

MEMORANDUM

To: Pete Zak, NCA Realty

From: Pete Pirzadeh

Date: June 10, 2015

Subject: Latitude II, Escondido, California



Pursuant to your request, we have evaluated the subject project to determine if any traffic improvements are required to address the potential impacts of the project. Our findings are indicated below:

Project

The proposed project consists of 112 condominium units. This project is expected to generate 78 AM peak hour trips, 99 PM peak hour trips and 980 Average Daily Trips (ADT). The project site will be served by a main access driveway off Centre City Parkway. The operation of this driveway will be limited to right turns in and out only. Two additional driveways, one off Washington Avenue and another one off Centre City Parkway will allow emergency exit from the site.

Potential Off-site Impacts

In 2012 the City of Escondido adopted an update to its General Plan. An EIR, including a comprehensive traffic study were prepared and approved for the General Plan Update. The EIR Traffic Study evaluated the potential impacts of the anticipated development for exiting and long range conditions, and identified a list of mitigation measures to address the identified impacts.

The proposed project site is included in an area (SPA 9), which was assumed to include 5,275 residential dwelling units in addition to other non-residential uses. The traffic study assumed that 4,000 of the residential units would be built by Horizon Year 2035 for assessing the related traffic impacts (EIR, Table 3-4). The proposed 112 DU condominium project is a part of the assumed 5,275 units in SPA 9. However, based on the allowed residential density in the area, the proposed project represents a fraction of the units that could be permitted and was assumed in the General Plan EIR. Furthermore, the proposed project would represent less than 3 percent of the units assumed in SPA 9 for the 2035 traffic impact analysis.

Based on the project traffic generation level and anticipated trip distribution pattern as shown on Figures 1 A, B, and C, the following intersections and roadway segments were

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identified for a focused analysis to determine if the implementation of the proposed project would cause an impact at these locations:

Centre City Parkway at Mission Avenue
Centre City Parkway at Washington Avenue

Centre City Parkway:

SR 78 EB Off-Ramp to Mission Avenue
Mission Avenue to Project Access Drive
Washington Avenue to Project Access Drive
Washington Avenue to Valley Parkway

Mission Avenue:

Center City Parkway to Escondido Boulevard
Centre City Parkway to Quince Street

Washington Avenue:

Centre City Parkway to Escondido Boulevard
Centre City Parkway to Quince Street

The Downtown Specific Plan has established the acceptable level of service for roadway segments and intersections at LOS "E" in the downtown area. The EIR Traffic Study found that the above listed facilities will all operate at acceptable level of service at Horizon Year 2035. This finding was based on an analysis of impacts associated with the assumed land uses and facility improvements as planned by the City.

In order to evaluate any potential near term impacts associated with the proposed project, the existing (Year 2011/2012) roadway segment and intersection volumes presented in the EIR Traffic Study were increased by 10 percent to account for a 2.5 percent annual growth for four (4) years to bring the volumes to current (2015/2016) levels. This procedure is consistent with the methodology presented in the EIR Traffic Study. The intersection data for the intersection of Mission Avenue and Centre City Parkway is based on more recent information that was provided by the City of Escondido. The same annual growth rate was applied to this intersection to bring the date to current levels. The project trip generation was then added to these levels to evaluate the performance level of identified roadway segments and intersections (see Figures 2, 2A, 2B and 3, 3A, 3B). As shown in Tables 1 and 2, with the exception of one roadway segment, Centre City Parkway, SR78-Mission Avenue, all roadway segments and intersections will continue to operate at level of service "D" or better.

The segment of Centre City Parkway from SR-78 to Mission Avenue is operating at LOS "F" with and without the project. The City of Escondido Traffic Impact Analysis Guidelines ("Escondido Guidelines"), which implement Escondido's Environmental Quality Regulations as set forth in Escondido Municipal Code Section 33-924, state that the threshold of significance for a facility with a LOS "F" is a V/C increase of 0.02. As shown in Table 1

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below, the project's added V/C ratio to this segment is only 0.006. Therefore the project's increase to Centre City Parkway segment between Mission and SR-78 is less than significant.

The Escondido Guidelines additionally state that mitigation measures should be considered for any segment operating at LOS "F". Similarly the General Plan EIR Traffic Study Significance Criteria (Section 4.0, page 13) states "*Where LOS E/F street segment operations are calculated, a secondary analysis of the adjacent intersections is conducted to determine the peak hour operations at either end of the segment. The peak hour intersection analysis is a more complicated and robust calculation as compared to the simplistic volume/capacity analysis required for street segments. If the adjacent intersections demonstrate acceptable LOS D or better operations, then it is determined that the street segment impact is in fact not significant, despite the poor V/C calculations, since intersection operations are considered more indicative of actual roadway system operations than street segment analysis.*" As shown in Table 2 below, the intersection of Centre City Parkway and Mission Avenue is projected to operate at LOS C, the other end the segment at SR-78 operates without an intersection, and the northbound portion of this segment of Center City Parkway has a third lane from Mission to SR-78 which provides further capacity for the roadway. Therefore, in accordance with the applicable regulation and guidelines as clarified by the General Plan EIR, the impact along this segment of Centre City Parkway is less than significant and does not require mitigation.

The project impacts for Existing With Project Cumulative, which includes traffic generation for a recently approved project, Center Point, are also identified in Tables 1 and 2. Additionally, the long range project impacts were analyzed based on adding the project traffic generation to the Year 2035 conditions at the study intersections and along identified roadway segments. As shown in Tables 1 and 2 the proposed project does not adversely impact any intersections and roadway segments for these analysis scenarios and horizon years.

Conclusions

Based on the City's adopted threshold of significance and acceptable level of service for roadway segments and intersections, the proposed project will not adversely impact any existing or future planned facilities during the short range and long range horizon year scenarios. The project is being developed at a significantly lower density than anticipated in the General Plan EIR and the project represents less than 3 percent of the residential units assumed in the Horizon Year 2035 land uses. The project traffic generation is an insignificant (less than 1 percent) portion of the total additional trip generation (Residential and Commercial) assumed in 2035.

Please call me if you have any questions regarding our findings related to the proposed project.

