        | 80         | 1430  |
| 345-400       | 124       | 109       | 88        | 22        | 450       | 19        | 20        | 66        | 22        | 39         | 516        | 80         | 1555  |
| 400-415       | 100       | 65        | 64        | 34        | 359       | 17        | 15        | 74        | 12        | 27         | 510        | 89         | 1366  |
| 415-430       | 102       | 96        | 74        | 45        | 446       | 29        | 13        | 77        | 26        | 34         | 510        | 94         | 1546  |
| 430-445       | 112       | 82        | 94        | 41        | 431       | 13        | 29        | 78        | 24        | 44         | 568        | 99         | 1615  |
| 445-500       | 110       | 88        | 79        | 20        | 483       | 21        | 19        | 59        | 37        | 39         | 529        | 90         | 1574  |
| 500-515       | 140       | 85        | 87        | 36        | 483       | 22        | 19        | 66        | 38        | 40         | 544        | 93         | 1653  |
| 515-530       | 144       | 55        | 59        | 27        | 460       | 23        | 18        | 56        | 24        | 37         | 521        | 111        | 1535  |
| 530-545       | 134       | 82        | 57        | 33        | 549       | 25        | 24        | 77        | 28        | 24         | 535        | 108        | 1676  |
| 545-600       | 147       | 73        | 74        | 25        | 511       | 38        | 16        | 62        | 32        | 27         | 532        | 72         | 1609  |
| HOOR TOTALS   |           |           |           |           |           |           |           |           |           |            |            |            |       |
| TIME          | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-300       | 464       | 285       | 273       | 130       | 1475      | 93        | 64        | 181       | 91        | 134        | 1789       | 314        | 5293  |
| 215-315       | 439       | 286       | 260       | 112       | 1460      | 97        | 70        | 196       | 96        | 117        | 1806       | 317        | 5256  |
| 230-330       | 436       | 303       | 266       | 127       | 1523      | 102       | 68        | 206       | 85        | 107        | 1906       | 348        | 5477  |
| 245-345       | 422       | 300       | 266       | 115       | 1583      | 101       | 74        | 206       | 89        | 109        | 1946       | 341        | 5552  |
| 300-400       | 438       | 341       | 278       | 112       | 1661      | 87        | 77        | 229       | 92        | 114        | 2006       | 347        | 5782  |
| 315-415       | 434       | 331       | 283       | 121       | 1667      | 87        | 74        | 245       | 79        | 116        | 2045       | 343        | 5825  |
| 330-430       | 421       | 349       | 293       | 131       | 1705      | 87        | 68        | 262       | 85        | 126        | 2027       | 343        | 5897  |
| 345-445       | 438       | 352       | 320       | 142       | 1686      | 78        | 77        | 295       | 84        | 144        | 2104       | 362        | 6082  |
| 400-500       | 424       | 331       | 311       | 140       | 1719      | 80        | 76        | 288       | 99        | 144        | 2117       | 372        | 6101  |
| 415-515       | 464       | 351       | 334       | 142       | 1843      | 85        | 80        | 280       | 125       | 157        | 2151       | 376        | 6388  |
| 430-530       | 506       | 310       | 319       | 124       | 1857      | 79        | 85        | 259       | 123       | 160        | 2162       | 393        | 6377  |
| 445-545       | 528       | 310       | 282       | 116       | 1975      | 91        | 80        | 258       | 127       | 140        | 2129       | 402        | 6438  |
| 500-600       | 565       | 295       | 277       | 121       | 2003      | 108       | 77        | 261       | 122       | 128        | 2132       | 384        | 6473  |



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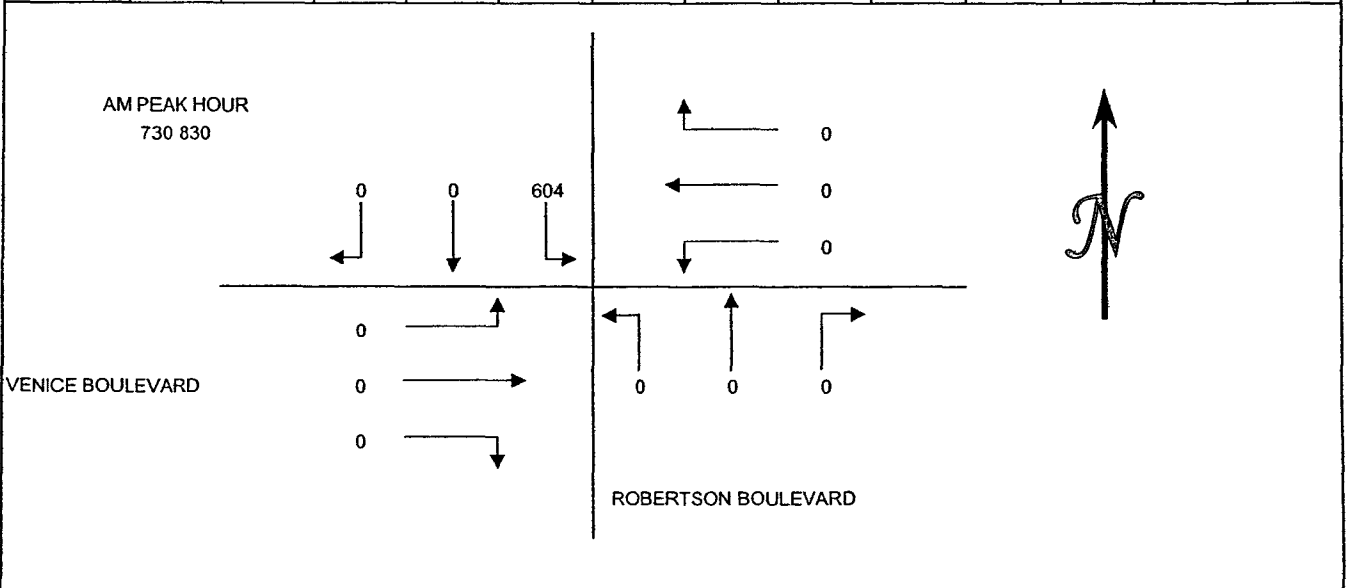
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## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT COVER CITY TRAFFIC COUNTS  
 DATE WEDNESDAY SEPTEMBER 22ND 2004  
 PERIOD 7 00 AM TO 9 00 AM  
 INTERSECTION N/S ROBERTSON BOULEVARD  
 E/W VENICE BOULEVARD