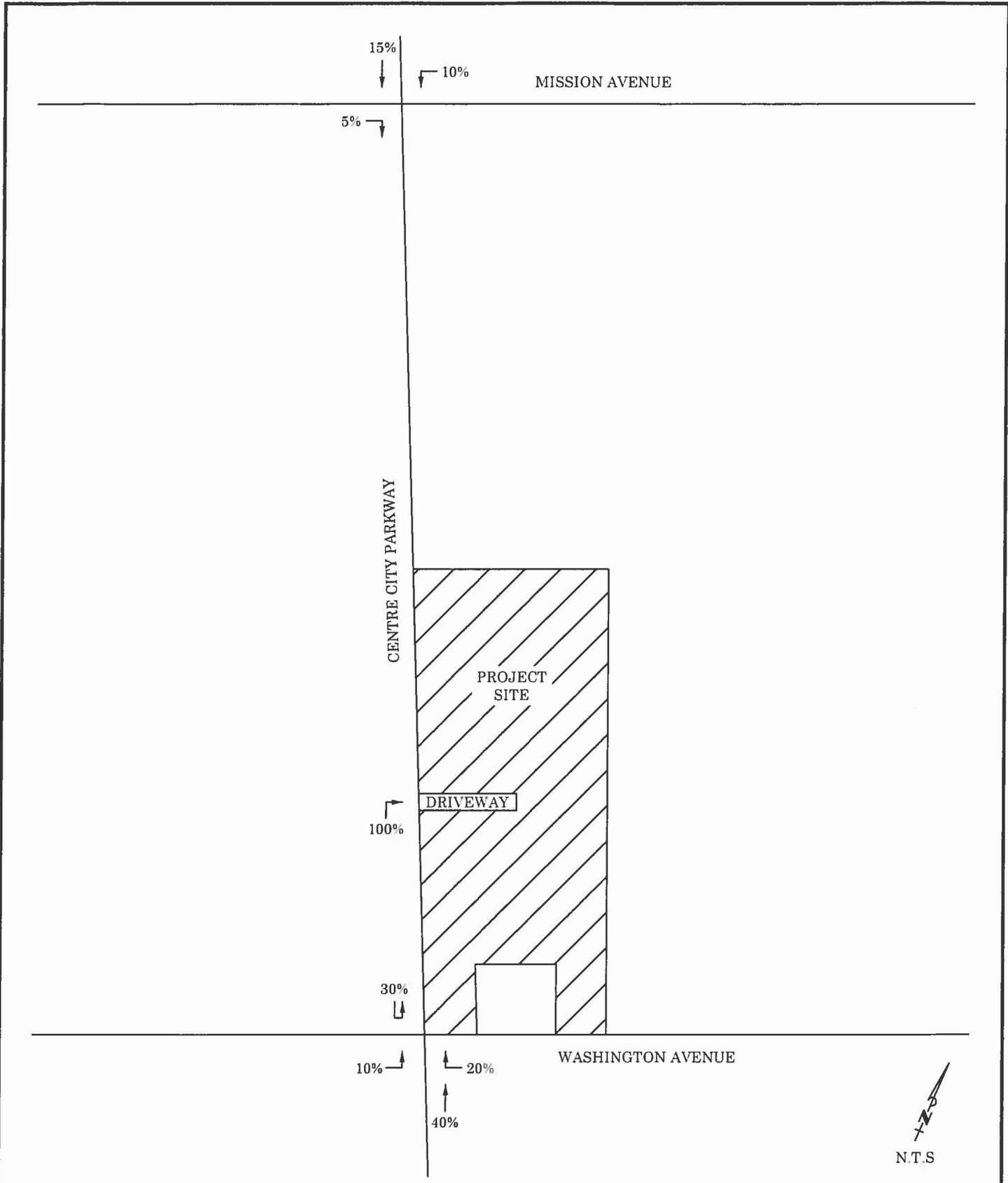


Figure 1A

Project Site/ Trip Distribution (%) - Peak Hour Inbound
 Escondido, California



MISSION AVENUE

30% 20% 30% 20%

CENTRE CITY PARKWAY

PROJECT SITE

100%

DRIVEWAY

30%

WASHINGTON AVENUE



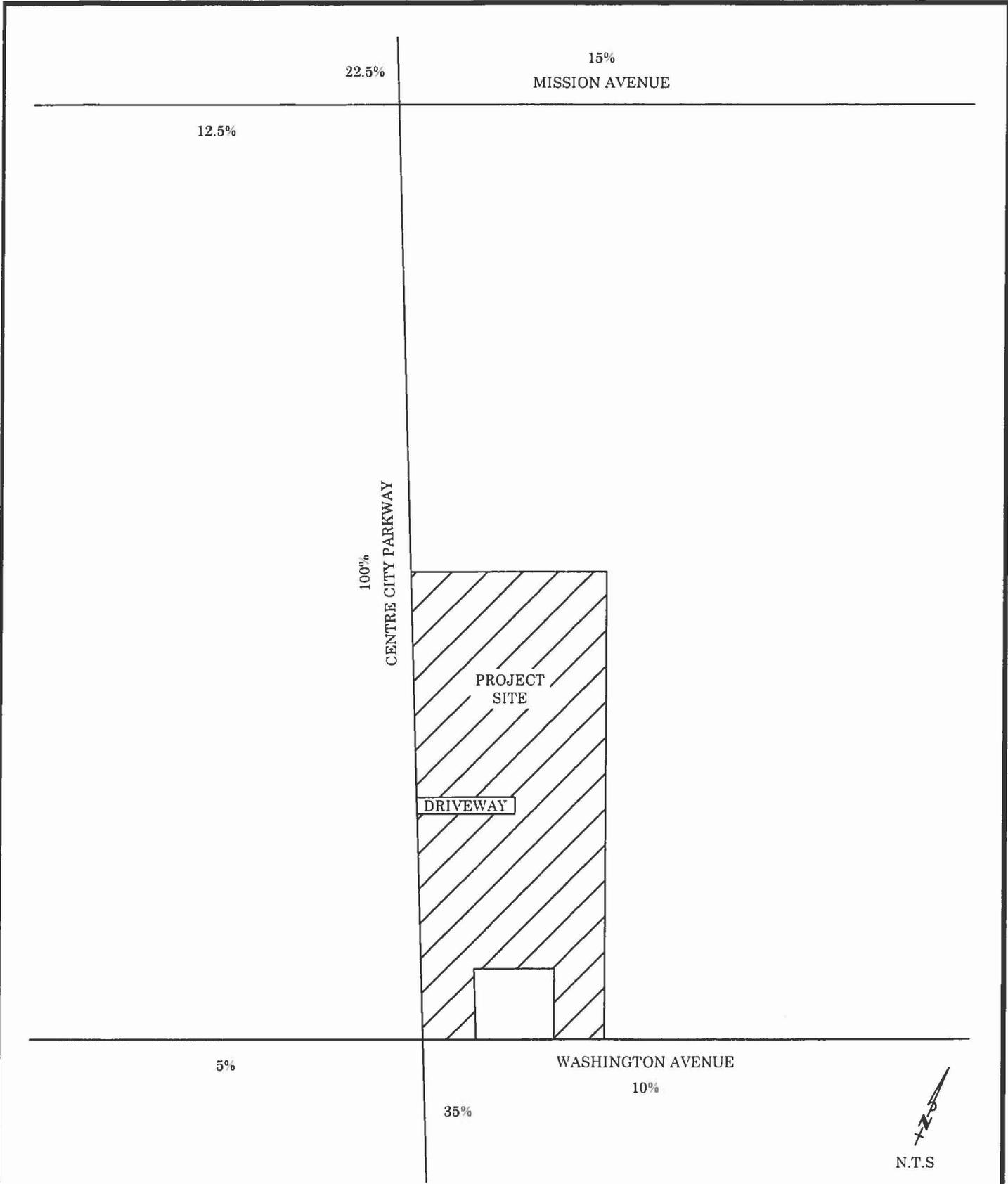
06/03/2015

Figure 1B

Project Site/ Trip Distribution (%) - Peak Hour Outbound
Escondido, California



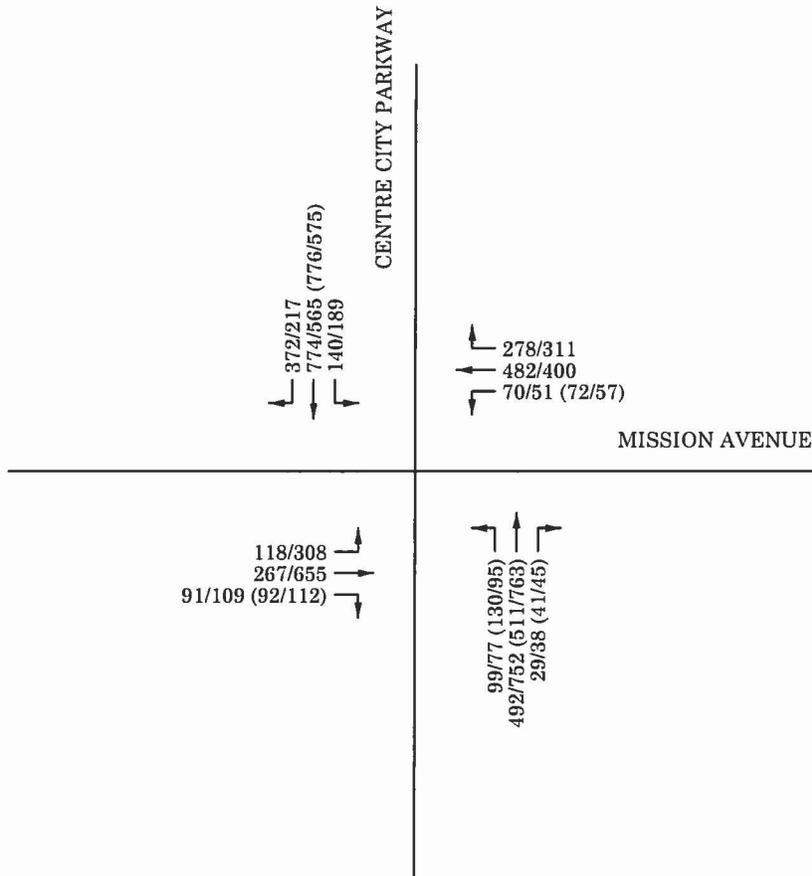
Pirzadeh
ASSOCIATES, INC.



06/03/2015

Figure 1C
 Project Site/ Trip Distribution (%) - Daily
 Escondido, California





Legend

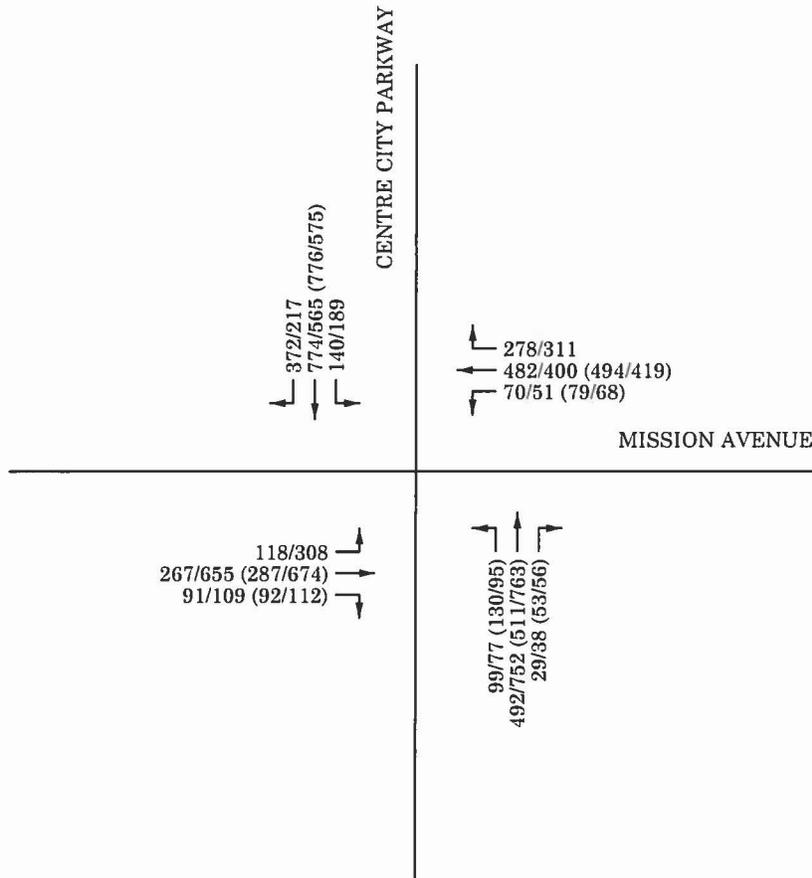
XX/YY = AM/PM Peak Hour Volume **No Project**
 (XX/YY) = AM/PM Peak Hour Volume **With Project**



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Figure 2
 Intersection Peak Hour Volumes - Existing
 Centre City Parkway/ Mission Avenue





Legend

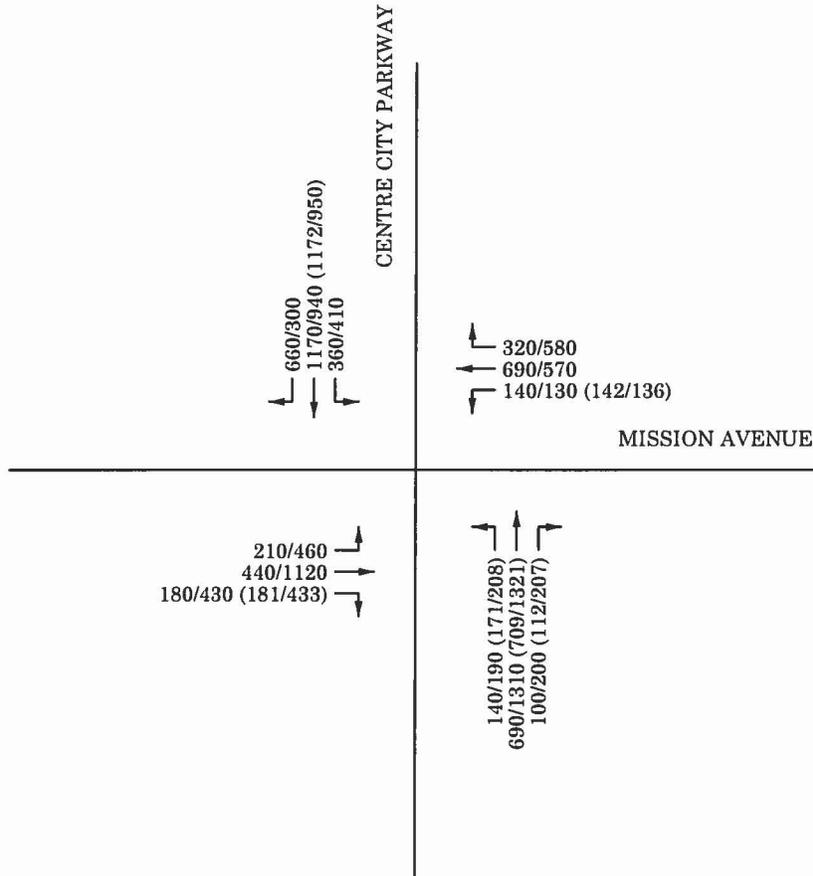
XX/YY = AM/PM Peak Hour Volume No Project
 (XX/YY) = AM/PM Peak Hour Volume With Project (Cummulative)



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Figure 2A
 Intersection Peak Hour Volumes - Existing Cummulative
 Centre City Parkway/ Mission Avenue





Legend

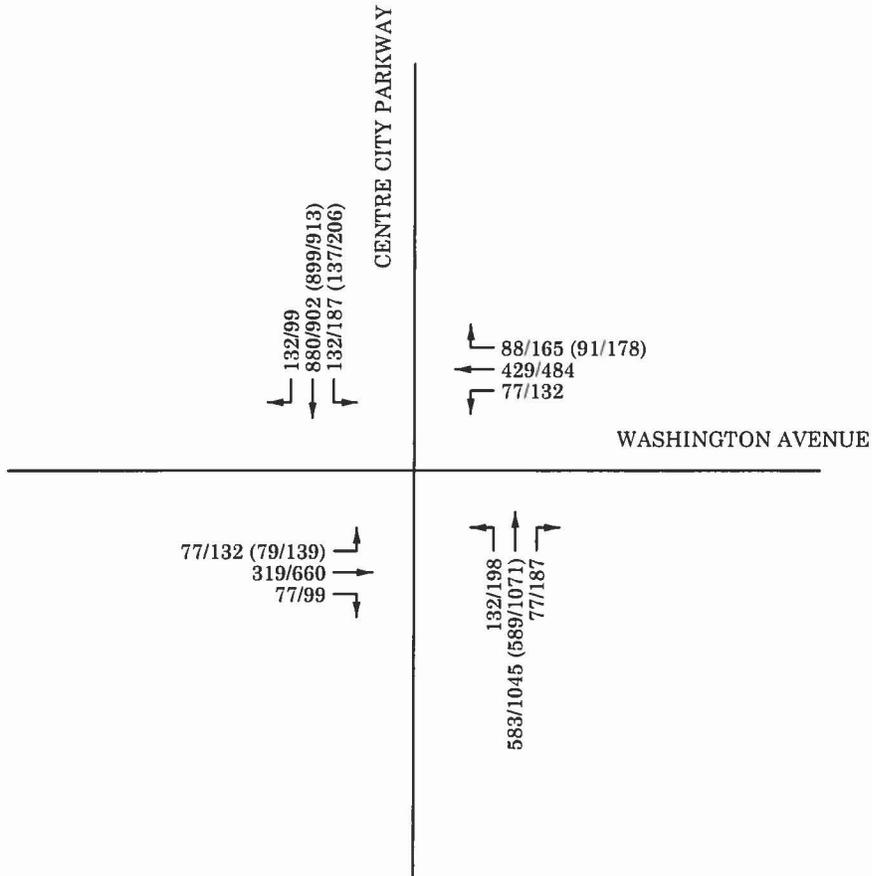
XX/YY = AM/PM Peak Hour Volume No Project
 (XX/YY) = AM/PM Peak Hour Volume With Project



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Figure 2B
 Intersection Peak Hour Volumes - Year 2035
 Centre City Parkway/ Mission Avenue





Legend

XX/YY = AM/PM Peak Hour Volume **No Project**

(XX/YY) = AM/PM Peak Hour Volume **With Project**



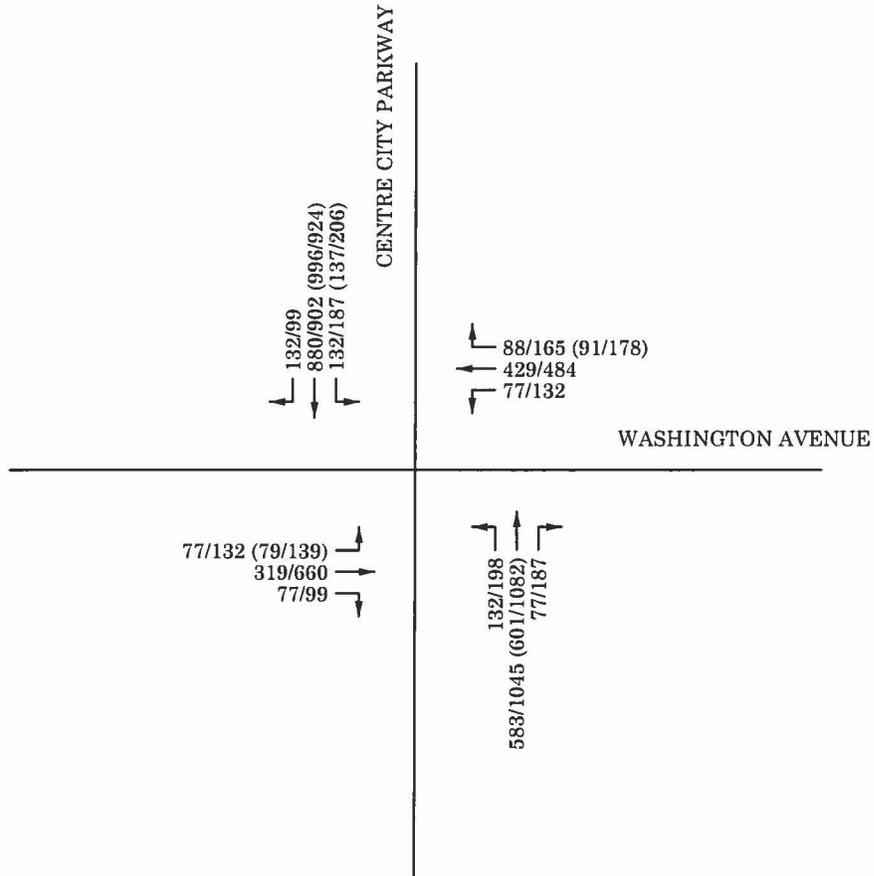
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Figure 3

Intersection Peak Hour Volumes - Existing
Centre City Parkway/ Washington Avenue



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& ASSOCIATES, INC.



Legend

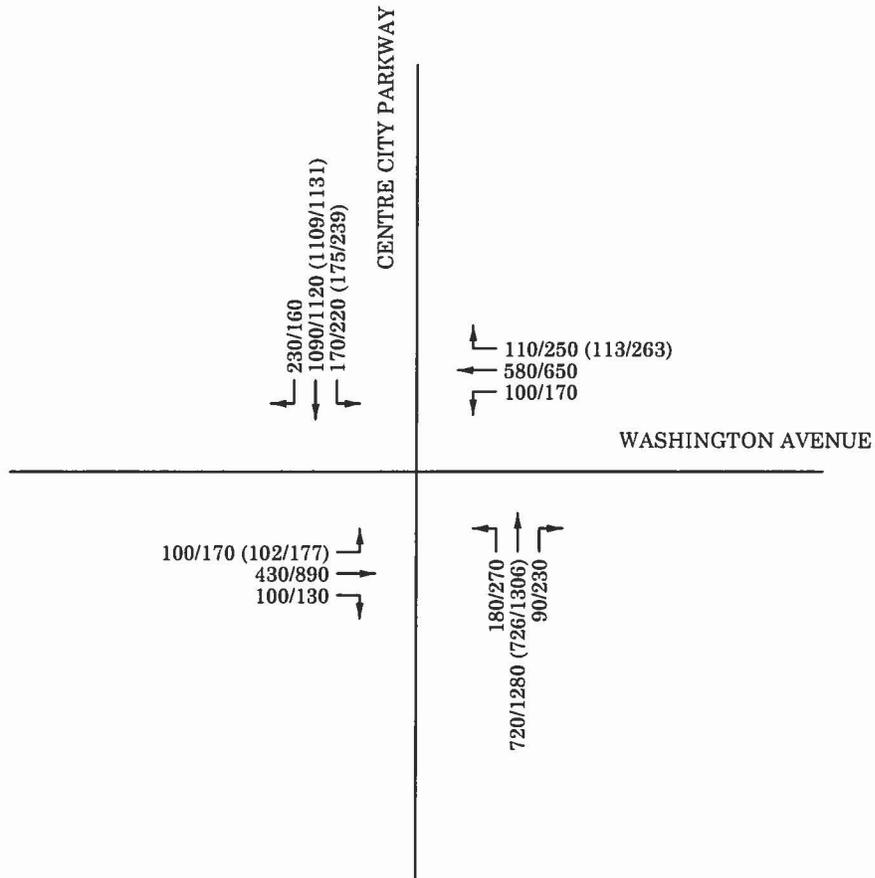
XX/YY = AM/PM Peak Hour Volume No Project
 (XX/YY) = AM/PM Peak Hour Volume With Project (Cummulative)



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Figure 3A
 Intersection Peak Hour Volumes - Existing Cummulative
 Centre City Parkway/ Washington Avenue





Legend

XX/YY = AM/PM Peak Hour Volume **No Project**
 (XX/YY) = AM/PM Peak Hour Volume **With Project**



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Figure 3B
 Intersection Peak Hour Volumes - Year 2035
 Centre City Parkway/ Washington Avenue



Table 1
Street Segment Operations

| Street Segment | Currently Built As | Existing Capacity (LOS E) | Existing No Project | | | Existing With Project | | | With Project Cumulative | | | 2035 Built As | 2035 Capacity (LOS E) | 2035 No Project | | | 2035 With Project | | |
|--|--------------------|---------------------------|---------------------|-----|-------|-----------------------|-----|-------|-------------------------|-----|-------|------------------|-----------------------|-----------------|-----|-------|-------------------|-----|-------|
| | | | ADT | LOS | V/C | ADT | LOS | V/C | ADT | LOS | V/C | | | ADT | LOS | V/C | ADT | LOS | V/C |
| North/South Roadways | | | | | | | | | | | | | | | | | | | |
| Centre City Parkway | | | | | | | | | | | | | | | | | | | |
| SR-78-EB Off-Ramp to Mission Avenue | 4-Ln Major | 37,000 | 38,940 | F | 1.052 | 39,160 | F | 1.058 | 39,160 | F | 1.057 | 6-Ln Super Major | 50,000 | 46,400 | E | 0.930 | 46,620 | E | 0.930 |
| Mission Avenue to Project Access | 4-Ln Major | 37,000 | 32,340 | D | 0.874 | 32,830 | D | 0.890 | 33,035 | D | 0.890 | 6-Ln Super Major | 50,000 | 41,500 | D | 0.830 | 41,990 | D | 0.840 |
| Washington Avenue to Project Access | 4-Ln Major | 37,000 | 32,340 | D | 0.874 | 32,830 | D | 0.890 | 33,035 | D | 0.890 | 6-Ln Super Major | 50,000 | 41,500 | D | 0.830 | 41,990 | D | 0.840 |
| Washington Avenue to Valley Parkway | 4-Ln Major | 37,000 | 32,560 | D | 0.880 | 32,903 | D | 0.890 | 33,108 | D | 0.890 | 6-Ln Super Major | 50,000 | 31,700 | C | 0.630 | 32,043 | C | 0.640 |
| East/West Roadways | | | | | | | | | | | | | | | | | | | |
| Mission Avenue | | | | | | | | | | | | | | | | | | | |
| Centre City Parkway to Escondido Boulevard | 4-Ln Collector | 34,200 | 27,060 | D | 0.79 | 27,207 | D | 0.80 | 28,007 | D | 0.82 | 6-Ln Super Major | 50,000 | 39,800 | D | 0.80 | 39,947 | D | 0.80 |
| Centre City Parkway to Quince Street | 4-Ln Major | 37,000 | 30,690 | D | 0.83 | 30,813 | D | 0.83 | 31,203 | D | 0.84 | 6-Ln Super Major | 50,000 | 44,500 | D | 0.89 | 44,623 | D | 0.89 |
| Washington Avenue | | | | | | | | | | | | | | | | | | | |
| Centre City Parkway to Escondido Boulevard | 4-Ln Collector | 34,200 | 22,220 | C | 0.65 | 22,318 | C | 0.65 | 22,318 | C | 0.65 | 4-Ln Collector | 34,200 | 28,800 | D | 0.84 | 28,898 | D | 0.84 |
| Centre City Parkway to Quince Street | 4-Ln Collector | 34,200 | 19,690 | C | 0.58 | 19,739 | C | 0.58 | 19,739 | C | 0.65 | 4-Ln Collector | 34,200 | 30,000 | D | 0.88 | 30,049 | D | 0.88 |

Table 2
Intersection Operations⁽¹⁾

| Intersection | Control Type | Peak Hour | Existing No Project | | Existing With Project | | With Project Cumulative | | 2035 No Project | | 2035 With Project | |
|---|--------------|-----------|---------------------|-----|-----------------------|-----|-------------------------|-----|-----------------|-----|-------------------|-----|
| | | | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS |
| Centre City Parkway/ Mission Avenue | Signal | AM | 29.9 | C | 30.9 | C | 31.3 | C | 34.1 | C | 35.3 | D |
| | | PM | 34.2 | C | 35.0 | C | 35.5 | D | 41.8 | D | 42.2 | D |
| Centre City Parkway/ Washington Avenue | Signal | AM | 27.9 | C | 28.1 | C | 28.1 | C | 28.6 | C | 28.8 | C |
| | | PM | 40.6 | D | 41.7 | D | 41.8 | D | 47.7 | D | 49.5 | D |

(1) Intersection analysis worksheets attached.