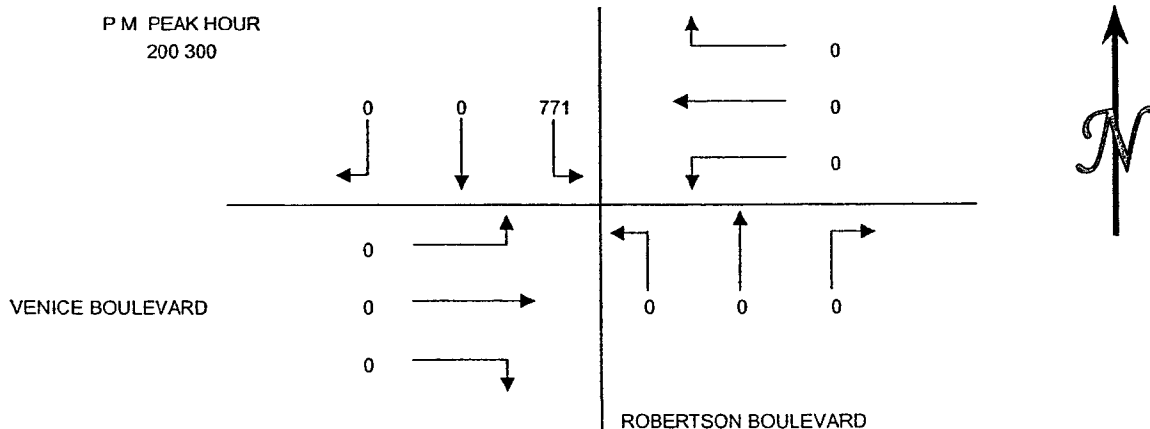
| 15 MIN COUNTS |        |        |        |        |        |        |        |        |        |         |         |         |       |     |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|-------|-----|
| PERIOD        | 1 SBRT | 2 SBTH | 3 SBUT | 4 WBRT | 5 WBTH | 6 WBLT | 7 NBRT | 8 NBTH | 9 NBLT | 10 EBRT | 11 EBTH | 12 EBLT | TOTAL |     |
| 700-715       | 0      | 0      | 98     | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 98  |
| 715-730       | 0      | 0      | 100    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 100 |
| 730-745       | 0      | 0      | 123    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 123 |
| 745-800       | 0      | 0      | 199    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 199 |
| 800-815       | 0      | 0      | 124    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 124 |
| 815-830       | 0      | 0      | 158    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 158 |
| 830-845       | 0      | 0      | 100    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 100 |
| 845-900       | 0      | 0      | 101    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 101 |
| HOUR TOTALS   |        |        |        |        |        |        |        |        |        |         |         |         |       |     |
| PERIOD        | 1 SBRT | 2 SBTH | 3 SBUT | 4 WBRT | 5 WBTH | 6 WBLT | 7 NBRT | 8 NBTH | 9 NBLT | 10 EBRT | 11 EBTH | 12 EBLT | TOTAL |     |
| 700-800       | 0      | 0      | 520    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 520 |
| 715-815       | 0      | 0      | 546    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 546 |
| 730-830       | 0      | 0      | 604    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 604 |
| 745-845       | 0      | 0      | 581    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 581 |
| 800-900       | 0      | 0      | 483    | 0      | 0      | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0     | 483 |



## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT COVER CITY TRAFFIC COUNTS  
 DATE WEDNESDAY SEPTEMBER 22ND 2004  
 PERIOD 2 00 PM TO 6 00 PM  
 INTERSECTION N/S ROBERTSON BOULEVARD  
 E/W VENICE BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBUT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-215       | 0         | 0         | 177       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 177   |
| 215-230       | 0         | 0         | 197       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 197   |
| 230-245       | 0         | 0         | 193       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 193   |
| 245-300       | 0         | 0         | 204       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 204   |
| 300-315       | 0         | 0         | 132       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 132   |
| 315-330       | 0         | 0         | 164       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 164   |
| 330-345       | 0         | 0         | 126       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 126   |
| 345-400       | 0         | 0         | 182       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 182   |
| 400-415       | 0         | 0         | 120       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 120   |
| 415-430       | 0         | 0         | 149       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 149   |
| 430-445       | 0         | 0         | 119       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 119   |
| 445-500       | 0         | 0         | 142       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 142   |
| 500-515       | 0         | 0         | 165       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 165   |
| 515-530       | 0         | 0         | 142       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 142   |
| 530-545       | 0         | 0         | 135       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 135   |
| 545-600       | 0         | 0         | 168       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 168   |
| HOUR TOTALS   |           |           |           |           |           |           |           |           |           |            |            |            |       |
| TIME          | 1<br>SBRT | 2<br>SBTH | 3<br>SBUT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-300       | 0         | 0         | 771       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 771   |
| 215-315       | 0         | 0         | 726       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 726   |
| 230-330       | 0         | 0         | 693       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 693   |
| 245-345       | 0         | 0         | 626       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 626   |
| 300-400       | 0         | 0         | 604       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 604   |
| 315-415       | 0         | 0         | 592       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 592   |
| 330-430       | 0         | 0         | 577       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 577   |
| 345-445       | 0         | 0         | 570       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 570   |
| 400-500       | 0         | 0         | 530       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 530   |
| 415-515       | 0         | 0         | 575       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 575   |
| 430-530       | 0         | 0         | 568       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 568   |
| 445-545       | 0         | 0         | 584       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 584   |
| 500-600       | 0         | 0         | 610       | 0         | 0         | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 610   |



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## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT COVER CITY TRAFFIC COUNTS  
 DATE WEDNESDAY SEPTEMBER 22ND 2004  
 PERIOD 7 00 AM TO 9 00 AM  
 INTERSECTION N/S NATIONAL BOULEVARD  
 E/W VENICE BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-715       | 11        | 48        | 13        | 26        | 363       | 9         | 4         | 168       | 60        | 73         | 280        | 58         | 1113  |
| 715-730       | 16        | 71        | 20        | 22        | 486       | 13        | 6         | 177       | 64        | 68         | 345        | 44         | 1332  |
| 730-745       | 20        | 123       | 36        | 36        | 531       | 17        | 2         | 217       | 57        | 77         | 472        | 51         | 1639  |
| 745-800       | 25        | 144       | 44        | 38        | 559       | 28        | 7         | 207       | 30        | 81         | 478        | 39         | 1680  |
| 800-815       | 16        | 160       | 39        | 23        | 579       | 20        | 7         | 242       | 38        | 87         | 573        | 39         | 1823  |
| 815-830       | 25        | 154       | 48        | 29        | 578       | 20        | 2         | 210       | 31        | 82         | 583        | 53         | 1815  |
| 830-845       | 18        | 138       | 47        | 30        | 577       | 18        | 2         | 238       | 40        | 65         | 559        | 45         | 1777  |
| 845-900       | 28        | 110       | 38        | 33        | 545       | 21        | 7         | 218       | 41        | 77         | 509        | 53         | 1680  |
| HOURLY TOTALS |           |           |           |           |           |           |           |           |           |            |            |            |       |
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 700-800       | 72        | 386       | 113       | 122       | 1939      | 67        | 19        | 769       | 211       | 299        | 1575       | 192        | 5764  |
| 715-815       | 77        | 498       | 139       | 119       | 2155      | 78        | 22        | 843       | 189       | 313        | 1868       | 173        | 6474  |
| 730-830       | 86        | 581       | 167       | 126       | 2247      | 85        | 18        | 876       | 156       | 327        | 2106       | 182        | 6957  |
| 745-845       | 84        | 596       | 178       | 120       | 2293      | 86        | 18        | 897       | 139       | 315        | 2193       | 176        | 7095  |
| 800-900       | 87        | 562       | 172       | 115       | 2279      | 79        | 18        | 908       | 150       | 311        | 2224       | 190        | 7095  |