HCM 2010 Signalized Intersection Summary
 4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Volume (veh/h) | 118 | 267 | 91 | 70 | 482 | 278 | 99 | 492 | 29 | 140 | 774 | 372 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| Cap, veh/h | 157 | 860 | 0 | 98 | 735 | 0 | 166 | 1850 | 0 | 217 | 1905 | 0 |
| Arrive On Green | 0.09 | 0.23 | 0.00 | 0.06 | 0.20 | 0.00 | 0.05 | 0.50 | 0.00 | 0.06 | 0.51 | 0.00 |
| Sat Flow, veh/h | 1774 | 3725 | 0 | 1774 | 3725 | 0 | 3442 | 3725 | 0 | 3442 | 3725 | 0 |
| Grp Volume(v), veh/h | 128 | 290 | 0 | 76 | 524 | 0 | 108 | 535 | 0 | 152 | 841 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 7.3 | 6.7 | 0.0 | 4.4 | 13.6 | 0.0 | 3.2 | 8.7 | 0.0 | 4.5 | 14.8 | 0.0 |
| Cycle Q Clear(g_c), s | 7.3 | 6.7 | 0.0 | 4.4 | 13.6 | 0.0 | 3.2 | 8.7 | 0.0 | 4.5 | 14.8 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 157 | 860 | 0 | 98 | 735 | 0 | 166 | 1850 | 0 | 217 | 1905 | 0 |
| V/C Ratio(X) | 0.81 | 0.34 | 0.00 | 0.78 | 0.71 | 0.00 | 0.65 | 0.29 | 0.00 | 0.70 | 0.44 | 0.00 |
| Avail Cap(c_a), veh/h | 223 | 1222 | 0 | 188 | 1150 | 0 | 199 | 1850 | 0 | 332 | 1905 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 46.4 | 33.2 | 0.0 | 48.3 | 38.9 | 0.0 | 48.5 | 15.3 | 0.0 | 47.6 | 16.0 | 0.0 |
| Incr Delay (d2), s/veh | 14.2 | 0.2 | 0.0 | 12.4 | 1.3 | 0.0 | 5.6 | 0.4 | 0.0 | 4.1 | 0.7 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 3.9 | 3.1 | 0.0 | 2.3 | 6.5 | 0.0 | 1.5 | 3.9 | 0.0 | 2.1 | 6.5 | 0.0 |
| Lane Grp Delay (d), s/veh | 60.5 | 33.5 | 0.0 | 60.7 | 40.2 | 0.0 | 54.0 | 15.7 | 0.0 | 51.6 | 16.7 | 0.0 |
| Lane Grp LOS | E | C | | E | D | | D | B | | D | B | |
| Approach Vol, veh/h | | 418 | | | 600 | | | 643 | | | 993 | |
| Approach Delay, s/veh | | 41.8 | | | 42.8 | | | 22.2 | | | 22.1 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 13.2 | 27.9 | | 9.7 | 24.4 | | 9.0 | 55.4 | | 10.5 | 57.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 13.0 | 34.0 | | 11.0 | 32.0 | | 6.0 | 49.0 | | 10.0 | 53.0 | |
| Max Q Clear Time (g_c+1), s | 9.3 | 8.7 | | 6.4 | 15.6 | | 5.2 | 10.7 | | 6.5 | 16.8 | |
| Green Ext Time (p_c), s | 0.1 | 5.6 | | 0.1 | 4.8 | | 0.0 | 12.2 | | 0.1 | 12.0 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 29.9 | | | | | | | | |
| HCM 2010 LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
 4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Volume (veh/h) | 308 | 655 | 109 | 51 | 400 | 311 | 77 | 752 | 38 | 189 | 565 | 217 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| Cap, veh/h | 372 | 1341 | 0 | 71 | 709 | 0 | 136 | 1368 | 0 | 269 | 1512 | 0 |
| Arrive On Green | 0.21 | 0.36 | 0.00 | 0.04 | 0.19 | 0.00 | 0.04 | 0.37 | 0.00 | 0.08 | 0.41 | 0.00 |
| Sat Flow, veh/h | 1774 | 3725 | 0 | 1774 | 3725 | 0 | 3442 | 3725 | 0 | 3442 | 3725 | 0 |
| Grp Volume(v), veh/h | 335 | 712 | 0 | 55 | 435 | 0 | 84 | 817 | 0 | 205 | 614 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 19.0 | 15.6 | 0.0 | 3.2 | 11.1 | 0.0 | 2.5 | 18.4 | 0.0 | 6.0 | 12.1 | 0.0 |
| Cycle Q Clear(g_c), s | 19.0 | 15.6 | 0.0 | 3.2 | 11.1 | 0.0 | 2.5 | 18.4 | 0.0 | 6.0 | 12.1 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 372 | 1341 | 0 | 71 | 709 | 0 | 136 | 1368 | 0 | 269 | 1512 | 0 |
| V/C Ratio(X) | 0.90 | 0.53 | 0.00 | 0.78 | 0.61 | 0.00 | 0.62 | 0.60 | 0.00 | 0.76 | 0.41 | 0.00 |
| Avail Cap(c_a), veh/h | 497 | 1728 | 0 | 154 | 1008 | 0 | 166 | 1368 | 0 | 299 | 1512 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 39.9 | 26.2 | 0.0 | 49.2 | 38.4 | 0.0 | 48.9 | 26.5 | 0.0 | 46.8 | 21.9 | 0.0 |
| Incr Delay (d2), s/veh | 15.9 | 0.3 | 0.0 | 16.4 | 0.9 | 0.0 | 4.6 | 1.9 | 0.0 | 9.9 | 0.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 9.9 | 7.1 | 0.0 | 1.7 | 5.2 | 0.0 | 1.2 | 8.7 | 0.0 | 3.0 | 5.5 | 0.0 |
| Lane Grp Delay (d), s/veh | 55.7 | 26.5 | 0.0 | 65.6 | 39.3 | 0.0 | 53.6 | 28.5 | 0.0 | 56.7 | 22.7 | 0.0 |
| Lane Grp LOS | E | C | | E | D | | D | C | | E | C | |
| Approach Vol, veh/h | | 1047 | | | 490 | | | 901 | | | 819 | |
| Approach Delay, s/veh | | 35.9 | | | 42.2 | | | 30.8 | | | 31.2 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 25.7 | 41.3 | | 8.1 | 23.7 | | 8.1 | 42.0 | | 12.1 | 46.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 29.0 | 48.0 | | 9.0 | 28.0 | | 5.0 | 38.0 | | 9.0 | 42.0 | |
| Max Q Clear Time (g_c+I1), s | 21.0 | 17.6 | | 5.2 | 13.1 | | 4.5 | 20.4 | | 8.0 | 14.1 | |
| Green Ext Time (p_c), s | 0.6 | 9.0 | | 0.0 | 6.6 | | 0.0 | 9.1 | | 0.1 | 11.5 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 34.2 | | | | | | | | |
| HCM 2010 LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
 4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Volume (veh/h) | 118 | 267 | 92 | 72 | 482 | 278 | 130 | 511 | 41 | 140 | 776 | 372 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| Cap, veh/h | 157 | 851 | 0 | 100 | 732 | 0 | 197 | 1861 | 0 | 216 | 1882 | 0 |
| Arrive On Green | 0.09 | 0.23 | 0.00 | 0.06 | 0.20 | 0.00 | 0.06 | 0.50 | 0.00 | 0.06 | 0.51 | 0.00 |
| Sat Flow, veh/h | 1774 | 3725 | 0 | 1774 | 3725 | 0 | 3442 | 3725 | 0 | 3442 | 3725 | 0 |
| Grp Volume(v), veh/h | 128 | 290 | 0 | 78 | 524 | 0 | 141 | 555 | 0 | 152 | 843 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 7.4 | 6.8 | 0.0 | 4.6 | 13.8 | 0.0 | 4.2 | 9.2 | 0.0 | 4.5 | 15.2 | 0.0 |
| Cycle Q Clear(g_c), s | 7.4 | 6.8 | 0.0 | 4.6 | 13.8 | 0.0 | 4.2 | 9.2 | 0.0 | 4.5 | 15.2 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 157 | 851 | 0 | 100 | 732 | 0 | 197 | 1861 | 0 | 216 | 1882 | 0 |
| V/C Ratio(X) | 0.81 | 0.34 | 0.00 | 0.78 | 0.72 | 0.00 | 0.72 | 0.30 | 0.00 | 0.70 | 0.45 | 0.00 |
| Avail Cap(c_a), veh/h | 220 | 1208 | 0 | 186 | 1137 | 0 | 197 | 1861 | 0 | 328 | 1882 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 47.0 | 33.8 | 0.0 | 48.8 | 39.4 | 0.0 | 48.6 | 15.4 | 0.0 | 48.2 | 16.6 | 0.0 |
| Incr Delay (d2), s/veh | 14.7 | 0.2 | 0.0 | 12.2 | 1.3 | 0.0 | 11.7 | 0.4 | 0.0 | 4.1 | 0.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 3.9 | 3.2 | 0.0 | 2.4 | 6.5 | 0.0 | 2.1 | 4.0 | 0.0 | 2.1 | 6.6 | 0.0 |
| Lane Grp Delay (d), s/veh | 61.7 | 34.1 | 0.0 | 61.0 | 40.7 | 0.0 | 60.3 | 15.8 | 0.0 | 52.3 | 17.4 | 0.0 |
| Lane Grp LOS | E | C | | E | D | | E | B | | D | B | |
| Approach Vol, veh/h | | 418 | | | 602 | | | 696 | | | 995 | |
| Approach Delay, s/veh | | 42.5 | | | 43.4 | | | 24.9 | | | 22.7 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 13.3 | 28.0 | | 9.9 | 24.6 | | 10.0 | 56.4 | | 10.6 | 57.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 13.0 | 34.0 | | 11.0 | 32.0 | | 6.0 | 49.0 | | 10.0 | 53.0 | |
| Max Q Clear Time (g_c+I1), s | 9.4 | 8.8 | | 6.6 | 15.8 | | 6.2 | 11.2 | | 6.5 | 17.2 | |
| Green Ext Time (p_c), s | 0.1 | 5.6 | | 0.1 | 4.8 | | 0.0 | 12.5 | | 0.1 | 12.3 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 30.9 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
 4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Volume (veh/h) | 308 | 655 | 112 | 57 | 400 | 311 | 95 | 763 | 45 | 189 | 575 | 217 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| Cap, veh/h | 371 | 1318 | 0 | 80 | 706 | 0 | 159 | 1379 | 0 | 268 | 1498 | 0 |
| Arrive On Green | 0.21 | 0.35 | 0.00 | 0.05 | 0.19 | 0.00 | 0.05 | 0.37 | 0.00 | 0.08 | 0.40 | 0.00 |
| Sat Flow, veh/h | 1774 | 3725 | 0 | 1774 | 3725 | 0 | 3442 | 3725 | 0 | 3442 | 3725 | 0 |
| Grp Volume(v), veh/h | 335 | 712 | 0 | 62 | 435 | 0 | 103 | 829 | 0 | 205 | 625 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 19.2 | 16.0 | 0.0 | 3.6 | 11.2 | 0.0 | 3.1 | 18.8 | 0.0 | 6.1 | 12.6 | 0.0 |
| Cycle Q Clear(g_c), s | 19.2 | 16.0 | 0.0 | 3.6 | 11.2 | 0.0 | 3.1 | 18.8 | 0.0 | 6.1 | 12.6 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 371 | 1318 | 0 | 80 | 706 | 0 | 159 | 1379 | 0 | 268 | 1498 | 0 |
| V/C Ratio(X) | 0.90 | 0.54 | 0.00 | 0.78 | 0.62 | 0.00 | 0.65 | 0.60 | 0.00 | 0.76 | 0.42 | 0.00 |
| Avail Cap(c_a), veh/h | 492 | 1712 | 0 | 153 | 998 | 0 | 165 | 1379 | 0 | 296 | 1498 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 40.3 | 27.0 | 0.0 | 49.4 | 38.9 | 0.0 | 49.0 | 26.7 | 0.0 | 47.2 | 22.4 | 0.0 |
| Incr Delay (d2), s/veh | 16.3 | 0.3 | 0.0 | 14.7 | 0.9 | 0.0 | 8.2 | 1.9 | 0.0 | 10.3 | 0.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 10.1 | 7.2 | 0.0 | 1.9 | 5.3 | 0.0 | 1.5 | 8.8 | 0.0 | 3.0 | 5.7 | 0.0 |
| Lane Grp Delay (d), s/veh | 56.5 | 27.3 | 0.0 | 64.0 | 39.7 | 0.0 | 57.2 | 28.6 | 0.0 | 57.5 | 23.3 | 0.0 |
| Lane Grp LOS | E | C | | E | D | | E | C | | E | C | |
| Approach Vol, veh/h | | 1047 | | | 497 | | | 932 | | | 830 | |
| Approach Delay, s/veh | | 36.7 | | | 42.8 | | | 31.8 | | | 31.7 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 25.9 | 41.0 | | 8.7 | 23.8 | | 8.8 | 42.7 | | 12.1 | 46.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 29.0 | 48.0 | | 9.0 | 28.0 | | 5.0 | 38.0 | | 9.0 | 42.0 | |
| Max Q Clear Time (g_c+I1), s | 21.2 | 18.0 | | 5.6 | 13.2 | | 5.1 | 20.8 | | 8.1 | 14.6 | |
| Green Ext Time (p_c), s | 0.6 | 9.0 | | 0.0 | 6.6 | | 0.0 | 9.1 | | 0.1 | 11.7 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 35.0 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary

4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Volume (veh/h) | 118 | 287 | 92 | 79 | 494 | 278 | 130 | 511 | 53 | 140 | 776 | 372 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| Cap, veh/h | 157 | 847 | 0 | 110 | 748 | 0 | 196 | 1849 | 0 | 216 | 1871 | 0 |
| Arrive On Green | 0.09 | 0.23 | 0.00 | 0.06 | 0.20 | 0.00 | 0.06 | 0.50 | 0.00 | 0.06 | 0.50 | 0.00 |
| Sat Flow, veh/h | 1774 | 3725 | 0 | 1774 | 3725 | 0 | 3442 | 3725 | 0 | 3442 | 3725 | 0 |
| Grp Volume(v), veh/h | 128 | 312 | 0 | 86 | 537 | 0 | 141 | 555 | 0 | 152 | 843 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 7.5 | 7.5 | 0.0 | 5.0 | 14.2 | 0.0 | 4.3 | 9.3 | 0.0 | 4.6 | 15.4 | 0.0 |
| Cycle Q Clear(g_c), s | 7.5 | 7.5 | 0.0 | 5.0 | 14.2 | 0.0 | 4.3 | 9.3 | 0.0 | 4.6 | 15.4 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 157 | 847 | 0 | 110 | 748 | 0 | 196 | 1849 | 0 | 216 | 1871 | 0 |
| V/C Ratio(X) | 0.81 | 0.37 | 0.00 | 0.78 | 0.72 | 0.00 | 0.72 | 0.30 | 0.00 | 0.70 | 0.45 | 0.00 |
| Avail Cap(c_a), veh/h | 219 | 1200 | 0 | 185 | 1130 | 0 | 196 | 1849 | 0 | 326 | 1871 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 47.2 | 34.4 | 0.0 | 48.8 | 39.4 | 0.0 | 48.9 | 15.7 | 0.0 | 48.5 | 16.9 | 0.0 |
| Incr Delay (d2), s/veh | 15.0 | 0.3 | 0.0 | 11.5 | 1.3 | 0.0 | 12.1 | 0.4 | 0.0 | 4.1 | 0.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 4.0 | 3.5 | 0.0 | 2.6 | 6.7 | 0.0 | 2.2 | 4.1 | 0.0 | 2.1 | 6.8 | 0.0 |
| Lane Grp Delay (d), s/veh | 62.2 | 34.6 | 0.0 | 60.3 | 40.7 | 0.0 | 61.1 | 16.1 | 0.0 | 52.6 | 17.7 | 0.0 |
| Lane Grp LOS | E | C | | E | D | | E | B | | D | B | |
| Approach Vol, veh/h | | 440 | | | 623 | | | 696 | | | 995 | |
| Approach Delay, s/veh | | 42.7 | | | 43.4 | | | 25.2 | | | 23.0 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 13.3 | 28.0 | | 10.5 | 25.2 | | 10.0 | 56.4 | | 10.6 | 57.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 13.0 | 34.0 | | 11.0 | 32.0 | | 6.0 | 49.0 | | 10.0 | 53.0 | |
| Max Q Clear Time (g_c+I1), s | 9.5 | 9.5 | | 7.0 | 16.2 | | 6.3 | 11.3 | | 6.6 | 17.4 | |
| Green Ext Time (p_c), s | 0.1 | 5.9 | | 0.1 | 5.0 | | 0.0 | 12.4 | | 0.1 | 12.2 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 31.3 | | | | | | | | |
| HCM 2010 LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
 4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Volume (veh/h) | 308 | 674 | 112 | 68 | 419 | 311 | 95 | 763 | 56 | 189 | 575 | 217 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| Cap, veh/h | 371 | 1304 | 0 | 95 | 724 | 0 | 158 | 1367 | 0 | 268 | 1485 | 0 |
| Arrive On Green | 0.21 | 0.35 | 0.00 | 0.05 | 0.19 | 0.00 | 0.05 | 0.37 | 0.00 | 0.08 | 0.40 | 0.00 |
| Sat Flow, veh/h | 1774 | 3725 | 0 | 1774 | 3725 | 0 | 3442 | 3725 | 0 | 3442 | 3725 | 0 |
| Grp Volume(v), veh/h | 335 | 733 | 0 | 74 | 455 | 0 | 103 | 829 | 0 | 205 | 625 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 0 | 1774 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 19.4 | 16.8 | 0.0 | 4.3 | 11.8 | 0.0 | 3.1 | 19.1 | 0.0 | 6.2 | 12.8 | 0.0 |
| Cycle Q Clear(g_c), s | 19.4 | 16.8 | 0.0 | 4.3 | 11.8 | 0.0 | 3.1 | 19.1 | 0.0 | 6.2 | 12.8 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 371 | 1304 | 0 | 95 | 724 | 0 | 158 | 1367 | 0 | 268 | 1485 | 0 |
| V/C Ratio(X) | 0.90 | 0.56 | 0.00 | 0.78 | 0.63 | 0.00 | 0.65 | 0.61 | 0.00 | 0.77 | 0.42 | 0.00 |
| Avail Cap(c_a), veh/h | 488 | 1697 | 0 | 152 | 990 | 0 | 163 | 1367 | 0 | 294 | 1485 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 40.6 | 27.7 | 0.0 | 49.2 | 38.9 | 0.0 | 49.4 | 27.2 | 0.0 | 47.6 | 22.9 | 0.0 |
| Incr Delay (d2), s/veh | 16.6 | 0.4 | 0.0 | 12.8 | 0.9 | 0.0 | 8.4 | 2.0 | 0.0 | 10.5 | 0.9 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 10.3 | 7.6 | 0.0 | 2.3 | 5.5 | 0.0 | 1.5 | 8.9 | 0.0 | 3.1 | 5.9 | 0.0 |
| Lane Grp Delay (d), s/veh | 57.3 | 28.1 | 0.0 | 62.0 | 39.9 | 0.0 | 57.8 | 29.2 | 0.0 | 58.2 | 23.8 | 0.0 |
| Lane Grp LOS | E | C | | E | D | | E | C | | E | C | |
| Approach Vol, veh/h | | 1068 | | | 529 | | | 932 | | | 830 | |
| Approach Delay, s/veh | | 37.2 | | | 43.0 | | | 32.3 | | | 32.3 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 26.0 | 40.9 | | 9.6 | 24.5 | | 8.9 | 42.7 | | 12.2 | 46.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 29.0 | 48.0 | | 9.0 | 28.0 | | 5.0 | 38.0 | | 9.0 | 42.0 | |
| Max Q Clear Time (g_c+I1), s | 21.4 | 18.8 | | 6.3 | 13.8 | | 5.1 | 21.1 | | 8.2 | 14.8 | |
| Green Ext Time (p_c), s | 0.6 | 9.3 | | 0.0 | 6.7 | | 0.0 | 9.0 | | 0.1 | 11.6 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 35.5 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
 4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Volume (veh/h) | 210 | 440 | 180 | 140 | 690 | 320 | 140 | 690 | 100 | 360 | 1170 | 660 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 |
| Cap, veh/h | 286 | 1238 | 0 | 212 | 1117 | 0 | 209 | 2460 | 0 | 464 | 2874 | 0 |
| Arrive On Green | 0.08 | 0.22 | 0.00 | 0.06 | 0.20 | 0.00 | 0.06 | 0.44 | 0.00 | 0.13 | 0.51 | 0.00 |
| Sat Flow, veh/h | 3442 | 5588 | 0 | 3442 | 5588 | 0 | 3442 | 5588 | 0 | 3442 | 5588 | 0 |
| Grp Volume(v), veh/h | 228 | 478 | 0 | 152 | 750 | 0 | 152 | 750 | 0 | 391 | 1272 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 7.3 | 8.2 | 0.0 | 4.9 | 14.0 | 0.0 | 4.9 | 9.8 | 0.0 | 12.5 | 16.1 | 0.0 |
| Cycle Q Clear(g_c), s | 7.3 | 8.2 | 0.0 | 4.9 | 14.0 | 0.0 | 4.9 | 9.8 | 0.0 | 12.5 | 16.1 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 286 | 1238 | 0 | 212 | 1117 | 0 | 209 | 2460 | 0 | 464 | 2874 | 0 |
| V/C Ratio(X) | 0.80 | 0.39 | 0.00 | 0.72 | 0.67 | 0.00 | 0.73 | 0.30 | 0.00 | 0.84 | 0.44 | 0.00 |
| Avail Cap(c_a), veh/h | 305 | 1437 | 0 | 305 | 1437 | 0 | 214 | 2460 | 0 | 610 | 2874 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 50.8 | 37.4 | 0.0 | 51.9 | 41.7 | 0.0 | 52.1 | 20.4 | 0.0 | 47.6 | 17.2 | 0.0 |
| Incr Delay (d2), s/veh | 13.0 | 0.2 | 0.0 | 4.5 | 0.8 | 0.0 | 11.6 | 0.3 | 0.0 | 8.1 | 0.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 3.7 | 3.8 | 0.0 | 2.3 | 6.6 | 0.0 | 2.5 | 4.4 | 0.0 | 6.0 | 7.1 | 0.0 |
| Lane Grp Delay (d), s/veh | 63.8 | 37.6 | 0.0 | 56.4 | 42.5 | 0.0 | 63.6 | 20.7 | 0.0 | 55.7 | 17.7 | 0.0 |
| Lane Grp LOS | E | D | | E | D | | E | C | | E | B | |
| Approach Vol, veh/h | | 706 | | | 902 | | | 902 | | | 1663 | |
| Approach Delay, s/veh | | 46.0 | | | 44.8 | | | 28.0 | | | 26.7 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 13.4 | 29.0 | | 11.0 | 26.5 | | 10.8 | 53.6 | | 19.2 | 62.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 10.0 | 29.0 | | 10.0 | 29.0 | | 7.0 | 45.0 | | 20.0 | 58.0 | |
| Max Q Clear Time (g_c+l1), s | 9.3 | 10.2 | | 6.9 | 16.0 | | 6.9 | 11.8 | | 14.5 | 18.1 | |
| Green Ext Time (p_c), s | 0.1 | 8.1 | | 0.1 | 6.6 | | 0.0 | 19.2 | | 0.7 | 21.2 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 34.1 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |   |   | |   |   | |   |   | |   |   | |
| Volume (veh/h) | 460 | 1120 | 430 | 130 | 570 | 580 | 190 | 1310 | 200 | 410 | 940 | 300 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 |
| Cap, veh/h | 539 | 1749 | 0 | 180 | 1166 | 0 | 268 | 1993 | 0 | 479 | 2334 | 0 |
| Arrive On Green | 0.16 | 0.31 | 0.00 | 0.05 | 0.21 | 0.00 | 0.08 | 0.36 | 0.00 | 0.14 | 0.42 | 0.00 |
| Sat Flow, veh/h | 3442 | 5588 | 0 | 3442 | 5588 | 0 | 3442 | 5588 | 0 | 3442 | 5588 | 0 |
| Grp Volume(v), veh/h | 500 | 1217 | 0 | 141 | 620 | 0 | 207 | 1424 | 0 | 446 | 1022 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 16.5 | 22.0 | 0.0 | 4.7 | 11.4 | 0.0 | 6.8 | 25.3 | 0.0 | 14.7 | 15.0 | 0.0 |
| Cycle Q Clear(g_c), s | 16.5 | 22.0 | 0.0 | 4.7 | 11.4 | 0.0 | 6.8 | 25.3 | 0.0 | 14.7 | 15.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 539 | 1749 | 0 | 180 | 1166 | 0 | 268 | 1993 | 0 | 479 | 2334 | 0 |
| V/C Ratio(X) | 0.93 | 0.70 | 0.00 | 0.79 | 0.53 | 0.00 | 0.77 | 0.71 | 0.00 | 0.93 | 0.44 | 0.00 |
| Avail Cap(c_a), veh/h | 539 | 1993 | 0 | 180 | 1409 | 0 | 359 | 1993 | 0 | 479 | 2334 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 47.9 | 34.7 | 0.0 | 53.9 | 40.5 | 0.0 | 52.0 | 31.9 | 0.0 | 49.0 | 23.9 | 0.0 |
| Incr Delay (d2), s/veh | 22.5 | 0.9 | 0.0 | 20.1 | 0.4 | 0.0 | 7.1 | 2.2 | 0.0 | 25.1 | 0.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 8.8 | 10.2 | 0.0 | 2.5 | 5.3 | 0.0 | 3.3 | 11.9 | 0.0 | 8.0 | 6.8 | 0.0 |
| Lane Grp Delay (d), s/veh | 70.4 | 35.6 | 0.0 | 74.0 | 40.9 | 0.0 | 59.1 | 34.2 | 0.0 | 74.1 | 24.5 | 0.0 |
| Lane Grp LOS | E | D | | E | D | | E | C | | E | C | |
| Approach Vol, veh/h | | 1717 | | | 761 | | | 1631 | | | 1468 | |
| Approach Delay, s/veh | | 45.7 | | | 47.0 | | | 37.3 | | | 39.5 | |
| Approach LOS | | D | | | D | | | D | | | D | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 22.0 | 40.0 | | 10.0 | 28.0 | | 13.0 | 45.0 | | 20.0 | 52.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 18.0 | 41.0 | | 6.0 | 29.0 | | 12.0 | 41.0 | | 16.0 | 45.0 | |
| Max Q Clear Time (g_c+I1), s | 18.5 | 24.0 | | 6.7 | 13.4 | | 8.8 | 27.3 | | 16.7 | 17.0 | |
| Green Ext Time (p_c), s | 0.0 | 11.3 | | 0.0 | 10.6 | | 0.2 | 11.5 | | 0.0 | 20.7 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 41.8 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
 4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Volume (veh/h) | 210 | 440 | 181 | 142 | 690 | 320 | 171 | 709 | 112 | 360 | 1172 | 660 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 |
| Cap, veh/h | 286 | 1233 | 0 | 214 | 1116 | 0 | 213 | 2462 | 0 | 464 | 2869 | 0 |
| Arrive On Green | 0.08 | 0.22 | 0.00 | 0.06 | 0.20 | 0.00 | 0.06 | 0.44 | 0.00 | 0.13 | 0.51 | 0.00 |
| Sat Flow, veh/h | 3442 | 5588 | 0 | 3442 | 5588 | 0 | 3442 | 5588 | 0 | 3442 | 5588 | 0 |
| Grp Volume(v), veh/h | 228 | 478 | 0 | 154 | 750 | 0 | 186 | 771 | 0 | 391 | 1274 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 7.3 | 8.2 | 0.0 | 5.0 | 14.0 | 0.0 | 6.1 | 10.1 | 0.0 | 12.5 | 16.2 | 0.0 |
| Cycle Q Clear(g_c), s | 7.3 | 8.2 | 0.0 | 5.0 | 14.0 | 0.0 | 6.1 | 10.1 | 0.0 | 12.5 | 16.2 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 286 | 1233 | 0 | 214 | 1116 | 0 | 213 | 2462 | 0 | 464 | 2869 | 0 |
| V/C Ratio(X) | 0.80 | 0.39 | 0.00 | 0.72 | 0.67 | 0.00 | 0.87 | 0.31 | 0.00 | 0.84 | 0.44 | 0.00 |
| Avail Cap(c_a), veh/h | 305 | 1435 | 0 | 305 | 1435 | 0 | 213 | 2462 | 0 | 609 | 2869 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 50.8 | 37.5 | 0.0 | 52.0 | 41.8 | 0.0 | 52.5 | 20.5 | 0.0 | 47.7 | 17.3 | 0.0 |
| Incr Delay (d2), s/veh | 13.1 | 0.2 | 0.0 | 4.7 | 0.8 | 0.0 | 30.2 | 0.3 | 0.0 | 8.2 | 0.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 3.7 | 3.9 | 0.0 | 2.3 | 6.6 | 0.0 | 3.5 | 4.6 | 0.0 | 6.0 | 7.1 | 0.0 |
| Lane Grp Delay (d), s/veh | 63.9 | 37.7 | 0.0 | 56.7 | 42.6 | 0.0 | 82.7 | 20.8 | 0.0 | 55.9 | 17.8 | 0.0 |
| Lane Grp LOS | E | D | | E | D | | F | C | | E | B | |
| Approach Vol, veh/h | | 706 | | | 904 | | | 957 | | | 1665 | |
| Approach Delay, s/veh | | 46.2 | | | 45.0 | | | 32.9 | | | 26.8 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 13.4 | 28.9 | | 11.0 | 26.6 | | 11.0 | 53.8 | | 19.2 | 62.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 10.0 | 29.0 | | 10.0 | 29.0 | | 7.0 | 45.0 | | 20.0 | 58.0 | |
| Max Q Clear Time (g_c+I1), s | 9.3 | 10.2 | | 7.0 | 16.0 | | 8.1 | 12.1 | | 14.5 | 18.2 | |
| Green Ext Time (p_c), s | 0.1 | 8.1 | | 0.1 | 6.6 | | 0.0 | 19.3 | | 0.7 | 21.4 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 35.3 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
 4: Centre City Pkwy & Mission Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Volume (veh/h) | 460 | 1120 | 433 | 136 | 570 | 580 | 208 | 1321 | 207 | 410 | 950 | 300 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 |
| Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 |
| Cap, veh/h | 539 | 1749 | 0 | 180 | 1166 | 0 | 287 | 1993 | 0 | 479 | 2304 | 0 |
| Arrive On Green | 0.16 | 0.31 | 0.00 | 0.05 | 0.21 | 0.00 | 0.08 | 0.36 | 0.00 | 0.14 | 0.41 | 0.00 |
| Sat Flow, veh/h | 3442 | 5588 | 0 | 3442 | 5588 | 0 | 3442 | 5588 | 0 | 3442 | 5588 | 0 |
| Grp Volume(v), veh/h | 500 | 1217 | 0 | 148 | 620 | 0 | 226 | 1436 | 0 | 446 | 1033 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1721 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 | 1721 | 1863 | 0 |
| Q Serve(g_s), s | 16.5 | 22.0 | 0.0 | 4.9 | 11.4 | 0.0 | 7.4 | 25.6 | 0.0 | 14.7 | 15.3 | 0.0 |
| Cycle Q Clear(g_c), s | 16.5 | 22.0 | 0.0 | 4.9 | 11.4 | 0.0 | 7.4 | 25.6 | 0.0 | 14.7 | 15.3 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 539 | 1749 | 0 | 180 | 1166 | 0 | 287 | 1993 | 0 | 479 | 2304 | 0 |
| V/C Ratio(X) | 0.93 | 0.70 | 0.00 | 0.82 | 0.53 | 0.00 | 0.79 | 0.72 | 0.00 | 0.93 | 0.45 | 0.00 |
| Avail Cap(c_a), veh/h | 539 | 1993 | 0 | 180 | 1409 | 0 | 359 | 1993 | 0 | 479 | 2304 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 47.9 | 34.7 | 0.0 | 54.0 | 40.5 | 0.0 | 51.7 | 32.0 | 0.0 | 49.0 | 24.4 | 0.0 |
| Incr Delay (d2), s/veh | 22.5 | 0.9 | 0.0 | 25.7 | 0.4 | 0.0 | 8.9 | 2.3 | 0.0 | 25.1 | 0.6 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 8.8 | 10.2 | 0.0 | 2.8 | 5.3 | 0.0 | 3.6 | 12.0 | 0.0 | 8.0 | 7.0 | 0.0 |
| Lane Grp Delay (d), s/veh | 70.4 | 35.6 | 0.0 | 79.7 | 40.9 | 0.0 | 60.6 | 34.3 | 0.0 | 74.1 | 25.0 | 0.0 |
| Lane Grp LOS | E | D | | E | D | | E | C | | E | C | |
| Approach Vol, veh/h | | 1717 | | | 768 | | | 1662 | | | 1479 | |
| Approach Delay, s/veh | | 45.7 | | | 48.4 | | | 37.9 | | | 39.8 | |
| Approach LOS | | D | | | D | | | D | | | D | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 22.0 | 40.0 | | 10.0 | 28.0 | | 13.6 | 45.0 | | 20.0 | 51.4 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 18.0 | 41.0 | | 6.0 | 29.0 | | 12.0 | 41.0 | | 16.0 | 45.0 | |
| Max Q Clear Time (g_c+l1), s | 18.5 | 24.0 | | 6.9 | 13.4 | | 9.4 | 27.6 | | 16.7 | 17.3 | |
| Green Ext Time (p_c), s | 0.0 | 11.3 | | 0.0 | 10.6 | | 0.2 | 11.4 | | 0.0 | 20.7 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 42.2 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Volume (veh/h) | 77 | 319 | 77 | 77 | 429 | 88 | 132 | 583 | 77 | 132 | 880 | 132 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 2 | 1 |
| Cap, veh/h | 108 | 626 | 150 | 108 | 646 | 132 | 210 | 1871 | 795 | 210 | 1871 | 795 |
| Arrive On Green | 0.06 | 0.22 | 0.22 | 0.06 | 0.22 | 0.22 | 0.06 | 0.50 | 0.50 | 0.06 | 0.50 | 0.50 |
| Sat Flow, veh/h | 1774 | 2908 | 695 | 1774 | 3002 | 615 | 3442 | 3725 | 1583 | 3442 | 3725 | 1583 |
| Grp Volume(v), veh/h | 84 | 221 | 210 | 84 | 288 | 274 | 143 | 634 | 84 | 143 | 957 | 143 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1740 | 1774 | 1863 | 1754 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 4.6 | 10.5 | 10.7 | 4.6 | 14.3 | 14.5 | 4.1 | 10.2 | 2.8 | 4.1 | 17.1 | 4.9 |
| Cycle Q Clear(g_c), s | 4.6 | 10.5 | 10.7 | 4.6 | 14.3 | 14.5 | 4.1 | 10.2 | 2.8 | 4.1 | 17.1 | 4.9 |
| Prop In Lane | 1.00 | | 0.40 | 1.00 | | 0.35 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 108 | 401 | 374 | 108 | 401 | 378 | 210 | 1871 | 795 | 210 | 1871 | 795 |
| V/C Ratio(X) | 0.78 | 0.55 | 0.56 | 0.78 | 0.72 | 0.73 | 0.68 | 0.34 | 0.11 | 0.68 | 0.51 | 0.18 |
| Avail Cap(c_a), veh/h | 249 | 561 | 524 | 249 | 561 | 529 | 346 | 1871 | 795 | 346 | 1871 | 795 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 46.1 | 34.8 | 34.9 | 46.1 | 36.3 | 36.3 | 45.8 | 14.9 | 13.0 | 45.8 | 16.6 | 13.6 |
| Incr Delay (d2), s/veh | 11.2 | 1.2 | 1.3 | 11.2 | 2.7 | 3.0 | 3.9 | 0.5 | 0.3 | 3.9 | 1.0 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 2.4 | 5.0 | 4.8 | 2.4 | 6.9 | 6.6 | 1.9 | 4.4 | 1.1 | 1.9 | 7.6 | 1.9 |
| Lane Grp Delay (d), s/veh | 57.3 | 36.0 | 36.2 | 57.3 | 38.9 | 39.4 | 49.7 | 15.4 | 13.3 | 49.7 | 17.6 | 14.1 |
| Lane Grp LOS | E | D | D | E | D | D | D | B | B | D | B | B |
| Approach Vol, veh/h | | 515 | | | 646 | | | 861 | | | 1243 | |
| Approach Delay, s/veh | | 39.5 | | | 41.5 | | | 20.9 | | | 20.9 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 10.1 | 25.4 | | 10.1 | 25.4 | | 10.1 | 54.0 | | 10.1 | 54.0 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 14.0 | 30.0 | | 14.0 | 30.0 | | 10.0 | 50.0 | | 10.0 | 50.0 | |
| Max Q Clear Time (g_c+I1), s | 6.6 | 12.7 | | 6.6 | 16.5 | | 6.1 | 12.2 | | 6.1 | 19.1 | |
| Green Ext Time (p_c), s | 0.1 | 5.6 | | 0.1 | 5.0 | | 0.1 | 16.4 | | 0.1 | 15.0 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 27.9 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Volume (veh/h) | 132 | 660 | 99 | 132 | 484 | 165 | 198 | 1045 | 187 | 187 | 902 | 99 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 2 | 1 |
| Cap, veh/h | 171 | 854 | 129 | 171 | 719 | 244 | 275 | 1560 | 663 | 260 | 1543 | 656 |
| Arrive On Green | 0.10 | 0.27 | 0.27 | 0.10 | 0.27 | 0.27 | 0.08 | 0.42 | 0.42 | 0.08 | 0.41 | 0.41 |
| Sat Flow, veh/h | 1774 | 3165 | 476 | 1774 | 2664 | 902 | 3442 | 3725 | 1583 | 3442 | 3725 | 1583 |
| Grp Volume(v), veh/h | 143 | 422 | 403 | 143 | 367 | 338 | 215 | 1136 | 203 | 203 | 980 | 108 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1779 | 1774 | 1863 | 1703 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 9.1 | 24.5 | 24.5 | 9.1 | 20.5 | 20.7 | 7.0 | 29.2 | 9.8 | 6.6 | 24.0 | 4.9 |
| Cycle Q Clear(g_c), s | 9.1 | 24.5 | 24.5 | 9.1 | 20.5 | 20.7 | 7.0 | 29.2 | 9.8 | 6.6 | 24.0 | 4.9 |
| Prop In Lane | 1.00 | | 0.27 | 1.00 | | 0.53 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 171 | 503 | 480 | 171 | 503 | 460 | 275 | 1560 | 663 | 260 | 1543 | 656 |
| V/C Ratio(X) | 0.84 | 0.84 | 0.84 | 0.84 | 0.73 | 0.73 | 0.78 | 0.73 | 0.31 | 0.78 | 0.64 | 0.16 |
| Avail Cap(c_a), veh/h | 217 | 536 | 512 | 217 | 536 | 490 | 330 | 1560 | 663 | 270 | 1543 | 656 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 50.9 | 39.5 | 39.5 | 50.9 | 38.1 | 38.1 | 51.8 | 27.9 | 22.2 | 52.1 | 26.7 | 21.1 |
| Incr Delay (d2), s/veh | 19.8 | 10.8 | 11.3 | 19.8 | 4.7 | 5.3 | 9.7 | 3.0 | 1.2 | 13.3 | 2.0 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 5.0 | 12.8 | 12.3 | 5.0 | 10.1 | 9.4 | 3.4 | 13.7 | 3.9 | 3.4 | 11.3 | 2.0 |
| Lane Grp Delay (d), s/veh | 70.7 | 50.3 | 50.8 | 70.7 | 42.8 | 43.4 | 61.5 | 30.9 | 23.4 | 65.4 | 28.7 | 21.7 |
| Lane Grp LOS | E | D | D | E | D | D | E | C | C | E | C | C |
| Approach Vol, veh/h | | 968 | | | 848 | | | 1554 | | | 1291 | |
| Approach Delay, s/veh | | 53.5 | | | 47.7 | | | 34.2 | | | 33.9 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 15.1 | 35.0 | | 15.1 | 35.0 | | 13.2 | 52.0 | | 12.7 | 51.5 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 14.0 | 33.0 | | 14.0 | 33.0 | | 11.0 | 48.0 | | 9.0 | 46.0 | |
| Max Q Clear Time (g_c+I1), s | 11.1 | 26.5 | | 11.1 | 22.7 | | 9.0 | 31.2 | | 8.6 | 26.0 | |
| Green Ext Time (p_c), s | 0.1 | 4.4 | | 0.1 | 6.4 | | 0.1 | 13.2 | | 0.0 | 15.3 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 40.6 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Volume (veh/h) | 79 | 319 | 77 | 77 | 429 | 91 | 132 | 589 | 77 | 137 | 899 | 132 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 2 | 1 |
| Cap, veh/h | 111 | 631 | 151 | 108 | 644 | 136 | 210 | 1861 | 791 | 216 | 1868 | 794 |
| Arrive On Green | 0.06 | 0.22 | 0.22 | 0.06 | 0.22 | 0.22 | 0.06 | 0.50 | 0.50 | 0.06 | 0.50 | 0.50 |
| Sat Flow, veh/h | 1774 | 2908 | 695 | 1774 | 2984 | 630 | 3442 | 3725 | 1583 | 3442 | 3725 | 1583 |
| Grp Volume(v), veh/h | 86 | 221 | 210 | 84 | 290 | 275 | 143 | 640 | 84 | 149 | 977 | 143 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1740 | 1774 | 1863 | 1752 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 4.8 | 10.5 | 10.8 | 4.7 | 14.5 | 14.6 | 4.1 | 10.4 | 2.8 | 4.2 | 17.7 | 5.0 |
| Cycle Q Clear(g_c), s | 4.8 | 10.5 | 10.8 | 4.7 | 14.5 | 14.6 | 4.1 | 10.4 | 2.8 | 4.2 | 17.7 | 5.0 |
| Prop In Lane | 1.00 | | 0.40 | 1.00 | | 0.36 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 111 | 404 | 378 | 108 | 402 | 378 | 210 | 1861 | 791 | 216 | 1868 | 794 |
| V/C Ratio(X) | 0.78 | 0.55 | 0.56 | 0.78 | 0.72 | 0.73 | 0.68 | 0.34 | 0.11 | 0.69 | 0.52 | 0.18 |
| Avail Cap(c_a), veh/h | 248 | 558 | 521 | 248 | 558 | 525 | 344 | 1861 | 791 | 344 | 1868 | 794 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 46.3 | 34.8 | 34.9 | 46.3 | 36.5 | 36.5 | 46.1 | 15.1 | 13.2 | 46.0 | 16.9 | 13.7 |
| Incr Delay (d2), s/veh | 11.1 | 1.1 | 1.3 | 11.2 | 2.8 | 3.2 | 3.9 | 0.5 | 0.3 | 3.9 | 1.1 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 2.5 | 5.0 | 4.8 | 2.4 | 6.9 | 6.7 | 1.9 | 4.6 | 1.1 | 1.9 | 7.7 | 1.9 |
| Lane Grp Delay (d), s/veh | 57.3 | 36.0 | 36.2 | 57.6 | 39.3 | 39.7 | 49.9 | 15.7 | 13.5 | 49.9 | 17.9 | 14.2 |
| Lane Grp LOS | E | D | D | E | D | D | D | B | B | D | B | B |
| Approach Vol, veh/h | | 517 | | | 649 | | | 867 | | | 1269 | |
| Approach Delay, s/veh | | 39.6 | | | 41.8 | | | 21.1 | | | 21.3 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 10.2 | 25.7 | | 10.1 | 25.6 | | 10.1 | 54.0 | | 10.3 | 54.2 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 14.0 | 30.0 | | 14.0 | 30.0 | | 10.0 | 50.0 | | 10.0 | 50.0 | |
| Max Q Clear Time (g_c+I1), s | 6.8 | 12.8 | | 6.7 | 16.6 | | 6.1 | 12.4 | | 6.2 | 19.7 | |
| Green Ext Time (p_c), s | 0.1 | 5.6 | | 0.1 | 4.9 | | 0.1 | 16.8 | | 0.1 | 15.2 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 28.1 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Volume (veh/h) | 139 | 660 | 99 | 132 | 484 | 178 | 198 | 1071 | 187 | 206 | 913 | 99 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 2 | 1 |
| Cap, veh/h | 179 | 853 | 128 | 171 | 690 | 252 | 275 | 1553 | 660 | 269 | 1547 | 658 |
| Arrive On Green | 0.10 | 0.27 | 0.27 | 0.10 | 0.26 | 0.26 | 0.08 | 0.42 | 0.42 | 0.08 | 0.42 | 0.42 |
| Sat Flow, veh/h | 1774 | 3165 | 476 | 1774 | 2606 | 952 | 3442 | 3725 | 1583 | 3442 | 3725 | 1583 |
| Grp Volume(v), veh/h | 151 | 422 | 403 | 143 | 375 | 344 | 215 | 1164 | 203 | 224 | 992 | 108 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1779 | 1774 | 1863 | 1695 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 9.6 | 24.6 | 24.7 | 9.1 | 21.4 | 21.5 | 7.1 | 30.5 | 9.9 | 7.4 | 24.4 | 4.9 |
| Cycle Q Clear(g_c), s | 9.6 | 24.6 | 24.7 | 9.1 | 21.4 | 21.5 | 7.1 | 30.5 | 9.9 | 7.4 | 24.4 | 4.9 |
| Prop In Lane | 1.00 | | 0.27 | 1.00 | | 0.56 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 179 | 502 | 479 | 171 | 494 | 449 | 275 | 1553 | 660 | 269 | 1547 | 658 |
| V/C Ratio(X) | 0.84 | 0.84 | 0.84 | 0.84 | 0.76 | 0.77 | 0.78 | 0.75 | 0.31 | 0.83 | 0.64 | 0.16 |
| Avail Cap(c_a), veh/h | 216 | 534 | 510 | 216 | 534 | 486 | 329 | 1553 | 660 | 269 | 1547 | 658 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 50.9 | 39.7 | 39.7 | 51.1 | 38.9 | 39.0 | 52.0 | 28.5 | 22.4 | 52.3 | 26.8 | 21.1 |
| Incr Delay (d2), s/veh | 21.9 | 11.0 | 11.5 | 20.0 | 5.9 | 6.6 | 9.8 | 3.4 | 1.2 | 19.5 | 2.1 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 5.4 | 13.0 | 12.5 | 5.1 | 10.7 | 9.9 | 3.5 | 14.5 | 4.0 | 4.0 | 11.5 | 2.0 |
| Lane Grp Delay (d), s/veh | 72.7 | 50.7 | 51.2 | 71.1 | 44.8 | 45.7 | 61.8 | 31.8 | 23.7 | 71.8 | 28.9 | 21.7 |
| Lane Grp LOS | E | D | D | E | D | D | E | C | C | E | C | C |
| Approach Vol, veh/h | | 976 | | | 862 | | | 1582 | | | 1324 | |
| Approach Delay, s/veh | | 54.3 | | | 49.5 | | | 34.9 | | | 35.5 | |
| Approach LOS | | D | | | D | | | C | | | D | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 15.6 | 35.0 | | 15.1 | 34.5 | | 13.2 | 52.0 | | 13.0 | 51.8 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 14.0 | 33.0 | | 14.0 | 33.0 | | 11.0 | 48.0 | | 9.0 | 46.0 | |
| Max Q Clear Time (g_c+I1), s | 11.6 | 26.7 | | 11.1 | 23.5 | | 9.1 | 32.5 | | 9.4 | 26.4 | |
| Green Ext Time (p_c), s | 0.1 | 4.4 | | 0.1 | 6.0 | | 0.1 | 12.6 | | 0.0 | 15.2 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 41.7 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Volume (veh/h) | 79 | 319 | 77 | 77 | 429 | 91 | 132 | 601 | 77 | 137 | 996 | 132 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 2 | 1 |
| Cap, veh/h | 111 | 631 | 151 | 108 | 644 | 136 | 210 | 1861 | 791 | 216 | 1868 | 794 |
| Arrive On Green | 0.06 | 0.22 | 0.22 | 0.06 | 0.22 | 0.22 | 0.06 | 0.50 | 0.50 | 0.06 | 0.50 | 0.50 |
| Sat Flow, veh/h | 1774 | 2908 | 695 | 1774 | 2984 | 630 | 3442 | 3725 | 1583 | 3442 | 3725 | 1583 |