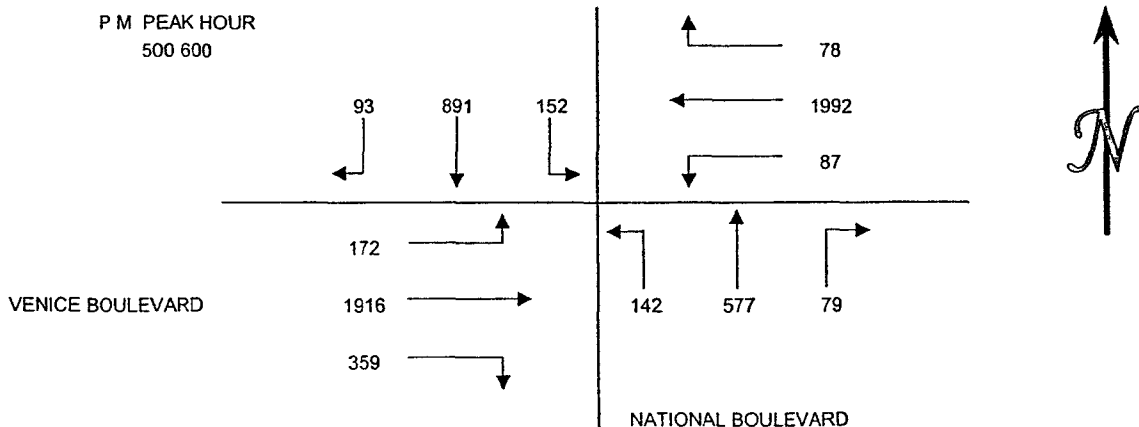
|                         |     |     |  |                    |      |    |  |                                                                                       |  |
|-------------------------|-----|-----|--|--------------------|------|----|--|---------------------------------------------------------------------------------------|--|
| AM PEAK HOUR<br>745 845 |     |     |  |                    |      |    |  |                                                                                       |  |
| 84                      | 596 | 178 |  | 120                | 2293 | 86 |  |  |  |
| 176                     |     |     |  |                    |      |    |  |                                                                                       |  |
| 2193                    |     |     |  | 139                | 897  | 18 |  |                                                                                       |  |
| 315                     |     |     |  |                    |      |    |  |                                                                                       |  |
| VENICE BOULEVARD        |     |     |  | NATIONAL BOULEVARD |      |    |  |                                                                                       |  |

114

## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT COVER CITY TRAFFIC COUNTS  
 DATE WEDNESDAY SEPTEMBER 22ND 2004  
 PERIOD 2 00 PM TO 6 00 PM  
 INTERSECTION N/S NATIONAL BOULEVARD  
 E/W VENICE BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-215       | 17        | 128       | 19        | 12        | 316       | 21        | 16        | 125       | 48        | 111        | 303        | 77         | 1193  |
| 215-230       | 27        | 148       | 23        | 18        | 340       | 24        | 25        | 135       | 50        | 93         | 326        | 58         | 1267  |
| 230-245       | 26        | 153       | 36        | 23        | 355       | 26        | 26        | 145       | 52        | 106        | 367        | 92         | 1407  |
| 245-300       | 15        | 148       | 27        | 21        | 353       | 25        | 24        | 118       | 47        | 92         | 347        | 73         | 1290  |
| 300-315       | 27        | 151       | 36        | 18        | 353       | 26        | 23        | 117       | 36        | 90         | 432        | 70         | 1379  |
| 315-330       | 15        | 177       | 47        | 18        | 422       | 30        | 19        | 150       | 36        | 123        | 411        | 85         | 1533  |
| 330-345       | 23        | 185       | 35        | 18        | 421       | 18        | 21        | 119       | 46        | 93         | 414        | 56         | 1449  |
| 345-400       | 25        | 211       | 30        | 18        | 397       | 28        | 14        | 148       | 51        | 98         | 410        | 72         | 1502  |
| 400-415       | 22        | 206       | 35        | 21        | 364       | 20        | 16        | 140       | 32        | 113        | 374        | 67         | 1410  |
| 415-430       | 21        | 192       | 41        | 18        | 399       | 24        | 19        | 136       | 47        | 116        | 445        | 72         | 1530  |
| 430-445       | 26        | 215       | 39        | 17        | 450       | 18        | 26        | 144       | 37        | 102        | 480        | 62         | 1616  |
| 445-500       | 19        | 207       | 31        | 13        | 432       | 20        | 15        | 143       | 33        | 90         | 501        | 48         | 1552  |
| 500-515       | 22        | 216       | 40        | 14        | 481       | 23        | 20        | 145       | 24        | 91         | 491        | 40         | 1607  |
| 515-530       | 25        | 240       | 41        | 23        | 469       | 25        | 21        | 165       | 43        | 97         | 463        | 48         | 1660  |
| 530-545       | 23        | 217       | 45        | 23        | 531       | 24        | 18        | 127       | 38        | 99         | 471        | 44         | 1660  |
| 545-600       | 23        | 218       | 26        | 18        | 511       | 15        | 20        | 140       | 37        | 72         | 491        | 40         | 1611  |
| HOUR TOTALS   |           |           |           |           |           |           |           |           |           |            |            |            |       |
| TIME          | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-300       | 85        | 577       | 105       | 74        | 1364      | 96        | 91        | 523       | 197       | 402        | 1343       | 300        | 5157  |
| 215-315       | 95        | 600       | 122       | 80        | 1401      | 101       | 98        | 515       | 185       | 381        | 1472       | 293        | 5343  |
| 230-330       | 83        | 629       | 146       | 80        | 1483      | 107       | 92        | 530       | 171       | 411        | 1557       | 320        | 5609  |
| 245-345       | 80        | 661       | 145       | 75        | 1549      | 99        | 87        | 504       | 165       | 398        | 1604       | 284        | 5651  |
| 300-400       | 90        | 724       | 148       | 72        | 1593      | 102       | 77        | 534       | 169       | 404        | 1667       | 283        | 5863  |
| 315-415       | 85        | 779       | 147       | 75        | 1604      | 96        | 70        | 557       | 165       | 427        | 1609       | 280        | 5894  |
| 330-430       | 91        | 794       | 141       | 75        | 1581      | 90        | 70        | 543       | 176       | 420        | 1643       | 267        | 5891  |
| 345-445       | 94        | 824       | 145       | 74        | 1610      | 90        | 75        | 568       | 167       | 429        | 1709       | 273        | 6058  |
| 400-500       | 88        | 820       | 146       | 69        | 1645      | 82        | 76        | 563       | 149       | 421        | 1800       | 249        | 6108  |
| 415-515       | 88        | 830       | 151       | 62        | 1762      | 85        | 80        | 568       | 141       | 399        | 1917       | 222        | 6305  |
| 430-530       | 92        | 878       | 151       | 67        | 1832      | 86        | 82        | 597       | 137       | 380        | 1935       | 198        | 6435  |
| 445-545       | 89        | 880       | 157       | 73        | 1913      | 92        | 74        | 580       | 138       | 377        | 1926       | 180        | 6479  |
| 500-600       | 93        | 891       | 152       | 78        | 1992      | 87        | 79        | 577       | 142       | 359        | 1916       | 172        | 6538  |



115

# WILTEC

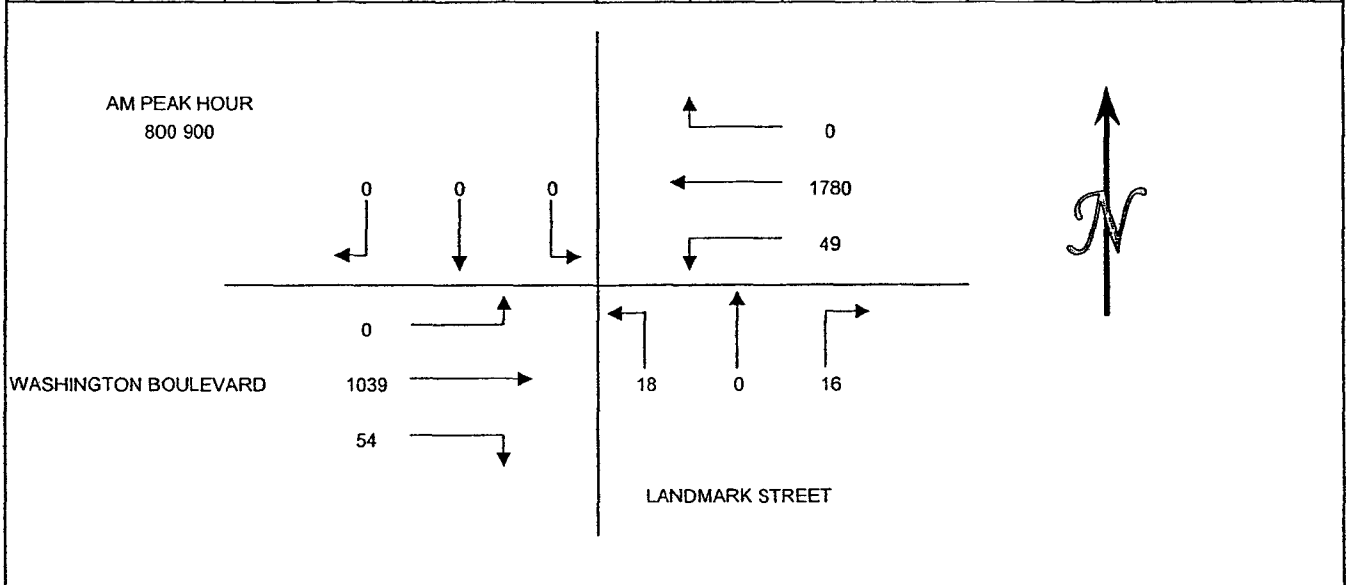
Phone (626) 564 1944 Fax. (626) 564-0969

## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT CUPER CITY TRAFFIC COUNTS  
 DATE WEDNESDAY SEPTEMBER 22ND 2004  
 PERIOD 7 00 AM TO 9 00 AM  
 INTERSECTION N/S LANDMARK STREET  
 E/W WASHINGTON BOULEVARD

| 15 MIN COUNTS |        |        |        |        |        |        |        |        |        |         |         |         |       |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|-------|
| PERIOD        | 1 SBRT | 2 SBTH | 3 SBLT | 4 WBRT | 5 WBTH | 6 WBLT | 7 NBRT | 8 NBTH | 9 NBLT | 10 EBRT | 11 EBTH | 12 EBLT | TOTAL |
| 700-715       | 0      | 0      | 0      | 0      | 306    | 17     | 4      | 0      | 1      | 6       | 92      | 0       | 426   |
| 715-730       | 0      | 0      | 0      | 0      | 406    | 5      | 0      | 0      | 0      | 4       | 114     | 0       | 529   |
| 730-745       | 0      | 0      | 0      | 0      | 420    | 7      | 2      | 0      | 1      | 4       | 180     | 0       | 614   |
| 745-800       | 0      | 0      | 0      | 0      | 432    | 7      | 3      | 0      | 2      | 16      | 204     | 0       | 664   |
| 800-815       | 0      | 0      | 0      | 0      | 456    | 8      | 1      | 0      | 6      | 17      | 296     | 0       | 784   |
| 815-830       | 0      | 0      | 0      | 0      | 423    | 11     | 2      | 0      | 4      | 11      | 270     | 0       | 721   |
| 830-845       | 0      | 0      | 0      | 0      | 476    | 11     | 6      | 0      | 3      | 16      | 268     | 0       | 780   |
| 845-900       | 0      | 0      | 0      | 0      | 425    | 19     | 7      | 0      | 5      | 10      | 205     | 0       | 671   |

| HOURLY TOTALS        |        |        |        |        |        |        |        |        |        |         |         |         |       |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|-------|
| PERIOD               | 1 SBRT | 2 SBTH | 3 SBLT | 4 WBRT | 5 WBTH | 6 WBLT | 7 NBRT | 8 NBTH | 9 NBLT | 10 EBRT | 11 EBTH | 12 EBLT | TOTAL |
| 700-800              | 0      | 0      | 0      | 0      | 1564   | 36     | 9      | 0      | 4      | 30      | 590     | 0       | 2233  |
| 715-815              | 0      | 0      | 0      | 0      | 1714   | 27     | 6      | 0      | 9      | 41      | 794     | 0       | 2591  |
| 730-830 <sup>h</sup> | 0      | 0      | 0      | 0      | 1731   | 33     | 8      | 0      | 13     | 48      | 950     | 0       | 2783  |
| 745-845              | 0      | 0      | 0      | 0      | 1787   | 37     | 12     | 0      | 15     | 60      | 1038    | 0       | 2949  |
| 800-900              | 0      | 0      | 0      | 0      | 1780   | 49     | 16     | 0      | 18     | 54      | 1039    | 0       | 2956  |

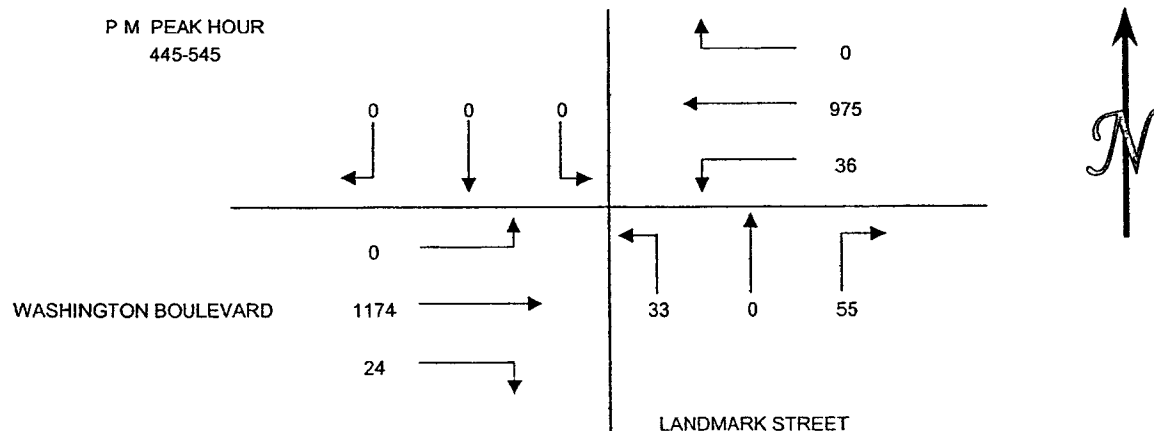


116

## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT KAKU ASSOCIATES  
 PROJECT COVER CITY TRAFFIC COUNTS  
 DATE WEDNESDAY SEPTEMBER 22ND 2004  
 PERIOD 2 00 PM TO 6 00 PM  
 INTERSECTION N/S LANDMARK STREET  
 E/W WASHINGTON BOULEVARD

| 15 MIN COUNTS |           |           |           |           |           |           |           |           |           |            |            |            |       |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| PERIOD        | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-215       | 0         | 0         | 0         | 0         | 118       | 11        | 6         | 0         | 2         | 7          | 120        | 0          | 264   |
| 215-230       | 0         | 0         | 0         | 0         | 171       | 3         | 10        | 0         | 6         | 9          | 174        | 0          | 373   |
| 230-245       | 0         | 0         | 0         | 0         | 181       | 12        | 19        | 0         | 11        | 6          | 213        | 0          | 442   |
| 245-300       | 0         | 0         | 0         | 0         | 167       | 16        | 8         | 0         | 11        | 7          | 220        | 0          | 429   |
| 300-315       | 0         | 0         | 0         | 0         | 236       | 10        | 17        | 0         | 20        | 13         | 255        | 0          | 551   |
| 315-330       | 0         | 0         | 0         | 0         | 176       | 9         | 8         | 0         | 5         | 12         | 220        | 0          | 430   |
| 330-345       | 0         | 0         | 0         | 0         | 240       | 11        | 10        | 0         | 5         | 4          | 245        | 0          | 515   |
| 345-400       | 0         | 0         | 0         | 0         | 193       | 15        | 18        | 0         | 14        | 11         | 211        | 0          | 462   |
| 400-415       | 0         | 0         | 0         | 0         | 206       | 8         | 36        | 0         | 20        | 11         | 228        | 0          | 509   |
| 415-430       | 0         | 0         | 0         | 0         | 191       | 9         | 14        | 0         | 11        | 6          | 294        | 0          | 525   |
| 430-445       | 0         | 0         | 0         | 0         | 197       | 6         | 14        | 0         | 5         | 4          | 255        | 0          | 481   |
| 445-500       | 0         | 0         | 0         | 0         | 230       | 14        | 12        | 0         | 6         | 6          | 304        | 0          | 572   |
| 500-515       | 0         | 0         | 0         | 0         | 256       | 5         | 14        | 0         | 12        | 8          | 309        | 0          | 604   |
| 515-530       | 0         | 0         | 0         | 0         | 241       | 12        | 12        | 0         | 9         | 8          | 296        | 0          | 578   |
| 530-545       | 0         | 0         | 0         | 0         | 248       | 5         | 17        | 0         | 6         | 2          | 265        | 0          | 543   |
| 545-600       | 0         | 0         | 0         | 0         | 245       | 5         | 5         | 0         | 4         | 4          | 266        | 0          | 529   |
| HOUR TOTALS   |           |           |           |           |           |           |           |           |           |            |            |            |       |
| TIME          | 1<br>SBRT | 2<br>SBTH | 3<br>SBLT | 4<br>WBRT | 5<br>WBTH | 6<br>WBLT | 7<br>NBRT | 8<br>NBTH | 9<br>NBLT | 10<br>EBRT | 11<br>EBTH | 12<br>EBLT | TOTAL |
| 200-300       | 0         | 0         | 0         | 0         | 637       | 42        | 43        | 0         | 30        | 29         | 727        | 0          | 1508  |
| 215-315       | 0         | 0         | 0         | 0         | 755       | 41        | 54        | 0         | 48        | 35         | 862        | 0          | 1795  |
| 230-330       | 0         | 0         | 0         | 0         | 760       | 47        | 52        | 0         | 47        | 38         | 908        | 0          | 1852  |
| 245-345       | 0         | 0         | 0         | 0         | 819       | 46        | 43        | 0         | 41        | 36         | 940        | 0          | 1925  |
| 300-400       | 0         | 0         | 0         | 0         | 845       | 45        | 53        | 0         | 44        | 40         | 931        | 0          | 1958  |
| 315-415       | 0         | 0         | 0         | 0         | 815       | 43        | 72        | 0         | 44        | 38         | 904        | 0          | 1916  |
| 330-430       | 0         | 0         | 0         | 0         | 830       | 43        | 78        | 0         | 50        | 32         | 978        | 0          | 2011  |
| 345-445       | 0         | 0         | 0         | 0         | 787       | 38        | 82        | 0         | 50        | 32         | 988        | 0          | 1977  |
| 400-500       | 0         | 0         | 0         | 0         | 824       | 37        | 76        | 0         | 42        | 27         | 1081       | 0          | 2087  |
| 415-515       | 0         | 0         | 0         | 0         | 874       | 34        | 54        | 0         | 34        | 24         | 1162       | 0          | 2182  |
| 430-530       | 0         | 0         | 0         | 0         | 924       | 37        | 52        | 0         | 32        | 26         | 1164       | 0          | 2235  |
| 445-545       | 0         | 0         | 0         | 0         | 975       | 36        | 55        | 0         | 33        | 24         | 1174       | 0          | 2297  |
| 500-600       | 0         | 0         | 0         | 0         | 990       | 27        | 48        | 0         | 31        | 22         | 1136       | 0          | 2254  |



3939 Landmark Street  
Driveway Count  
Monday July 26 2004

| A M<br>Peak | CARS |     | BIKES |     | PEDESTRIANS |     |
|-------------|------|-----|-------|-----|-------------|-----|
|             | In   | Out | In    | Out | In          | Out |
| 7 00 7 15   | 5    | 1   | 1     | 2   | 0           | 0   |
| 7 16 7 30   | 4    | 2   | 4     | 3   | 4           | 3   |
| 7 31 7 45   | 3    | 3   | 4     | 2   | 0           | 4   |
| 7 46 8 00   | 3    | 1   | 1     | 0   | 3           | 2   |
| 8 01 8 15   | 5    | 1   | 2     | 2   | 6           | 2   |
| 8 16 8 30   | 3    | 2   | 3     | 3   | 4           | 7   |
| 8 31 8 45   | 6    | 2   | 5     | 4   | 2           | 2   |
| 8 46 9 00   | 7    | 2   | 2     | 2   | 2           | 1   |

| Midday<br>Peak | CARS |     | BIKES |     | PEDESTRIANS |     |
|----------------|------|-----|-------|-----|-------------|-----|
|                | In   | Out | In    | Out | In          | Out |
| 2 00 2 15      | 1    | 3   | 4     | 3   | 2           | 3   |
| 2 16 2 30      | 4    | 3   | 0     | 2   | 2           | 1   |
| 2 31 2 45      | 2    | 5   | 2     | 1   | 3           | 2   |
| 2 46 3 00      | 1    | 3   | 4     | 0   | 0           | 1   |
| 3 01 3 15      | 4    | 3   | 2     | 8   | 1           | 1   |
| 3 16 3 30      | 2    | 4   | 5     | 3   | 3           | 2   |
| 3 31 3 45      | 3    | 1   | 2     | 1   | 1           | 2   |
| 3 46-4 00      | 5    | 6   | 3     | 3   | 3           | 0   |

| P M<br>Peak | CARS |     | BIKES |     | PEDESTRIANS |     |
|-------------|------|-----|-------|-----|-------------|-----|
|             | In   | Out | In    | Out | In          | Out |
| 4 01 4 15   | 1    | 2   | 4     | 3   | 2           | 2   |
| 4 16 4 30   | 5    | 11  | 1     | 1   | 2           | 4   |
| 4 31-4 45   | 7    | 4   | 4     | 4   | 0           | 2   |
| 4 46 5 00   | 2    | 5   | 2     | 3   | 0           | 2   |
| 5 01 5 15   | 3    | 8   | 5     | 4   | 3           | 1   |
| 5 16 5 30   | 2    | 4   | 3     | 3   | 0           | 0   |
| 5 31 5 45   | 6    | 5   | 2     | 3   | 4           | 5   |
| 5 46 6 00   | 3    | 12  | 0     | 0   | 1           | 1   |

| Cars parked in Lot |    | Cars parked in Lot |    | Cars parked in Lot |    |
|--------------------|----|--------------------|----|--------------------|----|
| Pre 7 00           | 16 | Pre-2 00           | 52 | 4 00               | 46 |
| 7 00 7 15          | 20 | 2 00 2 15          | 50 | 4 01-4 15          | 45 |
| 7 16 7 30          | 22 | 2 16 2 30          | 51 | 4 16 4 30          | 39 |
| 7 31 7 45          | 22 | 2 31 2 45          | 48 | 4 31 4 45          | 42 |
| 7 46-8 00          | 24 | 2 46 3 00          | 46 | 4 46-5 00          | 39 |
| 8 01 8 15          | 28 | 3 01 3 15          | 47 | 5 01-5 15          | 34 |
| 8 16 8 30          | 29 | 3 16 3 30          | 45 | 5 16 5 30          | 32 |
| 8 31 8 45          | 33 | 3 31 3 45          | 47 | 5 31 5 45          | 33 |
| 8 46 9 00          | 38 | 3 46 4 00          | 46 | 5 46-6 00          | 24 |

**APPENDIX C**

**INTERSECTION LEVEL OF SERVICE WORKSHEETS  
AND SIGNAL WARRANT ANALYSIS**

**Existing Conditions – Year 2004**

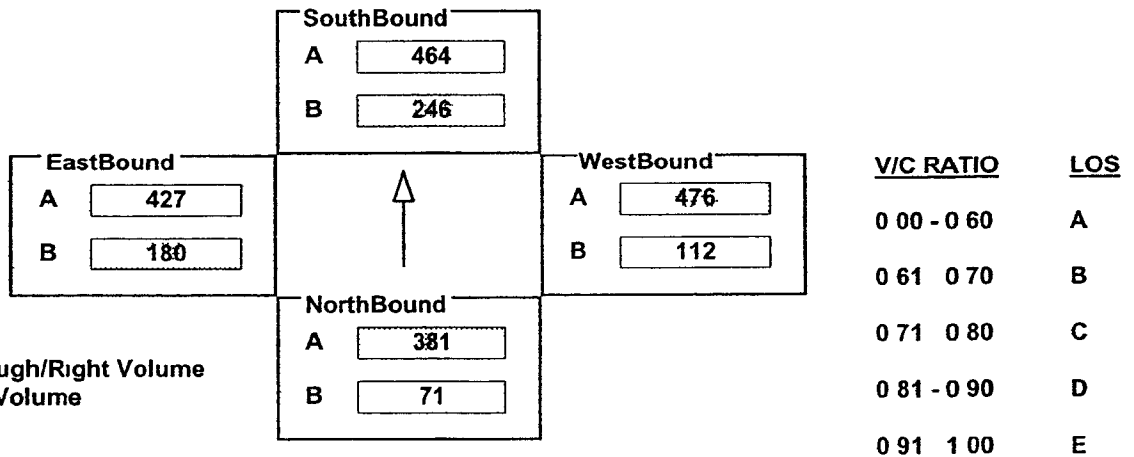
# INTERSECTION DATA SUMMARY SHEET

|            |              |            |                     |               |   |
|------------|--------------|------------|---------------------|---------------|---|
| N/S        | Robertson BI | W/E        | National BI         | I/S No        | 1 |
| AM/PM      | AM           | Comments   | Existing Conditions |               |   |
| COUNT DATE |              | STUDY DATE |                     | GROWTH FACTOR |   |

## Volume/Lane/Signal Configurations

|          | NORTHBOUND |      |    | SOUTHBOUND |      |     | WESTBOUND |      |     | EASTBOUND |      |     |
|----------|------------|------|----|------------|------|-----|-----------|------|-----|-----------|------|-----|
|          | LT         | TH   | RT | LT         | TH   | RT  | LT        | TH   | RT  | LT        | TH   | RT  |
| EXISTING | 71         | 704  | 57 | 448        | 719  | 208 | 112       | 476  | 476 | 180       | 632  | 222 |
| AMBIENT  |            |      |    |            |      |     |           |      |     |           |      |     |
| RELATED  |            |      |    |            |      |     |           |      |     |           |      |     |
| PROJECT  |            |      |    |            |      |     |           |      |     |           |      |     |
| TOTAL    | 71         | 704  | 57 | 448        | 719  | 208 | 112       | 476  | 476 | 180       | 632  | 222 |
| LANE     | 1          | 1    | 1  | 2          | 1    | 1   | 1         | 1    | 1   | 1         | 1    | 1   |
|          | Phasing    | RTOR |    | Phasing    | RTOR |     | Phasing   | RTOR |     | Phasing   | RTOR |     |
| SIGNAL   | Perm       | Auto |    | Prot Fix   | Auto |     | Perm      | Auto |     | Prot-Fix  | Auto |     |

## Critical Movements Diagram



A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

## Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{381 + 246 + 476 + 180}{*1375} = 0.863$$

LOS = D

# INTERSECTION DATA SUMMARY SHEET

N/S  W/E  I/S No

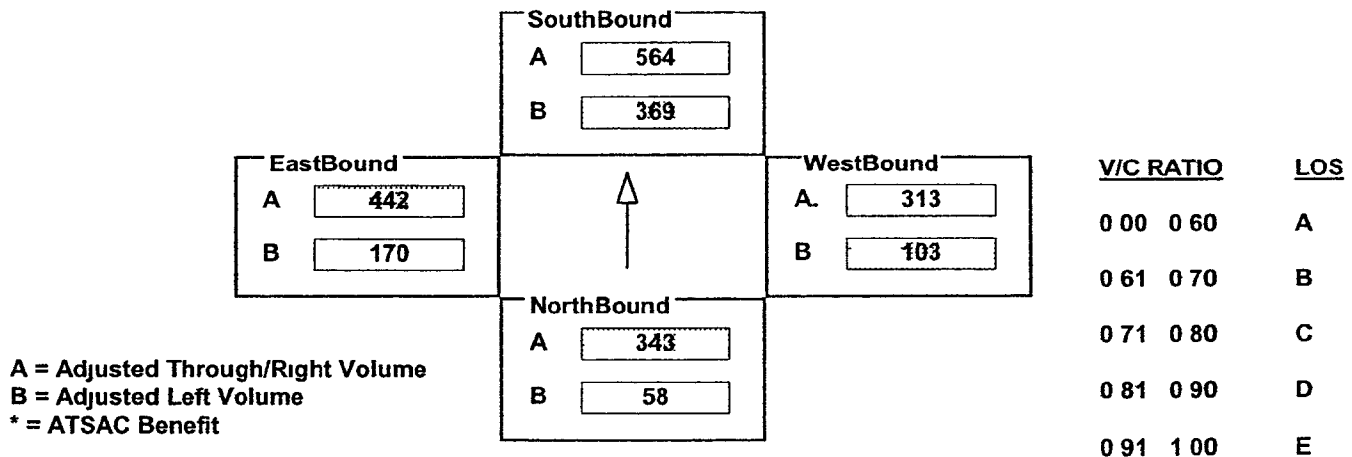
AM/PM  Comments

COUNT DATE  STUDY DATE  GROWTH FACTOR

## Volume/Lane/Signal Configurations

|          | NORTHBOUND |      |    | SOUTHBOUND |      |     | WESTBOUND |      |     | EASTBOUND |      |     |
|----------|------------|------|----|------------|------|-----|-----------|------|-----|-----------|------|-----|
|          | LT         | TH   | RT | LT         | TH   | RT  | LT        | TH   | RT  | LT        | TH   | RT  |
| EXISTING | 58         | 594  | 91 | 670        | 893  | 234 | 103       | 313  | 256 | 170       | 764  | 120 |
| AMBIENT  |            |      |    |            |      |     |           |      |     |           |      |     |
| RELATED  |            |      |    |            |      |     |           |      |     |           |      |     |
| PROJECT  |            |      |    |            |      |     |           |      |     |           |      |     |
| TOTAL    | 58         | 594  | 91 | 670        | 893  | 234 | 103       | 313  | 256 | 170       | 764  | 120 |
| LANE     | 1          | 1    | 1  | 2          | 1    | 1   | 1         | 1    | 1   | 1         | 1    | 1   |
|          | Phasing    | RTOR |    | Phasing    | RTOR |     | Phasing   | RTOR |     | Phasing   | RTOR |     |
| SIGNAL   | Perm       | Auto |    | Prot-Fix   | Auto |     | Perm      | Auto |     | Prot Fix  | Auto |     |

## Critical Movements Diagram



## Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{343 + 369 + 103 + 442}{*1375} = 0.844$$

LOS = D

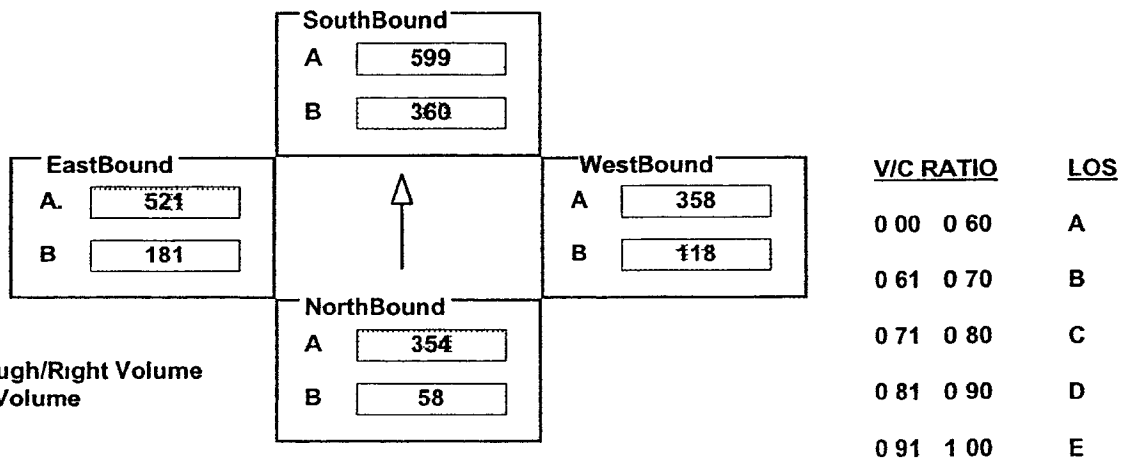
# INTERSECTION DATA SUMMARY SHEET

|            |              |            |                     |               |   |
|------------|--------------|------------|---------------------|---------------|---|
| N/S        | Robertson Bl | W/E        | National Bl         | I/S No        | 1 |
| AM/PM      | PM           | Comments   | Existing Conditions |               |   |
| COUNT DATE |              | STUDY DATE |                     | GROWTH FACTOR |   |

## Volume/Lane/Signal Configurations

|          | NORTHBOUND |      |     | SOUTHBOUND |      |     | WESTBOUND |      |     | EASTBOUND |      |     |
|----------|------------|------|-----|------------|------|-----|-----------|------|-----|-----------|------|-----|
|          | LT         | TH   | RT  | LT         | TH   | RT  | LT        | TH   | RT  | LT        | TH   | RT  |
| EXISTING | 58         | 599  | 108 | 654        | 919  | 279 | 118       | 358  | 236 | 181       | 937  | 105 |
| AMBIENT  |            |      |     |            |      |     |           |      |     |           |      |     |
| RELATED  |            |      |     |            |      |     |           |      |     |           |      |     |
| PROJECT  |            |      |     |            |      |     |           |      |     |           |      |     |
| TOTAL    | 58         | 599  | 108 | 654        | 919  | 279 | 118       | 358  | 236 | 181       | 937  | 105 |
| LANE     | 1          | 1    | 1   | 2          | 1    | 1   | 1         | 1    | 1   | 1         | 1    | 1   |
|          | Phasing    | RTOR |     | Phasing    | RTOR |     | Phasing   | RTOR |     | Phasing   | RTOR |     |
| SIGNAL   | Perm       | Auto |     | Prot Fix   | Auto |     | Perm      | Auto |     | Prot Fix  | Auto |     |

## Critical Movements Diagram



A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

## Results

$$\text{North/South Critical Movements} = A(N/B) + B(S/B)$$

$$\text{West/East Critical Movements} = B(W/B) + A(E/B)$$

$$V/C = \frac{354 + 360 + 118 + 521}{*1375} = 0.914$$

LOS = E

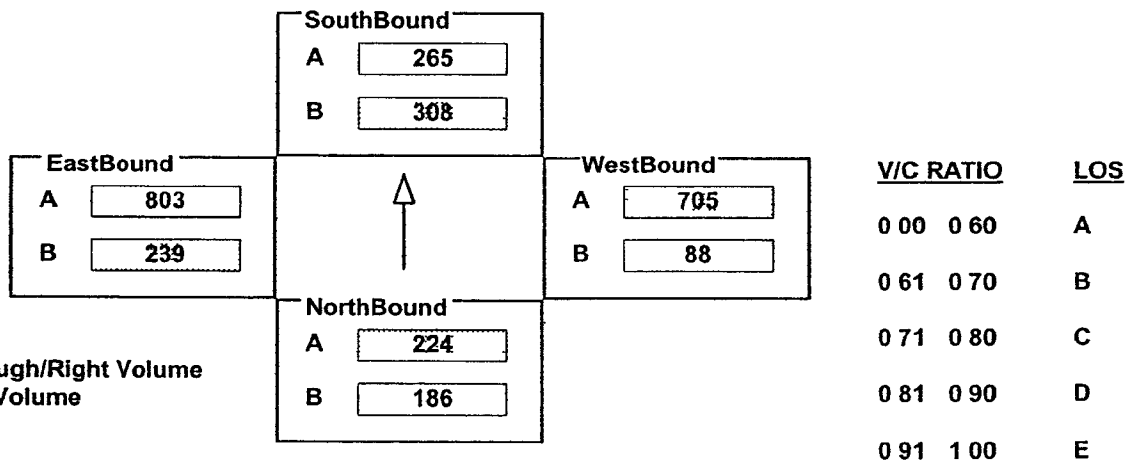
# INTERSECTION DATA SUMMARY SHEET

N/S W/E I/S No AM/PM Comments COUNT DATE STUDY DATE GROWTH FACTOR 

## Volume/Lane/Signal Configurations

|          | NORTHBOUND    |               |               | SOUTHBOUND    |          |      | WESTBOUND |      |         | EASTBOUND |      |    |
|----------|---------------|---------------|---------------|---------------|----------|------|-----------|------|---------|-----------|------|----|
|          | LT            | TH            | RT            | LT            | TH       | RT   | LT        | TH   | RT      | LT        | TH   | RT |
| EXISTING | 186           | 448           | 69            | 308           | 265      | 367  | 88        | 2116 | 357     | 434       | 2409 | 90 |
| AMBIENT  |               |               |               |               |          |      |           |      |         |           |      |    |
| RELATED  |               |               |               |               |          |      |           |      |         |           |      |    |
| PROJECT  |               |               |               |               |          |      |           |      |         |           |      |    |
| TOTAL    | 186           | 448           | 69            | 308           | 265      | 367  | 88        | 2116 | 357     | 434       | 2409 | 90 |
| LANE     | 1 0 2 0 0 1 0 | 0 1 1 0 0 1 0 | 1 0 3 0 0 1 0 | 2 0 3 0 0 1 0 |          |      |           |      |         |           |      |    |
|          | Phasing       | RTOR          | Phasing       | RTOR          | Phasing  | RTOR | Phasing   | RTOR | Phasing | RTOR      |      |    |
| SIGNAL   | Split         | Auto          | Split         | Auto          | Prot Var | Auto | Prot-Var  | Auto |         |           |      |    |

## Critical Movements Diagram



A = Adjusted Through/Right Volume

B = Adjusted Left Volume

\* = ATSAC Benefit

## Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{224 + 308 + 705 + 239}{*1375} = 1.003$$

LOS = F

# INTERSECTION DATA SUMMARY SHEET

N/S  W/E  I/S No

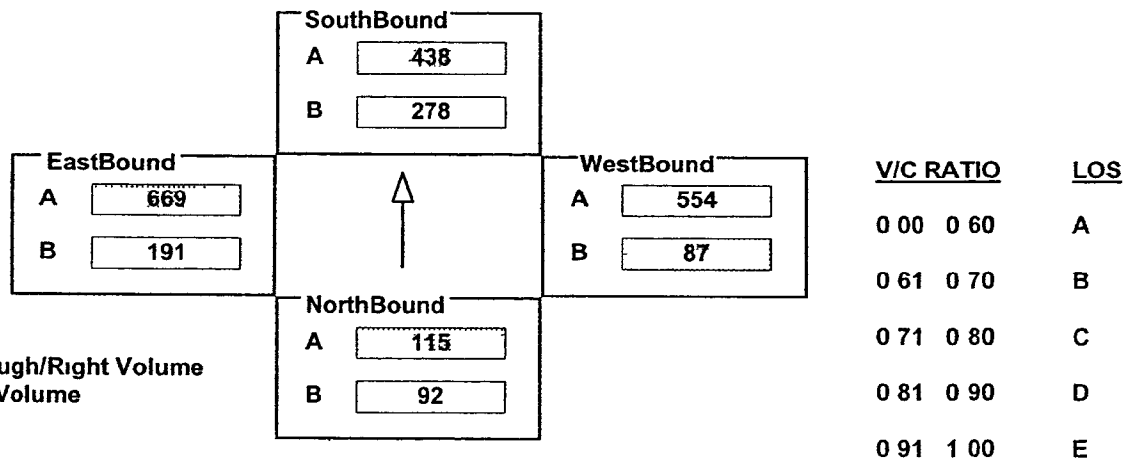
AM/PM ☒ MD Comments

COUNT DATE  STUDY DATE  GROWTH FACTOR

## Volume/Lane/Signal Configurations

|          | NORTHBOUND       |               |                  | SOUTHBOUND    |                     |              | WESTBOUND           |              |                     | EASTBOUND    |                     |              |
|----------|------------------|---------------|------------------|---------------|---------------------|--------------|---------------------|--------------|---------------------|--------------|---------------------|--------------|
|          | LT               | TH            | RT               | LT            | TH                  | RT           | LT                  | TH           | RT                  | LT           | TH                  | RT           |
| EXISTING | 92               | 229           | 77               | 278           | 341                 | 438          | 87                  | 1661         | 112                 | 347          | 2006                | 114          |
| AMBIENT  |                  |               |                  |               |                     |              |                     |              |                     |              |                     |              |
| RELATED  |                  |               |                  |               |                     |              |                     |              |                     |              |                     |              |
| PROJECT  |                  |               |                  |               |                     |              |                     |              |                     |              |                     |              |
| TOTAL    | 92               | 229           | 77               | 278           | 341                 | 438          | 87                  | 1661         | 112                 | 347          | 2006                | 114          |
| LANE     | 1 0 2 0 0 1 0    | 1 0 1 0 1 0 0 | 1 0 3 0 0 1 0    | 2 0 3 0 0 1 0 |                     |              |                     |              |                     |              |                     |              |
| SIGNAL   | Phasing<br>Split | RTOR<br>Auto  | Phasing<br>Split | RTOR<br>Auto  | Phasing<br>Prot-Var | RTOR<br>Auto | Phasing<br>Prot-Var | RTOR<br>Auto | Phasing<br>Prot-Var | RTOR<br>Auto | Phasing<br>Prot-Var | RTOR<br>Auto |

## Critical Movements Diagram



A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

### Results

$$\text{North/South Critical Movements} = A(N/B) + A(S/B)$$

$$\text{West/East Critical Movements} = B(W/B) + A(E/B)$$

$$V/C = \frac{115 + 438 + 87 + 669}{*1375} = 0.882$$

$$LOS = D$$