| Grp Volume(v), veh/h | 86 | 221 | 210 | 84 | 290 | 275 | 143 | 653 | 84 | 149 | 1083 | 143 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1740 | 1774 | 1863 | 1752 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 4.8 | 10.5 | 10.8 | 4.7 | 14.5 | 14.6 | 4.1 | 10.7 | 2.8 | 4.2 | 20.5 | 5.0 |
| Cycle Q Clear(g_c), s | 4.8 | 10.5 | 10.8 | 4.7 | 14.5 | 14.6 | 4.1 | 10.7 | 2.8 | 4.2 | 20.5 | 5.0 |
| Prop In Lane | 1.00 | | 0.40 | 1.00 | | 0.36 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 111 | 404 | 378 | 108 | 402 | 378 | 210 | 1861 | 791 | 216 | 1868 | 794 |
| VC Ratio(X) | 0.78 | 0.55 | 0.56 | 0.78 | 0.72 | 0.73 | 0.68 | 0.35 | 0.11 | 0.69 | 0.58 | 0.18 |
| Avail Cap(c_a), veh/h | 248 | 558 | 521 | 248 | 558 | 525 | 344 | 1861 | 791 | 344 | 1868 | 794 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 46.3 | 34.8 | 34.9 | 46.3 | 36.5 | 36.5 | 46.1 | 15.2 | 13.2 | 46.0 | 17.6 | 13.7 |
| Incr Delay (d2), s/veh | 11.1 | 1.1 | 1.3 | 11.2 | 2.8 | 3.2 | 3.9 | 0.5 | 0.3 | 3.9 | 1.3 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 2.5 | 5.0 | 4.8 | 2.4 | 6.9 | 6.7 | 1.9 | 4.7 | 1.1 | 1.9 | 8.9 | 1.9 |
| Lane Grp Delay (d), s/veh | 57.3 | 36.0 | 36.2 | 57.6 | 39.3 | 39.7 | 49.9 | 15.7 | 13.5 | 49.9 | 18.9 | 14.2 |
| Lane Grp LOS | E | D | D | E | D | D | D | B | B | D | B | B |
| Approach Vol, veh/h | | 517 | | | 649 | | | 880 | | | 1375 | |
| Approach Delay, s/veh | | 39.6 | | | 41.8 | | | 21.1 | | | 21.7 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 10.2 | 25.7 | | 10.1 | 25.6 | | 10.1 | 54.0 | | 10.3 | 54.2 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 14.0 | 30.0 | | 14.0 | 30.0 | | 10.0 | 50.0 | | 10.0 | 50.0 | |
| Max Q Clear Time (g_c+I1), s | 6.8 | 12.8 | | 6.7 | 16.6 | | 6.1 | 12.7 | | 6.2 | 22.5 | |
| Green Ext Time (p_c), s | 0.1 | 5.6 | | 0.1 | 4.9 | | 0.1 | 18.4 | | 0.1 | 15.7 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 28.1 | | | | | | | | |
| HCM 2010 LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Volume (veh/h) | 139 | 660 | 99 | 132 | 484 | 178 | 198 | 1082 | 187 | 206 | 924 | 99 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 190.0 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 2 | 1 |
| Cap, veh/h | 179 | 853 | 128 | 171 | 690 | 252 | 275 | 1553 | 660 | 269 | 1547 | 658 |
| Arrive On Green | 0.10 | 0.27 | 0.27 | 0.10 | 0.26 | 0.26 | 0.08 | 0.42 | 0.42 | 0.08 | 0.42 | 0.42 |
| Sat Flow, veh/h | 1774 | 3165 | 476 | 1774 | 2606 | 952 | 3442 | 3725 | 1583 | 3442 | 3725 | 1583 |
| Grp Volume(v), veh/h | 151 | 422 | 403 | 143 | 375 | 344 | 215 | 1176 | 203 | 224 | 1004 | 108 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1779 | 1774 | 1863 | 1695 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 9.6 | 24.6 | 24.7 | 9.1 | 21.4 | 21.5 | 7.1 | 31.0 | 9.9 | 7.4 | 24.8 | 4.9 |
| Cycle Q Clear(g_c), s | 9.6 | 24.6 | 24.7 | 9.1 | 21.4 | 21.5 | 7.1 | 31.0 | 9.9 | 7.4 | 24.8 | 4.9 |
| Prop In Lane | 1.00 | | 0.27 | 1.00 | | 0.56 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 179 | 502 | 479 | 171 | 494 | 449 | 275 | 1553 | 660 | 269 | 1547 | 658 |
| V/C Ratio(X) | 0.84 | 0.84 | 0.84 | 0.84 | 0.76 | 0.77 | 0.78 | 0.76 | 0.31 | 0.83 | 0.65 | 0.16 |
| Avail Cap(c_a), veh/h | 216 | 534 | 510 | 216 | 534 | 486 | 329 | 1553 | 660 | 269 | 1547 | 658 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 50.9 | 39.7 | 39.7 | 51.1 | 38.9 | 39.0 | 52.0 | 28.6 | 22.4 | 52.3 | 26.9 | 21.1 |
| Incr Delay (d2), s/veh | 21.9 | 11.0 | 11.5 | 20.0 | 5.9 | 6.6 | 9.8 | 3.5 | 1.2 | 19.5 | 2.1 | 0.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 5.4 | 13.0 | 12.5 | 5.1 | 10.7 | 9.9 | 3.5 | 14.8 | 4.0 | 4.0 | 11.6 | 2.0 |
| Lane Grp Delay (d), s/veh | 72.7 | 50.7 | 51.2 | 71.1 | 44.8 | 45.7 | 61.8 | 32.1 | 23.7 | 71.8 | 29.1 | 21.7 |
| Lane Grp LOS | E | D | D | E | D | D | E | C | C | E | C | C |
| Approach Vol, veh/h | | 976 | | | 862 | | | 1594 | | | 1336 | |
| Approach Delay, s/veh | | 54.3 | | | 49.5 | | | 35.0 | | | 35.6 | |
| Approach LOS | | D | | | D | | | D | | | D | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 15.6 | 35.0 | | 15.1 | 34.5 | | 13.2 | 52.0 | | 13.0 | 51.8 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 14.0 | 33.0 | | 14.0 | 33.0 | | 11.0 | 48.0 | | 9.0 | 46.0 | |
| Max Q Clear Time (g_c+l1), s | 11.6 | 26.7 | | 11.1 | 23.5 | | 9.1 | 33.0 | | 9.4 | 26.8 | |
| Green Ext Time (p_c), s | 0.1 | 4.4 | | 0.1 | 6.0 | | 0.1 | 12.3 | | 0.0 | 15.1 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 41.8 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Volume (veh/h) | 100 | 430 | 100 | 100 | 580 | 110 | 180 | 720 | 90 | 170 | 1090 | 230 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 1 |
| Cap, veh/h | 138 | 922 | 392 | 138 | 922 | 392 | 270 | 1629 | 692 | 257 | 2423 | 686 |
| Arrive On Green | 0.08 | 0.25 | 0.25 | 0.08 | 0.25 | 0.25 | 0.08 | 0.44 | 0.44 | 0.07 | 0.43 | 0.43 |
| Sat Flow, veh/h | 1774 | 3725 | 1583 | 1774 | 3725 | 1583 | 3442 | 3725 | 1583 | 3442 | 5588 | 1583 |
| Grp Volume(v), veh/h | 109 | 467 | 109 | 109 | 630 | 120 | 196 | 783 | 98 | 185 | 1185 | 250 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1583 | 1774 | 1863 | 1583 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 5.9 | 10.6 | 5.5 | 5.9 | 15.1 | 6.1 | 5.5 | 14.7 | 3.7 | 5.2 | 15.0 | 10.4 |
| Cycle Q Clear(g_c), s | 5.9 | 10.6 | 5.5 | 5.9 | 15.1 | 6.1 | 5.5 | 14.7 | 3.7 | 5.2 | 15.0 | 10.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 138 | 922 | 392 | 138 | 922 | 392 | 270 | 1629 | 692 | 257 | 2423 | 686 |
| V/C Ratio(X) | 0.79 | 0.51 | 0.28 | 0.79 | 0.68 | 0.31 | 0.73 | 0.48 | 0.14 | 0.72 | 0.49 | 0.36 |
| Avail Cap(c_a), veh/h | 289 | 1250 | 531 | 289 | 1250 | 531 | 455 | 1629 | 692 | 420 | 2423 | 686 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 44.5 | 31.8 | 29.9 | 44.5 | 33.5 | 30.1 | 44.3 | 19.7 | 16.6 | 44.5 | 20.0 | 18.7 |
| Incr Delay (d2), s/veh | 9.5 | 0.4 | 0.4 | 9.5 | 0.9 | 0.4 | 3.7 | 1.0 | 0.4 | 3.7 | 0.7 | 1.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 3.0 | 4.9 | 2.2 | 3.0 | 7.0 | 2.4 | 2.5 | 6.6 | 0.1 | 2.3 | 6.6 | 4.1 |
| Lane Grp Delay (d), s/veh | 54.1 | 32.3 | 30.3 | 54.1 | 34.5 | 30.6 | 48.0 | 20.7 | 17.0 | 48.2 | 20.7 | 20.2 |
| Lane Grp LOS | D | C | C | D | C | C | D | C | B | D | C | C |
| Approach Vol, veh/h | | 685 | | | 859 | | | 1077 | | | 1620 | |
| Approach Delay, s/veh | | 35.4 | | | 36.4 | | | 25.4 | | | 23.8 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | | 6 |
| Phs Duration (G+Y+Rc), s | 11.7 | 28.3 | | 11.7 | 28.3 | | 11.7 | 47.0 | | 11.4 | | 46.6 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | | 4.0 |
| Max Green Setting (Gmax), s | 16.0 | 33.0 | | 16.0 | 33.0 | | 13.0 | 43.0 | | 12.0 | | 42.0 |
| Max Q Clear Time (g_c+I1), s | 7.9 | 12.6 | | 7.9 | 17.1 | | 7.5 | 16.7 | | 7.2 | | 17.0 |
| Green Ext Time (p_c), s | 0.1 | 8.2 | | 0.1 | 7.3 | | 0.3 | 17.6 | | 0.2 | | 17.0 |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | | 28.6 | | | | | | | | |
| HCM 2010 LOS | | | | C | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Volume (veh/h) | 170 | 890 | 130 | 170 | 650 | 250 | 270 | 1280 | 230 | 220 | 1120 | 160 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 1 |
| Cap, veh/h | 212 | 1019 | 433 | 193 | 977 | 415 | 356 | 1525 | 648 | 259 | 2129 | 603 |
| Arrive On Green | 0.12 | 0.27 | 0.27 | 0.11 | 0.26 | 0.26 | 0.10 | 0.41 | 0.41 | 0.08 | 0.38 | 0.38 |
| Sat Flow, veh/h | 1774 | 3725 | 1583 | 1774 | 3725 | 1583 | 3442 | 3725 | 1583 | 3442 | 5588 | 1583 |
| Grp Volume(v), veh/h | 185 | 967 | 141 | 185 | 707 | 272 | 293 | 1391 | 250 | 239 | 1217 | 174 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1583 | 1774 | 1863 | 1583 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 12.3 | 30.5 | 8.5 | 12.4 | 20.7 | 18.3 | 10.0 | 42.2 | 13.3 | 8.3 | 20.6 | 9.2 |
| Cycle Q Clear(g_c), s | 12.3 | 30.5 | 8.5 | 12.4 | 20.7 | 18.3 | 10.0 | 42.2 | 13.3 | 8.3 | 20.6 | 9.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 212 | 1019 | 433 | 193 | 977 | 415 | 356 | 1525 | 648 | 259 | 2129 | 603 |
| V/C Ratio(X) | 0.87 | 0.95 | 0.33 | 0.96 | 0.72 | 0.65 | 0.82 | 0.91 | 0.39 | 0.92 | 0.57 | 0.29 |
| Avail Cap(c_a), veh/h | 237 | 1027 | 436 | 193 | 977 | 415 | 460 | 1525 | 648 | 259 | 2129 | 603 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 51.8 | 42.7 | 34.7 | 53.1 | 40.2 | 39.3 | 52.6 | 33.3 | 24.8 | 55.0 | 29.3 | 25.8 |
| Incr Delay (d2), s/veh | 26.0 | 17.2 | 0.4 | 53.3 | 2.7 | 3.7 | 9.2 | 9.8 | 1.7 | 36.2 | 1.1 | 1.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 7.1 | 16.5 | 3.4 | 8.5 | 10.0 | 7.6 | 4.8 | 21.0 | 5.4 | 4.9 | 9.7 | 3.7 |
| Lane Grp Delay (d), s/veh | 77.8 | 59.8 | 35.1 | 106.4 | 42.9 | 43.0 | 61.8 | 43.2 | 26.5 | 91.2 | 30.4 | 27.0 |
| Lane Grp LOS | E | E | D | F | D | D | E | D | C | F | C | C |
| Approach Vol, veh/h | | 1293 | | | 1164 | | | 1934 | | | 1630 | |
| Approach Delay, s/veh | | 59.7 | | | 53.0 | | | 43.9 | | | 39.0 | |
| Approach LOS | | E | | | D | | | D | | | D | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 18.3 | 36.7 | | 17.0 | 35.4 | | 16.4 | 53.0 | | 13.0 | 49.6 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 16.0 | 33.0 | | 13.0 | 30.0 | | 16.0 | 49.0 | | 9.0 | 42.0 | |
| Max Q Clear Time (g_c+I1), s | 14.3 | 32.5 | | 14.4 | 22.7 | | 12.0 | 44.2 | | 10.3 | 22.6 | |
| Green Ext Time (p_c), s | 0.1 | 0.2 | | 0.0 | 5.9 | | 0.4 | 4.6 | | 0.0 | 17.0 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 47.7 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Volume (veh/h) | 102 | 430 | 100 | 100 | 580 | 113 | 180 | 726 | 90 | 175 | 1109 | 230 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 1 |
| Cap, veh/h | 140 | 925 | 393 | 138 | 920 | 391 | 270 | 1623 | 690 | 262 | 2422 | 686 |
| Arrive On Green | 0.08 | 0.25 | 0.25 | 0.08 | 0.25 | 0.25 | 0.08 | 0.44 | 0.44 | 0.08 | 0.43 | 0.43 |
| Sat Flow, veh/h | 1774 | 3725 | 1583 | 1774 | 3725 | 1583 | 3442 | 3725 | 1583 | 3442 | 5588 | 1583 |
| Grp Volume(v), veh/h | 111 | 467 | 109 | 109 | 630 | 123 | 196 | 789 | 98 | 190 | 1205 | 250 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1583 | 1774 | 1863 | 1583 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 6.1 | 10.6 | 5.5 | 6.0 | 15.1 | 6.3 | 5.5 | 15.0 | 3.7 | 5.3 | 15.4 | 10.5 |
| Cycle Q Clear(g_c), s | 6.1 | 10.6 | 5.5 | 6.0 | 15.1 | 6.3 | 5.5 | 15.0 | 3.7 | 5.3 | 15.4 | 10.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 140 | 925 | 393 | 138 | 920 | 391 | 270 | 1623 | 690 | 262 | 2422 | 686 |
| V/C Ratio(X) | 0.79 | 0.50 | 0.28 | 0.79 | 0.68 | 0.31 | 0.73 | 0.49 | 0.14 | 0.72 | 0.50 | 0.36 |
| Avail Cap(c_a), veh/h | 287 | 1245 | 529 | 287 | 1245 | 529 | 453 | 1623 | 690 | 418 | 2422 | 686 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 44.7 | 31.9 | 30.0 | 44.7 | 33.7 | 30.3 | 44.5 | 20.0 | 16.8 | 44.6 | 20.2 | 18.8 |
| Incr Delay (d2), s/veh | 9.5 | 0.4 | 0.4 | 9.6 | 1.0 | 0.5 | 3.7 | 1.0 | 0.4 | 3.8 | 0.7 | 1.5 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 3.1 | 4.9 | 2.1 | 3.0 | 7.0 | 2.5 | 2.5 | 6.7 | 0.1 | 2.4 | 6.7 | 4.1 |
| Lane Grp Delay (d), s/veh | 54.1 | 32.3 | 30.3 | 54.3 | 34.6 | 30.8 | 48.2 | 21.0 | 17.2 | 48.4 | 20.9 | 20.3 |
| Lane Grp LOS | D | C | C | D | C | C | D | C | B | D | C | C |
| Approach Vol, veh/h | | 687 | | | 862 | | | 1083 | | | 1645 | |
| Approach Delay, s/veh | | 35.5 | | | 36.6 | | | 25.6 | | | 24.0 | |
| Approach LOS | | D | | | D | | | C | | | C | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | | 6 |
| Phs Duration (G+Y+Rc), s | 11.8 | 28.5 | | 11.7 | 28.4 | | 11.7 | 47.0 | | 11.5 | | 46.8 |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | | 4.0 |
| Max Green Setting (Gmax), s | 16.0 | 33.0 | | 16.0 | 33.0 | | 13.0 | 43.0 | | 12.0 | | 42.0 |
| Max Q Clear Time (g_c+1), s | 8.1 | 12.6 | | 8.0 | 17.1 | | 7.5 | 17.0 | | 7.3 | | 17.4 |
| Green Ext Time (p_c), s | 0.1 | 8.2 | | 0.1 | 7.3 | | 0.3 | 17.7 | | 0.2 | | 17.0 |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 28.8 | | | | | | | | | |
| HCM 2010 LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |

HCM 2010 Signalized Intersection Summary
6: Centre City Pkwy & Washington Ave

6/10/2015

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Volume (veh/h) | 177 | 890 | 130 | 170 | 650 | 263 | 270 | 1306 | 230 | 239 | 1131 | 160 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow veh/h/ln | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 | 186.3 |
| Lanes | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 1 |
| Cap, veh/h | 219 | 1019 | 433 | 193 | 963 | 409 | 356 | 1525 | 648 | 259 | 2129 | 603 |
| Arrive On Green | 0.12 | 0.27 | 0.27 | 0.11 | 0.26 | 0.26 | 0.10 | 0.41 | 0.41 | 0.08 | 0.38 | 0.38 |
| Sat Flow, veh/h | 1774 | 3725 | 1583 | 1774 | 3725 | 1583 | 3442 | 3725 | 1583 | 3442 | 5588 | 1583 |
| Grp Volume(v), veh/h | 192 | 967 | 141 | 185 | 707 | 286 | 293 | 1420 | 250 | 260 | 1229 | 174 |
| Grp Sat Flow(s),veh/h/ln | 1774 | 1863 | 1583 | 1774 | 1863 | 1583 | 1721 | 1863 | 1583 | 1721 | 1863 | 1583 |
| Q Serve(g_s), s | 12.7 | 30.5 | 8.5 | 12.4 | 20.8 | 19.6 | 10.0 | 43.6 | 13.3 | 9.0 | 20.9 | 9.1 |
| Cycle Q Clear(g_c), s | 12.7 | 30.5 | 8.5 | 12.4 | 20.8 | 19.6 | 10.0 | 43.6 | 13.3 | 9.0 | 20.9 | 9.1 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 219 | 1019 | 433 | 193 | 963 | 409 | 356 | 1525 | 648 | 259 | 2129 | 603 |
| V/C Ratio(X) | 0.88 | 0.95 | 0.33 | 0.96 | 0.73 | 0.70 | 0.82 | 0.93 | 0.39 | 1.01 | 0.58 | 0.29 |
| Avail Cap(c_a), veh/h | 237 | 1027 | 436 | 193 | 963 | 409 | 460 | 1525 | 648 | 259 | 2129 | 603 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 51.6 | 42.7 | 34.7 | 53.1 | 40.6 | 40.2 | 52.6 | 33.8 | 24.8 | 55.4 | 29.4 | 25.8 |
| Incr Delay (d2), s/veh | 27.5 | 17.2 | 0.4 | 53.3 | 2.9 | 5.2 | 9.2 | 11.6 | 1.7 | 57.3 | 1.1 | 1.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q (50%), veh/ln | 7.4 | 16.5 | 3.4 | 8.5 | 10.0 | 8.3 | 4.8 | 22.2 | 5.4 | 6.0 | 9.8 | 3.7 |
| Lane Grp Delay (d), s/veh | 79.1 | 59.8 | 35.1 | 106.4 | 43.6 | 45.3 | 61.8 | 45.4 | 26.5 | 112.6 | 30.5 | 27.0 |
| Lane Grp LOS | E | E | D | F | D | D | E | D | C | F | C | C |
| Approach Vol, veh/h | | 1300 | | | 1178 | | | 1963 | | | 1663 | |
| Approach Delay, s/veh | | 60.0 | | | 53.9 | | | 45.4 | | | 43.0 | |
| Approach LOS | | E | | | D | | | D | | | D | |
| Timer | | | | | | | | | | | | |
| Assigned Phs | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Phs Duration (G+Y+Rc), s | 18.8 | 36.7 | | 17.0 | 35.0 | | 16.4 | 53.0 | | 13.0 | 49.6 | |
| Change Period (Y+Rc), s | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Max Green Setting (Gmax), s | 16.0 | 33.0 | | 13.0 | 30.0 | | 16.0 | 49.0 | | 9.0 | 42.0 | |
| Max Q Clear Time (g_c+I1), s | 14.7 | 32.5 | | 14.4 | 22.8 | | 12.0 | 45.6 | | 11.0 | 22.9 | |
| Green Ext Time (p_c), s | 0.1 | 0.2 | | 0.0 | 5.8 | | 0.4 | 3.3 | | 0.0 | 16.9 | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2010 Ctrl Delay | | | 49.5 | | | | | | | | | |
| HCM 2010 LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |