Costa Verde Center Revitalization Project
Environmental Impact Report
SCH No. 2016071031; Project No. 477943

Appendix I

EIR Alternatives Traffic Analysis

March 2020

MEMORANDUM

To:	Mr. John Murphy Regency Centers	Date:	February 5, 2020
From:	John Boarman, P.E. / Shankar R., P.E LLG Engineers	LLG Ref:	3-14-2408
Subject:	Costa Verde Center Revitalization Project –EIR Alternatives Traffic Analysis		

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Linscott, Law & Greenspan Engineers (LLG) has prepared the following traffic analysis memo for the Costa Verde Center Revitalization Project. This memo includes an analysis of several alternatives to be addressed in the Environmental Impact Report (EIR) per the California Environmental Quality Act (CEQA). A brief background on CEQA EIR alternatives is provided below followed by a summary of the methodology, traffic analysis and findings.

EIR Alternatives Background

The CEQA Guidelines require that an EIR address alternatives to the proposed project, which includes retaining the existing 178,000 square feet of the retail space, an addition of approximately 360,000 square feet of research and development (R&D) space, an addition of 40,000 sf of office use and a 200-room hotel. The purpose of addressing alternatives is to identify if there are ways to avoid or reduce the significant impacts associated with the proposed project, especially to eliminate significant unmitigated impacts.

Project Alternatives Considered

The following four (4) alternatives will be included in the DEIR for the Costa Verde Center Revitalization Project:

- *No Project Alternative* – Under this alternative, the site is assumed to remain in its current condition. The existing site includes 178,000 SF of retail space. Since no development is proposed under this alternative, no additional traffic over existing condition would be generated. Therefore, no traffic impacts are calculated.
- *Retail, Hotel and Residential Alternative (2016 Proposed Project)* – This alternative proposes 125,000 SF of additional retail space, a 200-room hotel and 120 multi-family dwelling units. The existing retail space of 178,000 SF would be retained.
- *Retail, Office and R&D Alternative (No Hotel)* – This alternative proposes 360,000 SF of scientific research and development (R&D) space and 40,000 SF of office space. No hotel use is proposed under this alternative and the existing retail space of 178,000 SF would be retained.

- *Retail, Hotel, Office and Reduced R&D Alternative* – This alternative proposes 210,000 SF of scientific research and development (R&D) space, 40,000 SF of office space, and a 200-room hotel. The existing retail space of 178,000 SF would be retained.

Memo Organization

The below memo has been organized in the following order of alternatives.

- *No Project Alternative*
- *Retail, Hotel and Residential Alternative (2016 Proposed Project)*
- *Retail, Office and R&D Alternative (No Hotel)*
- *Retail, Hotel, Office and Reduced R&D Alternative*

Each alternative includes a description of the trip generation and associated traffic analysis at intersections, street segments, freeway segments and ramp meters. Each section also summarizes the impact comparison of the alternative to the proposed project.

Traffic Analysis Methodology

The traffic analysis for the above alternatives was conducted using a three-step process. Based on the City of San Diego Trip Generation Manual (May 2003), a trip generation forecast was prepared for each alternative. Secondly, the trips were distributed and assigned and lastly a level of service (LOS) analysis was conducted to check if the project alternatives would yield any reduction in traffic impacts. LOS analyses were conducted on the locations shown to have significant impacts for the proposed project.

The proposed project is calculated to cause impacts under the Existing, Near-Term (Opening Day 2023) and Year 2035 (Horizon Year) scenarios. Therefore, traffic analyses were conducted under these scenarios for the alternatives as well.

Impact Summary

Table A includes a summary of the significantly impacted locations under each alternative.

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TABLE A
SIGNIFICANT IMPACT SUMMARY TABLE

Analysis Year	Proposed Project *Cumulative Net New Trips* *ADT: 4,981* *Total AM: 621 (527 inbound / 94 outbound)* *Total PM: 592 (139 inbound / 453 outbound)*	Alternatives		
		Retail, Hotel and Residential (2016 Proposed Project) *Cumulative Net New Trips* *ADT: 6,329* *Total AM: 272 (143 inbound / 129 outbound)* *Total PM: 554 (302 inbound / 252 outbound)*	**Retail, Office and R&D (No Hotel)** *Cumulative Net New Trips* *ADT: 3,241* *Total AM: 514 (463 inbound / 51 outbound)* *Total PM: 454 (56 inbound / 398 outbound)*	**Retail, Hotel, Office and Reduced R&D** *Cumulative Net New Trips* *ADT: 3,937* *Total AM: 449 (372 inbound / 77 outbound)* *Total PM: 446 (125 inbound / 321 outbound)*
Existing + Project	Intersections ▪ Genesee Avenue / Esplanade Court (AM / PM) ▪ Genesee Avenue / Governor Drive (AM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (PM) *Total: 4*	Intersections ▪ Genesee Avenue / Esplanade Court (~~AM /~~ PM) ▪ Genesee Avenue / Governor Drive (AM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (PM) *Total: 4*	Intersections ▪ Genesee Avenue / Esplanade Court (AM / PM) ▪ Genesee Avenue / Governor Drive (AM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (PM) *Total: 4*	Intersections ▪ Genesee Avenue / Esplanade Court (~~AM /~~ PM) ▪ Genesee Avenue / Governor Drive (AM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (PM) *Total: 4*
	Street Segments No Impacts	Street Segments No Impacts	Street Segments No Impacts	Street Segments No Impacts
	Freeway Segments ▪ I-5 between Gilman Drive and Nobel Drive (PM SB) ▪ I-805 between Governor Drive and Nobel Drive (AM NB) ▪ SR 52 between Genesee Avenue and I-805 (PM EB) *Total: 3*	Freeway Segments ▪ ~~I-5 between Gilman Drive and Nobel Drive (PM SB)~~ ▪ ~~I-805 between Governor Drive and Nobel Drive (AM NB)~~ ▪ SR 52 between Genesee Avenue and I-805 (PM EB) *Total: 1*	Freeway Segments ▪ I-5 between Gilman Drive and Nobel Drive (PM SB) ▪ I-805 between Governor Drive and Nobel Drive (AM NB) ▪ SR 52 between Genesee Avenue and I-805 (PM EB) *Total: 3*	Freeway Segments ▪ I-5 between Gilman Drive and Nobel Drive (PM SB) ▪ ~~I-805 between Governor Drive and Nobel Drive (AM NB)~~ ▪ SR 52 between Genesee Avenue and I-805 (PM EB) *Total: 2*
	Ramp Meter ▪ Nobel Drive to SB I-805 (PM) *Total:1*	Ramp Meter ▪ ~~Nobel Drive to SB I-805 (PM)~~ *Total:0*	Ramp Meter ▪ Nobel Drive to SB I-805 (PM) *Total:1*	Ramp Meter ▪ Nobel Drive to SB I-805 (PM) *Total:1*

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Near-Term (Opening Day 2023) + Project	Intersections ▪ Genesee Avenue / Esplanade Court (PM) ▪ Genesee Avenue / Decoro Street (PM) ▪ Genesee Avenue / Governor Drive (AM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (AM / PM) *Total: 5*	Intersections ▪ Genesee Avenue / Esplanade Court (PM) ▪ Genesee Avenue / Decoro Street (PM) ▪ Genesee Avenue / Governor Drive (AM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (AM / PM) *Total: 5*	Intersections ▪ Genesee Avenue / Esplanade Court (PM) ▪ Genesee Avenue / Decoro Street (PM) ▪ Genesee Avenue / Governor Drive (AM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (AM / PM) *Total: 5*	Intersections ▪ Genesee Avenue / Esplanade Court (PM) ▪ Genesee Avenue / Decoro Street (PM) ▪ Genesee Avenue / Governor Drive (AM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (AM / PM) *Total: 5*
	Street Segments ▪ Genesee Avenue: Decoro Street to Centurion Square ▪ Genesee Avenue: Centurion Square to Governor Drive *Total: 2*	Street Segments ▪ La Jolla Village Drive: I-5 Ramps to Lebon Drive ▪ La Jolla Village Drive: Genesee Avenue to Executive Way ▪ Genesee Avenue: Nobel Drive to Decoro Street ▪ Genesee Avenue: Decoro Street to Centurion Square ▪ Genesee Avenue: Centurion Square to Governor Drive *Total: 5*	Street Segments ~~▪ Genesee Avenue: Decoro Street to Centurion Square~~ ~~▪ Genesee Avenue: Centurion Square to Governor Drive~~ *Total: 0*	Street Segments ▪ Genesee Avenue: Decoro Street to Centurion Square ▪ Genesee Avenue: Centurion Square to Governor Drive *Total: 2*
	Freeway Segments ▪ I-5 between Gilman Drive and Nobel Drive (PM SB) ▪ I-805 between Governor Drive and Nobel Drive (AM NB) ▪ SR 52 between Genesee Avenue and I-805 (AM WB; PM EB) *Total: 3*	Freeway Segments ~~▪ I-5 between Gilman Drive and Nobel Drive (PM SB)~~ ~~▪ I-805 between Governor Drive and Nobel Drive (AM NB)~~ ▪ SR 52 between Genesee Avenue and I-805 (~~AM WB;~~ PM EB) *Total: 1*	Freeway Segments ▪ I-5 between Gilman Drive and Nobel Drive (PM SB) ▪ I-805 between Governor Drive and Nobel Drive (AM NB) ▪ SR 52 between Genesee Avenue and I-805 (AM WB; PM EB) *Total: 3*	Freeway Segments ▪ I-5 between Gilman Drive and Nobel Drive (PM SB) ▪ I-805 between Governor Drive and Nobel Drive (AM NB) ▪ SR 52 between Genesee Avenue and I-805 (~~AM WB;~~ PM EB) *Total: 3*
	Ramp Meter ▪ Nobel Drive to SB I-805 (PM) *Total:1*	Ramp Meter ~~▪ Nobel Drive to SB I-805 (PM)~~ *Total:0*	Ramp Meter ▪ Nobel Drive to SB I-805 (PM) *Total:1*	Ramp Meter ▪ Nobel Drive to SB I-805 (PM) *Total:1*

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Year 2035 (Horizon Year) + Project	Intersections ▪ La Jolla Village Drive / Genesee Avenue (AM / PM) ▪ Costa Verde Boulevard / Loop Road (South) (PM) ▪ Genesee Avenue / Esplanade Court (AM / PM) ▪ Nobel Drive / Costa Verde Boulevard (AM / PM) ▪ Nobel Drive / Genesee Avenue (AM / PM) ▪ Genesee Avenue / Decoro Street (AM / PM) ▪ Genesee Avenue / Governor Drive (AM / PM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (AM / PM) *Total: 9*	Intersections ▪ La Jolla Village Drive / Genesee Avenue (AM / PM) ▪ Costa Verde Boulevard / Loop Road (South) (PM) ▪ Genesee Avenue / Esplanade Court (~~AM /~~ PM) ▪ Nobel Drive / Costa Verde Boulevard (AM / PM) ▪ Nobel Drive / Genesee Avenue (AM / PM) ▪ Genesee Avenue / Decoro Street (AM / PM) ▪ Genesee Avenue / Governor Drive (AM / PM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (AM / PM) *Total: 9*	Intersections ▪ La Jolla Village Drive / Genesee Avenue (AM / PM) ▪ Costa Verde Boulevard / Loop Road (South) (PM) ▪ Genesee Avenue / Esplanade Court (AM / PM) ▪ Nobel Drive / Costa Verde Boulevard (AM / PM) ▪ Nobel Drive / Genesee Avenue (AM / PM) ▪ Genesee Avenue / Decoro Street (AM / PM) ▪ Genesee Avenue / Governor Drive (AM / PM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (AM / PM) *Total: 9*	Intersections ▪ La Jolla Village Drive / Genesee Avenue (AM / PM) ▪ Costa Verde Boulevard / Loop Road (South) (PM) ▪ Genesee Avenue / Esplanade Court (AM / PM) ▪ Nobel Drive / Costa Verde Boulevard (AM / PM) ▪ Nobel Drive / Genesee Avenue (AM / PM) ▪ Genesee Avenue / Decoro Street (AM / PM) ▪ Genesee Avenue / Governor Drive (AM / PM) ▪ Genesee Avenue / SR 52 WB Ramps (PM) ▪ Genesee Avenue / SR 52 EB Ramps (AM / PM) *Total: 9*
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	Freeway Segments ▪ I-5 between Gilman Drive and Nobel Drive (PM SB) ▪ I-805 between Governor Drive and Nobel Drive (AM NB) ▪ SR 52 between Genesee Avenue and I-805 (AM WB; PM EB) *Total: 3*	Freeway Segments ▪ ~~I-5 between Gilman Drive and Nobel Drive (PM SB)~~ ▪ ~~I-805 between Governor Drive and Nobel Drive (AM NB)~~ ▪ SR 52 between Genesee Avenue and I-805 (~~AM WB;~~ PM EB) *Total: 1*	Freeway Segments ▪ I-5 between Gilman Drive and Nobel Drive (PM SB) ▪ I-805 between Governor Drive and Nobel Drive (AM NB) ▪ SR 52 between Genesee Avenue and I-805 (AM WB; PM EB) *Total: 3*	Freeway Segments ▪ ~~I-5 between Gilman Drive and Nobel Drive (PM SB)~~ ▪ I-805 between Governor Drive and Nobel Drive (AM NB) ▪ SR 52 between Genesee Avenue and I-805 (AM WB; PM EB) *Total: 2*
	Ramp Meter ▪ WB La Jolla Village Drive to NB I-5 (PM) ▪ Nobel Drive to SB I-805 (PM) *Total:2*	Ramp Meter ▪ ~~WB La Jolla Village Drive to NB I-5 (PM)~~ ▪ ~~Nobel Drive to SB I-805 (PM)~~ *Total:0*	Ramp Meter ▪ WB La Jolla Village Drive to NB I-5 (PM) ▪ Nobel Drive to SB I-805 (PM) *Total:2*	Ramp Meter ▪ ~~WB La Jolla Village Drive to NB I-5 (PM)~~ ▪ Nobel Drive to SB I-805 (PM) *Total:1*

General Notes:
1. Strike-through indicates elimination of an impact under the corresponding Alternative.

Project Alternative Analysis

The following describes the traffic analysis for the four (4) project alternatives.

- ***No Project Alternative*** – Since no development is proposed under this alternative, no additional traffic over existing conditions would be generated. Therefore, no traffic impacts are calculated.

Retail, Hotel and Residential Alternative (2016 Proposed Project)

- The trip generation for this alternative is calculated to be 6,329 ADT (net new) with 143/129 (in/out) AM peak hour trips and 302/252 (in/out) PM peak hour trips. ***Table 1–1*** shows the trip generation table for this alternative.

  The project alternative trips were assigned to the project study area based on the project trip distribution shown in the previous DEIR. ***Attachment A*** contains the trip distribution. Intersection, street segment, freeway segment and metered freeway on-ramp analyses were conducted to determine if any changes in impacts were identified.

  INTERSECTIONS

  Tables 1–2, ***1–3*** and ***1–4*** show the intersection analyses for the Existing, Near-Term (Opening Day 2023), and Year 2035 (Horizon Year) scenarios, respectively. *Attachment A* contains the intersection analysis worksheets for the Retail, Hotel and Residential Alternative (2016 Proposed Project).

  As shown in *Tables 1–2, 1–3* and *1–4,* **impact is reduced to less than significant levels for the following intersection:**

  Existing + Project

  - Genesee Avenue / Esplanade Court (during the AM peak hour)

  However, the PM peak hour impact would remain. Therefore, the overall number of impacts remains the same as the proposed project.

  Near-Term (Opening Day 2023) + Project

  No impacts are removed under the Near-Term (Opening Day 2023) scenario.

  Year 2035 (Horizon Year) + Project

  - Genesee Avenue / Esplanade Court (during the AM peak hour)

  However, the PM peak hour impact would remain. Therefore, the overall number of impacts remains the same as the proposed project.

STREET SEGMENTS

The calculated ADT under this Alternative is higher than the proposed project. The street segment analysis was conducted for this Alternative under all scenarios in order to determine any additional street segment impacts calculated due to the higher ADT.

Tables 1–5, ***1–6*** and ***1–7*** show the street segment analyses for the Existing, Near-Term (Opening Day 2023) and Year 2035 (Horizon Year) scenarios, respectively.

As shown in *Table 1–5*, despite the higher daily traffic this alternative generates, no additional street segment impacts are calculated under the Existing + Project scenario. However, as shown in *Tables 1–6* and *1–7*, **three (3) additional Near-Term (Opening Day 2023) street segment impacts and four (4) additional Year 2035 (Horizon Year) impacts are calculated:**

Existing + Project

No Impacts are calculated.

Near-Term (Opening Day 2023) + Project

- La Jolla Village Drive: I-5 Ramps to Lebon Drive
- La Jolla Village Drive: Genesee Avenue to Executive Way
- Genesee Avenue: Nobel Drive to Decoro Street

Year 2035 (Horizon Year) + Project

- La Jolla Village Drive: I-5 Ramps to Lebon Drive
- La Jolla Village Drive: Lebon Drive to Regents Road
- La Jolla Village Drive: Regents Road to Costa Verde Boulevard
- La Jolla Village Drive: Costa Verde Boulevard to Genesee Avenue

FREEWAY SEGMENTS

Tables 1–8A, ***1–8B***, ***1–9A***, ***1–9B***, ***1–10A*** and ***1–10B*** show the freeway segment analyses for the Existing, Near-Term (Opening Day 2023) and Year 2035 (Horizon Year) scenarios, respectively. *Attachment A* contains the freeway segment analysis worksheets for the Retail, Hotel and Residential Alternative (2016 Proposed Project).

As shown in *Tables 1–8A*, *1–8B*, *1–9A*, *1–9B*, *1–10A* and *1–10B*, **impacts are reduced to less than significant levels for the following freeway segments** due to the substantial reduction in the AM inbound and PM outbound trips in the alternative as compared to the proposed project**:**

Existing + Project

- I-5 between Gilman Drive and Nobel Drive, *LOS F–PM (SB)*
- I-805 between Governor Drive and Nobel Drive, *LOS F–AM (NB)*

Near-Term (Opening Day 2023) + Project

- I-5 between Gilman Drive and Nobel Drive, *LOS F–PM (SB)*
- I-805 between Governor Drive and Nobel Drive, *LOS F–AM (NB)*
- SR 52 between Genesee Avenue and I-805, *LOS E–AM (WB)*

However, the PM peak hour impact on the SR 52 between Genesee Avenue and I-805 on the eastbound direction would remain.

Year 2035 (Horizon Year) + Project

- I-5 between Gilman Drive and Nobel Drive, *LOS F–PM (SB)*
- I-805 between Governor Drive and Nobel Drive, *LOS F–AM (NB)*
- SR 52 between Genesee Avenue and I-805, *LOS F–AM (WB)*

However, the PM peak hour impact on the SR 52 between Genesee Avenue and I-805 on the eastbound direction would remain.

RAMP METER

Tables 1–11, ***1–12*** and ***1–13*** show the ramp meter analyses for the Existing, Near-Term (Opening Day 2023), and Year 2035 (Horizon Year) scenarios, respectively.

As shown in *Tables 1–11*, *1–12* and *1–13*, **impacts are reduced to less than significant levels** for the following ramp meters due to the reduction in PM peak hour trips under this alternative**:**

Existing + Project

- Nobel Drive to SB I-805 (PM)

Near-Term (Opening Day 2023) + Project

- Nobel Drive to SB I-805 (PM)

Year 2035 (Horizon Year) + Project

- WB La Jolla Village Drive to NB I-5 (PM)
- Nobel Drive to SB I-805 (PM)

Retail, Office and R&D Alternative (No Hotel)

- The trip generation for this alternative is calculated to be 3,241 ADT (net new) with 463/51 (in/out) AM peak hour trips and 56/398 (in/out) PM peak hour trips. ***Table 2–1*** shows the trip generation table for this alternative.

  The project alternative trips were assigned to the project study area based on the proposed project's trip distribution. ***Attachment B*** contains the trip distribution. Intersection, street segment and freeway segment analyses were conducted to determine if any changes in impacts were identified.

  INTERSECTIONS

  Tables 2–2, ***2–3*** and ***2–4*** show the intersection analyses for the Existing, Near-Term (Opening Day 2023), and Year 2035 (Horizon Year) scenarios, respectively. *Attachment B* contains the intersection analysis worksheets for the Retail, Office and R&D Alternative (No Hotel).

  As shown in *Tables 2–2, 2–3* and *2–4,* **no impacts are reduced to less than significant levels.**

  Existing + Project

  No impacts are reduced under the Existing + Project scenario.

  Near-Term (Opening Day 2023) + Project

  No impacts are reduced under the Near-Term (Opening Day 2023) scenario.

  Year 2035 (Horizon Year) + Project

  No impacts are reduced under the Year 2035 (Horizon Year) scenario.

  STREET SEGMENTS

  Tables 2–5 and ***2–6*** show the street segment analyses for the Near-Term (Opening Day 2023) and Year 2035 (Horizon Year) scenarios, respectively.

  Since this alternative is calculated to generate less daily traffic volumes, it can be concluded that no impact is calculated under the Existing scenario given that the proposed project did not have any impact under this scenario as well. As shown in *Tables 2–5* and 2*–6,* **impacts are reduced to less than significant levels for the following street segments:**

  Near-Term (Opening Day 2023) + Project

  - Genesee Avenue: Decoro Street to Centurion Square
  - Genesee Avenue: Centurion Square to Governor Drive

  Year 2035 (Horizon Year) + Project

  - La Jolla Village Drive: Genesee Avenue to Executive Way
  - Genesee Avenue: La Jolla Village Drive to Esplanade Court

FREEWAY SEGMENTS

Tables 2–7A, ***2–7B***, ***2–8A***, ***2–8B***, ***2–9A*** and ***2–9B*** show the freeway segment analyses for the Existing, Near-Term (Opening Day 2023) and Year 2035 (Horizon Year) scenarios, respectively. *Attachment B* contains the freeway segment analysis worksheets for the Retail, Office and R&D Alternative (No Hotel).

As shown in *Tables 2–7A, 2–7B, 2–8A, 2–8B, 2–9A* and *2–9B,* **no impacts are reduced to less than significant levels:**

Existing + Project

No impacts are reduced under the Existing + Project scenario.

Near-Term (Opening Day 2023) + Project

No impacts are reduced the Near-Term (Opening Day 2023) scenario.

Year 2035 (Horizon Year) + Project

No impacts are reduced under the Year 2035 (Horizon Year) scenario.

RAMP METER

Tables 2–10, ***2–11*** and ***2–12*** show the ramp meter analyses for the Existing, Near-Term (Opening Day 2023), and Year 2035 (Horizon Year) scenarios, respectively.

As shown in *Tables 2–10, 2–11* and *2–12,* **no impacts are reduced to less than significant levels.**

Existing + Project

No impacts are reduced under the Existing scenario.

Near-Term (Opening Day 2023) + Project

No impacts are reduced under the Near-Term (Opening Day 2023) scenario.

Year 2035 (Horizon Year) + Project

No impacts are reduced under the Year 2035 (Horizon Year) scenario.

Retail, Hotel, Office and Reduced R&D Alternative

- The trip generation for this alternative is calculated to be 3,937 ADT (net new) with 372/77 (in/out) AM peak hour trips and 125/321 (in/out) PM peak hour trips. ***Table 3–1*** shows the trip generation table for this alternative.

The project alternative trips were assigned to the project study area based on the proposed project's trip distribution. *Attachment B* contains the trip distribution. Intersection, street segment and freeway segment analyses were conducted to determine if any changes in impacts were identified.

INTERSECTIONS

Tables 3–2, ***3–3*** and ***3–4*** show the intersection analyses for the Existing, Near-Term (Opening Day 2023), and Year 2035 (Horizon Year) scenarios, respectively. ***Attachment C*** contains the intersection analysis worksheets for the Retail, Hotel, Office and Reduced R&D Alternative.

As shown in *Tables 3–2*, *3–3* and *3–4*, **impact is reduced to less than significant level for the following intersection:**

Existing + Project

- Genesee Avenue / Esplanade Court (during the AM peak hour)

However, the PM peak hour impact would remain. Therefore, the overall number of impacts remains the same as the proposed project.

Near-Term (Opening Day 2023) + Project

No impacts are reduced under the Near-Term (Opening Day 2023) scenario.

Year 2035 (Horizon Year) + Project

No impacts are reduced under the Year 2035 (Horizon Year) scenario.

STREET SEGMENTS

Tables 3–5 and ***3–6*** show the street segment analyses for the Near-Term (Opening Day 2023) and Year 2035 (Horizon Year) scenarios, respectively.

Since this alternative is calculated to generate less daily traffic volumes, it can be concluded that no impact is calculated under the Existing + Project scenario given that the proposed project is calculated to not trigger significant any impact under this scenario. As shown in *Tables 3–5* and 3–*6*, **no street segment impacts are reduced to less than significant levels:**

Existing + Project

Similar to the proposed project, no impacts are calculated under the Existing + Project scenario.

Near-Term (Opening Day 2023) + Project

No impacts are reduced under the Near-Term (Opening Day 2023) scenario.

Year 2035 (Horizon Year) + Project

No impacts are reduced under the Year 2035 (Horizon Year) scenario.

FREEWAY SEGMENTS

Tables 3–7A, ***3–7B***, ***3–8A***, ***3–8B***, ***3–9A*** and ***3–9B*** show the freeway segment analyses for the Existing, Near-Term (Opening Day 2023) and Year 2035 (Horizon Year) scenarios, respectively. *Attachment C* contains the freeway segment analysis worksheets for the Retail, Hotel, Office and Reduced R&D Alternative.

As shown in *Tables 3–7A, 3–7B, 3–8A, 3–8B, 3–9A* and *3–9B,* **impacts are reduced to less than significant levels for the following freeway segments:**

Existing + Project

- I-805 between Governor Drive and Nobel Drive, *LOS F–AM (NB)*

Near-Term (Opening Day 2023) + Project

- SR 52 between Genesee Avenue and I-805, *LOS E–AM (WB)*

However, the PM peak hour impact on the SR 52 between Genesee Avenue and I-805 on the eastbound direction would remain.

Year 2035 (Horizon Year) + Project

- I-5 between Gilman Drive and Nobel Drive, *LOS F–PM (SB)*

RAMP METER

Tables 3–10, ***3–11*** and ***3–12*** show the ramp meter analyses for the Existing, Near-Term (Opening Day 2023), and Year 2035 (Horizon Year) scenarios, respectively.

As shown in *Tables 3–10, 3–11* and *3–12,* **impacts are reduced to less than significant levels** in the Year 2035 due to the reduction in PM peak hour trips under the Retail, Hotel, Office and Reduced R&D Alternative**:**

Existing + Project

No impacts are reduced under the Existing scenario.

Near-Term (Opening Day 2023) + Project

No impacts are reduced under the Near-Term (Opening Day 2023) scenario.

Year 2035 (Horizon Year) + Project

- WB La Jolla Village Drive to NB I-5 (PM)

Please call us if you have any questions.

Cc: File

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TABLE 1–1
PROJECT TRIP GENERATION
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Land Use & Size	Daily Trip Ends (ADT) [a]		AM Peak Hour					PM Peak Hour				
	Rate	Volume	% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
					In	Out	Total			In	Out	Total
Community Shopping Center *Proposed: 125,000 SF*	***A. Trip Rate: 70 / KSF[b]***	8,750	3%	60:40	158	105	263	9%	50:50	394	394	788
	B. Mode Split:											
	Transit Reduction (10%) [c]	*-875*			*-16*	*-10*	*-26*			*-39*	*-39*	*-78*
	Walk/bike Reduction (25%) [d]	*-2,188*			*-40*	*-26*	*-66*			*-98*	*-98*	*-196*
	Driveway Trips (100%)	5,687			102	69	171			257	257	514
	C. Primary / Pass-By Trips:											
	Pass-By Trips (30%) [e]	1,706			30	21	51			77	77	154
	Primary Trips (70%) [e]	**3,981**			**72**	**48**	**120**			**180**	**180**	**360**
Hotel *200 rooms*	***A. Trip Rate: 10 / Room[h]***	2,000	6%	60:40	72	48	120	8%	60:40	96	64	160
	B. Mode Split:											
	Transit Reduction (10%) [c]	*-200*			*-7*	*-5*	*-12*			*-10*	*-6*	*-16*
	Walk/bike Reduction (5%) [f]	*-100*			*-4*	*-2*	*-6*			*-5*	*-3*	*-8*
	Driveway Trips (100%)	1,700			61	41	102			81	55	136
	C. Primary / Pass-By Trips:											
	Pass-By Trips (0%) [e]	0			0	0	0			0	0	0
	Primary Trips (100%) [e]	**1,700**			**61**	**41**	**102**			**81**	**55**	**136**

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TABLE 1–1
PROJECT TRIP GENERATION
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Land Use & Size		Daily Trip Ends (ADT) [a]		AM Peak Hour				PM Peak Hour				
	Rate	Volume	% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
					In	Out	Total			In	Out	Total
Apartments *120 dwelling units*	***A. Trip Rate: 6 / Dwelling Unit*** [i]	720	8%	20:80	12	46	58	9%	70:30	46	19	65
	B. Mode Split:											
	Transit Reduction (5%) [g]	*-36*			*-1*	*-4*	*-5*			*-3*	*-1*	*-4*
	Walk/bike Reduction (5%) [e]	*-36*			*-1*	*-2*	*-3*			*-2*	*-1*	*-3*
	Driveway Trips (100%)	648			10	40	50			41	17	58
	C. Primary / Pass-By Trips:											
	Pass-By Trips (0%) [e]	0			0	0	0			0	0	0
	Primary Trips (100%) [e]	**648**			**10**	**40**	**50**			**41**	**17**	**58**
Total Primary Trips		***6,329***			***143***	***129***	***272***			***302***	***252***	***554***

Footnotes:

a. Trip-ends are one-way traffic movements, either entering or leaving.
b. Per the City's Trip Generation Manual, the Community Shopping Center trip rate of 70 trips/ KSF was used.
c. A transit credit of 10% was included, given that a new light-rail transit station is proposed and the existing transit usage of 6%.
d. A walk/bike reduction of 25% was applied to the proposed retail based on existing survey. *Attachment A* contains the survey results.
e. Pass-by and Primary trip percentages based on Community Shopping Center per City of San Diego Trip Generation Manual.
f. A walk/bike reduction of 5% was applied to account for the interaction between the hotel guests and residents with the retail and restaurant opportunities such as at the adjacent Westfield UTC Mall.
g. Transit credits for residential land uses are 5% ADT, 9% AM and 6% PM peak hours.
h. Per the City's Trip Generation Manual, the Hotel trip rate of 10 weekday trips/ room was used.
i. The residential building footprint is 0.64 acres. With 120 units, the trip rate of 6/DU was used (as more than 20 DU/acre is proposed).

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TABLE 1–2
EXISTING + PROJECT INTERSECTION OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Intersection	Control Type	Peak Hour	Existing		Existing With Alternative (Retail, Hotel and Residential)		Δ[c]	Sig	Proposed Project Impacts (from TIA)
			Delay[a]	LOS[b]	Delay	LOS			
14. Genesee Avenue / Esplanade Court	Signal	AM	31.4	C	37.9	D	6.5	No	**Yes**
		PM	**61.7**	**E**	**85.5**	**F**	**23.8**	**Yes**	**Yes**
29. Genesee Avenue / Governor Drive	Signal	AM	**225.8**	**F**	**228.0**	**F**	**2.2**	**Yes**	**Yes**
		PM	**57.1**	**E**	**57.4**	**E**	0.3	No	No
30. Genesee Avenue / SR 52 WB Ramps	MSSC[d]	AM	18.7	C	19.4	C	0.7	No	No
		PM	**71.9**	**F**	**82.8**	**F**	**10.9**	**Yes**	**Yes**
31. Genesee Avenue / SR 52 EB Ramps	Signal	AM	44.4	D	48.1	D	3.7	No	No
		PM	**152.4**	**F**	**164.0**	**F**	**11.6**	**Yes**	**Yes**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. "Δ" denotes the project-induced increase in delay.
d. MSSC – Minor-street Stop-controlled intersection.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the delay increases by 2 seconds for LOS E or 1 second for LOS F.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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TABLE 1–3
NEAR-TERM (OPENING DAY 2023) + PROJECT INTERSECTION OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Intersection	Control Type	Peak Hour	Near-Term (Opening Day 2023)		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)		Δ[c]	Sig	Proposed Project Impacts (from TIA)
			Delay[a]	LOS[b]	Delay	LOS			
14. Genesee Avenue / Esplanade Court	Signal	AM	27.4	C	32.7	C	5.3	No	No
		PM	**67.4**	**E**	**90.5**	**F**	**23.1**	**Yes**	**Yes**
28. Genesee Avenue / Decoro Street	Signal	AM	30.9	C	34.2	C	3.3	No	No
		PM	**279.3**	**F**	**287.3**	**F**	**8.0**	**Yes**	**Yes**
29. Genesee Avenue / Governor Drive	Signal	AM	**368.4**	**F**	**370.7**	**F**	**2.3**	**Yes**	**Yes**
		PM	**65.1**	**E**	**66.0**	**E**	0.9	No	No
30. Genesee Avenue / SR 52 WB Ramps	MSSC[d]	AM	26.8	D	28.3	D	1.5	No	No
		PM	**135.0**	**F**	**151.5**	**F**	**16.5**	**Yes**	**Yes**
31. Genesee Avenue / SR 52 EB Ramps	Signal	AM	53.3	D	**57.3**	**E**	**4.0**	**Yes**	**Yes**
		PM	**152.6**	**F**	**164.3**	**F**	**11.7**	**Yes**	**Yes**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. "Δ" denotes the project-induced increase in delay.
d. MSSC – Minor-street Stop-controlled intersection.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the delay increases by 2 seconds for LOS E or 1 second for LOS F.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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TABLE 1–4
YEAR 2035 (HORIZON YEAR) + PROJECT INTERSECTION OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Intersection	Control Type	Peak Hour	Year 2035 (Horizon Year)		Year 2035 (Horizon Year) With Alternative (Retail, Hotel and Residential)		Δ[c]	Sig	Proposed Project Impacts (from TIA)
			Delay[a]	LOS[b]	Delay	LOS			
7. La Jolla Village Drive / Genesee Avenue	Signal	AM	**107.1**	**F**	**111.2**	**F**	**4.1**	**Yes**	**Yes**
		PM	**71.7**	**E**	**81.8**	**F**	**10.1**	**Yes**	**Yes**
13. Costa Verde Boulevard / Loop Road (South)	MSSC[d]	AM	18.6	C	23.4	C	4.8	No	No
		PM	**97.7**	**F**	**140.0**	**F**	**42.3**	**Yes**	**Yes**
14. Genesee Avenue / Esplanade Court	Signal	AM	51.9	D	54.1	D	2.2	No	**Yes**
		PM	**112.3**	**F**	**132.0**	**F**	**19.7**	**Yes**	**Yes**
20. Nobel Drive / Costa Verde Boulevard / Cargill Avenue	Signal	AM	**58.3**	**E**	**61.4**	**E**	**3.1**	**Yes**	**Yes**
		PM	54.4	D	**59.8**	**E**	**5.4**	**Yes**	**Yes**
22. Nobel Drive / Genesee Avenue	Signal	AM	**93.4**	**F**	**95.7**	**F**	**2.3**	**Yes**	**Yes**
		PM	**73.6**	**E**	**76.7**	**E**	**3.1**	**Yes**	**Yes**
28. Genesee Avenue / Decoro Street	Signal	AM	**157.5**	**F**	**161.2**	**F**	**3.7**	**Yes**	**Yes**
		PM	**328.7**	**F**	**335.6**	**F**	**6.9**	**Yes**	**Yes**
29. Genesee Avenue / Governor Drive	Signal	AM	**507.1**	**F**	**510.7**	**F**	**3.6**	**Yes**	**Yes**
		PM	**86.4**	**F**	**90.0**	**F**	**3.6**	**Yes**	**Yes**
30. Genesee Avenue / SR 52 WB Ramps	MSSC[d]	AM	**38.0**	**E**	**40.5**	**E**	2.5	No	No
		PM	**249.4**	**F**	**275.0**	**F**	**25.6**	**Yes**	**Yes**
31. Genesee Avenue / SR 52 EB Ramps	Signal	AM	**87.8**	**F**	**92.6**	**F**	**4.8**	**Yes**	**Yes**
		PM	**179.6**	**F**	**191.6**	**F**	**12.0**	**Yes**	**Yes**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. "Δ" denotes the project-induced increase in delay.
d. MSSC – Minor-street Stop-controlled intersection.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the delay increases by 2 seconds for LOS E or 1 second for LOS F.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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TABLE 1–5
EXISTING + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Near-Term (Opening Day 2023)			Retail, Hotel and Residential Alternative ADT 6,329		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
La Jolla Village Drive													
I-5 to Lebon Drive	6-Lane Major Arterial	50,000	**46,430**	**E**	**0.929**	12%	760	**47,190**	**E**	**0.944**	0.015	No	No
Lebon Drive to Regents Road	6-Lane Major Arterial	50,000	42,940	D	0.859	13%	820	43,760	D	0.875	0.016	No	No
Regents Road to Costa Verde Boulevard	6-Lane Major Arterial	50,000	35,240	C	0.705	18%	1,140	36,380	C	0.728	0.023	No	No
Costa Verde Boulevard to Genesee Avenue	6-Lane Major Arterial	50,000	37,280	C	0.746	15%	950	38,230	C	0.765	0.019	No	No
Genesee Avenue to Executive Way	6-Lane Major Arterial	50,000	42,350	D	0.847	15%	950	43,300	D	0.866	0.019	No	No
Executive Way to Towne Centre Drive	6-Lane Prime Arterial	60,000	43,530	C	0.726	15%	950	44,480	C	0.741	0.015	No	No

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TABLE 1–5
EXISTING + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Near-Term (Opening Day 2023)			Retail, Hotel and Residential Alternative ADT 6,329		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
Towne Centre Drive to I-805	8-Lane Prime Arterial	80,000	58,490	C	0.731	12%	760	59,250	C	0.741	0.010	No	No
Nobel Drive													
I-5 to Lebon Drive	6-Lane Major Arterial	50,000	22,730	B	0.455	6%	380	23,110	B	0.462	0.007	No	No
Lebon Drive to Regents Road	6-Lane Major Arterial	50,000	24,330	B	0.487	11%	700	25,030	B	0.501	0.014	No	No
Regents Road to Costa Verde Boulevard	6-Lane Major Arterial	50,000	24,570	B	0.491	20%	1,270	25,840	B	0.517	0.026	No	No
Costa Verde Boulevard to Genesee Avenue	6-Lane Major Arterial	50,000	22,410	B	0.448	21%	1,330	23,740	B	0.475	0.027	No	No
Genesee Avenue to Lombard Place	4-Lane Major Arterial	40,000	22,190	C	0.555	9%	570	22,760	C	0.569	0.014	No	No

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TABLE 1–5
EXISTING + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Near-Term (Opening Day 2023)			Retail, Hotel and Residential Alternative ADT 6,329		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
Lombard Place to Towne Centre Drive	4-Lane Major Arterial	40,000	20,270	B	0.507	9%	570	20,840	B	0.521	0.014	No	No
Towne Centre Drive to Shoreline Drive	6-Lane Prime Arterial	60,000	13,390	A	0.223	6%	380	13,770	A	0.230	0.007	No	No
Shoreline Drive to Judicial Drive	6-Lane Prime Arterial	60,000	15,350	A	0.256	5%	320	15,670	A	0.261	0.005	No	No
Judicial Drive to I-805	6-Lane Major Arterial	50,000	23,370	B	0.467	4%	250	23,620	B	0.472	0.005	No	No
Lebon Drive													
La Jolla Village Drive to Nobel Drive	5-Lane Major Arterial	45,000	14,530	A	0.323	1%	60	14,590	A	0.324	0.001	No	No

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TABLE 1–5
EXISTING + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Near-Term (Opening Day 2023)			Retail, Hotel and Residential Alternative ADT 6,329		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
Regents Road													
Executive Drive to La Jolla Village Drive	4-Lane Collector *(continuous left-turn lane)*	30,000	18,100	C	0.603	4%	250	18,350	C	0.612	0.009	No	No
La Jolla Village Drive to Nobel Drive	5-Lane Major Arterial	45,000	15,170	A	0.337	1%	60	15,230	A	0.338	0.001	No	No
South of Nobel Drive	4-Lane Major Arterial	40,000	15,170	B	0.379	9%	570	15,740	B	0.394	0.015	No	No
Genesee Avenue													
Eastgate Mall to Executive Drive	4-Lane Major Arterial	40,000	29,980	C	0.750	10%	630	30,610	D	0.765	0.015	No	No
Executive Drive to La Jolla Village Drive	4-Lane Major Arterial	40,000	32,190	D	0.805	12%	760	32,950	D	0.824	0.019	No	No
La Jolla Village Drive to Esplanade Court	4-Lane Major Arterial	40,000	28,790	C	0.720	40%	2,530	31,320	D	0.783	0.063	No	No

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TABLE 1–5
EXISTING + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Near-Term (Opening Day 2023)			Retail, Hotel and Residential Alternative ADT 6,329		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
Esplanade Court to Nobel Drive	4-Lane Major Arterial	40,000	22,980	C	0.575	34%	2,120	25,100	C	0.628	0.053	No	No
Nobel Drive to Decoro Street	4-Lane Major Arterial	40,000	30,920	D	0.773	20%	1,270	32,190	D	0.805	0.032	No	No
Decoro Street to Centurion Square	4-Lane Major Arterial	40,000	32,190	D	0.805	20%	1,270	33,460	D	0.837	0.032	No	No
Centurion Square to Governor Drive	4-Lane Major Arterial	40,000	33,620	D	0.841	20%	1,270	34,890	D	0.872	0.031	No	No
Governor Drive to SR 52	4-Lane Major Arterial	40,000	30,330	D	0.758	17%	1,080	31,410	D	0.785	0.027	No	No

Footnotes:
a. Capacities based on City of San Diego Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.
d. Volume to Capacity.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.02 for LOS E or 0.01 for LOS F.

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TABLE 1–6
NEAR-TERM (OPENING DAY 2023) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Near-Term (Opening Day 2023)			Retail, Hotel and Residential Alternative ADT 6,329		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
La Jolla Village Drive													
I-5 Ramps to Lebon Drive	6-Lane Major Arterial	50,000	**51,620**	**F**	**1.032**	12%	760	**52,380**	**F**	**1.048**	0.016	**Yes**	No
Genesee Avenue to Executive Way	6-Lane Major Arterial	50,000	**49,220**	**E**	**0.984**	15%	950	**50,170**	**F**	**1.003**	0.019	**Yes**	No
Genesee Avenue													
Nobel Drive to Decoro Street	4-Lane Major Arterial	40,000	33,840	D	0.846	20%	1,270	**35,110**	**E**	**0.878**	**0.032**	**Yes**	No
Decoro Street to Centurion Square	4-Lane Major Arterial	40,000	**35,110**	**E**	**0.878**	20%	1,270	**36,380**	**E**	**0.910**	**0.032**	**Yes**	**Yes**

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TABLE 1–6
NEAR-TERM (OPENING DAY 2023) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Near-Term (Opening Day 2023)			Retail, Hotel and Residential Alternative ADT 6,329		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
Centurion Square to Governor Drive	4-Lane Major Arterial	40,000	**36,540**	**E**	**0.914**	20%	1,270	**37,810**	**E**	**0.945**	**0.031**	**Yes**	**Yes**

Footnotes:
a. Capacities based on City of San Diego Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.
d. Volume to Capacity.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.02 for LOS E or 0.01 for LOS F.

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TABLE 1–7
YEAR 2035 (HORIZON YEAR) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Year 2035 (Horizon Year)			Retail, Hotel and Residential Alternative ADT 6,329		Year 2035 (Horizon Year) With Alternative (Retail, Hotel and Residential)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
La Jolla Village Drive													
I-5 Ramps to Lebon Drive	6-Lane Major Arterial	50,000	**52,460**	**F**	**1.049**	12%	760	**53,220**	**F**	**1.064**	**0.015**	**Yes**	No
Lebon Drive to Regents Road	6-Lane Major Arterial	50,000	**52,410**	**F**	**1.048**	13%	820	**53,230**	**F**	**1.065**	**0.017**	**Yes**	No
Regents Road to Costa Verde Boulevard	6-Lane Major Arterial	50,000	**46,190**	**E**	**0.924**	18%	1,140	**47,330**	**E**	**0.947**	**0.023**	**Yes**	No
Costa Verde Boulevard to Genesee Avenue	6-Lane Major Arterial	50,000	**50,320**	**F**	**1.006**	15%	950	**51,270**	**F**	**1.025**	**0.019**	**Yes**	No
Genesee Avenue to Executive Way	6-Lane Major Arterial	50,000	**55,400**	**F**	**1.108**	15%	950	**56,350**	**F**	**1.127**	**0.019**	**Yes**	**Yes**
Genesee Avenue													
La Jolla Village Drive to Esplanade Court	6-Lane Major Arterial	50,000	**45,100**	**E**	**0.902**	40%	2,530	**47,630**	**E**	**0.953**	**0.051**	**Yes**	**Yes**
Nobel Drive to Decoro Street	4-Lane Major Arterial	40,000	**45,700**	**F**	**1.143**	20%	1,270	**46,970**	**F**	**1.174**	**0.031**	**Yes**	**Yes**
Decoro Street to Centurion Square	4-Lane Major Arterial	40,000	**47,750**	**F**	**1.194**	20%	1,270	**49,020**	**F**	**1.226**	**0.032**	**Yes**	**Yes**

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TABLE 1–7
YEAR 2035 (HORIZON YEAR) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Year 2035 (Horizon Year)			Retail, Hotel and Residential Alternative ADT 6,329		Year 2035 (Horizon Year) With Alternative (Retail, Hotel and Residential)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
Centurion Square to Governor Drive	4-Lane Major Arterial	40,000	**55,850**	**F**	**1.396**	20%	1,270	**57,120**	**F**	**1.428**	**0.032**	**Yes**	**Yes**
Governor Drive to SR 52	4-Lane Major Arterial	40,000	**44,750**	**F**	**1.119**	17%	1,080	**45,830**	**F**	**1.146**	**0.027**	**Yes**	**Yes**

Footnotes:
a. Capacities based on City of San Diego Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.
d. Volume to Capacity.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.02 for LOS E or 0.01 for LOS F.

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TABLE 1–8A
EXISTING + PROJECT FREEWAY SEGMENT OPERATIONS—AM PEAK HOUR
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Freeway and Segment	Existing ADT	Existing + Project ADT	Direction & Number of Lanes		Existing			Existing With Alternative (Retail, Hotel and Residential)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
					V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-805													
Governor Drive to Nobel Drive	205,790	206,110	NB Mainlines	4M+ 1A	**1.046**	**>45.00**	**F**	**1.047**	**>45.00**	**F**	0.001	No	**Yes**
			SB Mainlines	4M+ 1A	0.427	15.40	B	0.428	15.50	B	0.001	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

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TABLE 1–8B
EXISTING + PROJECT FREEWAY SEGMENT OPERATIONS—PM PEAK HOUR
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Freeway and Segment	Existing ADT	Existing + Project ADT	Direction, &Number of Lanes	Existing			Existing With Alternative (Retail, Hotel and Residential)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-5												
Gilman Drive to Nobel Drive	172,110	172,300	NB Mainlines 4M	0.851	34.00	D	0.852	34.10	D	0.001	No	No
			SB Mainlines 4M	**0.825**	**>45.00**	**F**	**0.826**	**>45.00**	**F**	0.001	No	**Yes**
SR 52												
Genesee Avenue to I-805	91,080	91,780	EB Mainlines 2M	**1.098**	**>45.00**	**F**	**1.105**	**>45.00**	**F**	**0.007**	**Yes**	**Yes**
			WB Mainlines 2M	0.714	27.30	D	0.721	27.60	D	0.007	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

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TABLE 1–9A
NEAR-TERM (OPENING DAY 2023) + PROJECT FREEWAY SEGMENT OPERATIONS—AM PEAK HOUR
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Freeway and Segment	Near-Term (Opening Day 2023) ADT	Near-Term (Opening Day 2023) + Project ADT	Direction & Number of Lanes	Near-Term (Opening Day 2023)			Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-805												
Governor Drive to Nobel Drive	212,680	213,000	NB Mainlines 4M+ 1A	**1.100**	**>45.00**	**F**	**1.100**	**>45.00**	**F**	0.000	No	**Yes**
			SB Mainlines 4M+ 1A	0.449	16.20	B	0.449	16.30	B	0.000	No	No
SR 52												
Genesee Avenue to I-805	102,210	102,910	EB Mainlines 2M	**1.074**	**>45.00**	**F**	**1.077**	**>45.00**	**F**	0.003	No	No
			WB Mainlines 2M	0.865	34.80	D	0.869	35.00	D	0.004	No	**Yes**

Footnotes:
a. Volume to Capacity.
b. Level of Service.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

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TABLE 1–9B
NEAR-TERM (OPENING DAY 2023) + PROJECT FREEWAY SEGMENT OPERATIONS—PM PEAK HOUR
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Freeway and Segment	Near-Term (Opening Day 2023) ADT	Near-Term (Opening Day 2023) + Project ADT	Direction & Number of Lanes	Near-Term (Opening Day 2023)			Near-Term (Opening Day 2023) With Alternative (Retail, Hotel and Residential)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-5												
Gilman Drive to Nobel Drive	177,990	178,180	NB Mainlines 4M	**0.877**	**35.60**	**E**	**0.877**	**35.60**	**E**	0.000	No	No
			SB Mainlines 4M	**0.878**	**>45.00**	**F**	**0.879**	**>45.00**	**F**	0.001	No	**Yes**
SR 52												
Genesee Avenue to I-805	102,210	102,910	EB Mainlines 2M	**1.237**	**>45.00**	**F**	**1.243**	**>45.00**	**F**	**0.006**	**Yes**	**Yes**
			WB Mainlines 2M	0.799	31.10	D	0.807	31.50	D	0.008	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

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TABLE 1–10A
YEAR 2035 (HORIZON YEAR) + PROJECT FREEWAY SEGMENT OPERATIONS—AM PEAK HOUR
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Freeway and Segment	2035 ADT	2035 + Project ADT	Direction & Number of Lanes		Year 2035 (Horizon Year) V/C[a]	Year 2035 (Horizon Year) Density	Year 2035 (Horizon Year) LOS[b]	Year 2035 (Horizon Year) With Alternative (Retail, Hotel and Residential) V/C[a]	Year 2035 (Horizon Year) With Alternative (Retail, Hotel and Residential) Density	Year 2035 (Horizon Year) With Alternative (Retail, Hotel and Residential) LOS[b]	V/C Delta	Sig	Proposed Project Impacts (from TIA)
I-805													
Governor Drive to Nobel Drive	286,270	286,590	NB Mainlines	4M+ 1A	**1.456**	**>45.00**	**F**	**1.457**	**>45.00**	**F**	0.001	No	**Yes**
			SB Mainlines	4M+ 1A	0.594	21.50	C	0.595	21.50	C	0.001	No	No
SR 52													
Genesee Avenue to I-805	114,961	115,661	EB Mainlines	2M	**1.205**	**>45.00**	**F**	**1.208**	**>45.00**	**F**	0.003	No	No
			WB Mainlines	2M	**1.112**	**>45.00**	**F**	**1.116**	**>45.00**	**F**	0.004	No	**Yes**

Footnotes:
a. Volume to Capacity.
b. Level of Service.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

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TABLE 1–10B
YEAR 2035 (HORIZON YEAR) + PROJECT FREEWAY SEGMENT OPERATIONS—PM PEAK HOUR
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Freeway and Segment	2035 ADT	2035 + Project ADT	Direction & Number of Lanes	Year 2035 (Horizon Year)			Year 2035 (Horizon Year) With Alternative (Retail, Hotel and Residential)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-5												
Gilman Drive to Nobel Drive	203,460	203,650	NB Mainlines 4M	**1.071**	**>45.00**	**F**	**1.072**	**>45.00**	**F**	0.001	No	No
			SB Mainlines 4M	**0.976**	**>45.00**	**F**	**0.977**	**>45.00**	**F**	0.001	No	**Yes**
SR 52												
Genesee Avenue to I-805	114,961	115,661	EB Mainlines 2M	**1.431**	**>45.00**	**F**	**1.438**	**>45.00**	**F**	**0.007**	**Yes**	**Yes**
			WB Mainlines 2M	**0.883**	**35.80**	**E**	**0.891**	**36.30**	**E**	0.008	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

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TABLE 1–11
EXISTING + PROJECT RAMP METER OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Location/Condition	Peak Hour	Peak Hour Demand	SOV Demand (veh/hr/lane)	Ramp Meter Rate (Flow) (veh/hr/lane)	Excess Demand (veh/hr/lane)	Delay per Lane [a]	Queue per Lane [b]
Nobel Drive to SB I-805 (2 SOV + 1 HOV)							
Existing	PM	802	321	229	92	24	2300
Existing + Project	PM	810	324	229	95	25	2375
Project Increase	PM	8	3	229	3	1	75

Footnotes:
a. Delay expressed in minutes per lane.
b. Queue expressed in feet per lane.

General Notes:
1. SOV demand is shown per lane after subtracting HOV demand (i.e. 20%) from the total demand.

TABLE 1–12
NEAR-TERM (OPENING DAY 2023) + PROJECT RAMP METER OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Location/Condition	Peak Hour	Peak Hour Demand	SOV Demand (veh/hr/lane)	Ramp Meter Rate (Flow) (veh/hr/lane)	Excess Demand (veh/hr/lane)	Delay per Lane [a]	Queue per Lane [b]
Nobel Drive to SB I-805 (2 SOV + 1 HOV)							
Near-Term (Opening Day 2023)	PM	1093	437	229	208	54	5200
Near-Term (Opening Day 2023) + Project	PM	1101	441	229	212	55	5288
Project Increase	PM	8	4	229	4	1	88

Footnotes:
a. Delay expressed in minutes per lane.
b. Queue expressed in feet per lane.

General Notes:
1. SOV demand is shown per lane after subtracting HOV demand (i.e. 20%) from the total demand.

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TABLE 1–13
YEAR 2035 (HORIZON YEAR) + PROJECT RAMP METER OPERATIONS
RETAIL, HOTEL AND RESIDENTIAL ALTERNATIVE (2016 PROPOSED PROJECT)

Location/Condition	Peak Hour	Peak Hour Demand	SOV Demand (veh/hr/lane)	Ramp Meter Rate (Flow) (veh/hr/lane)	Excess Demand (veh/hr/lane)	Delay per Lane [a]	Queue per Lane [b]
WB La Jolla Village Drive to NB I-5 (1 SOV)							
Year 2035 (Horizon Year)	PM	753	753	555	198	21	4950
Year 2035 (Horizon Year) + Project	PM	763	763	555	208	22	5200
Project Increase	PM	10	10	555	10	1	250
Nobel Drive to SB I-805 (2 SOV + 1 HOV)							
Year 2035 (Horizon Year)	PM	1245	498	229	269	70	6725
Year 2035 (Horizon Year) + Project	PM	1253	501	229	272	71	6800
Project Increase	PM	8	3	229	3	1	75

Footnotes:
a. Delay expressed in minutes per lane.
b. Queue expressed in feet per lane.

General Notes:
1. SOV demand is shown per lane after subtracting HOV demand (i.e. 20%) from the total demand.

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TABLE 2–1
PROJECT TRIP GENERATION
Retail, Office and R&D Alternative (No Hotel)

Land Use & Size	Daily Trip Ends (ADT) [a]		AM Peak Hour					PM Peak Hour				
	Rate	Volume	% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
					In	Out	Total			In	Out	Total
Scientific Research and Development *360,000 SF*	*Trip Rate: 8 / KSF* [b]	2,880	16%	90:10	415	46	461	14%	10:90	40	363	403
Office *40,000 SF*	*Trip Rate: Ln Formula* [c]	845	13%	90:10	99	11	110	14%	20:80	24	94	118
Subtotal		*3,725*			*514*	*57*	*571*			*64*	*457*	*521*
MXD Credit [d] *(13% ADT, 10% AM, 13% PM)*		*484*			*51*	*6*	*57*			*8*	*59*	*67*
Total Primary Trips		***3,241***			***463***	***51***	***514***			***56***	***398***	***454***

Footnotes:

a. Trip-ends are one-way traffic movements, either entering or leaving.

b. Per the City's Trip Generation Manual, the scientific research and development trip rate of 8 weekday trips/ KSF was used.

c. Per the City's Trip Generation Manual, the commercial office ln formula of Ln(T) = 0.756 Ln(x) + 3.95 was used, where X = office KSF and T = total trips.

d. Per SANDAG MXD Model for the project site, 13% ADT, 10% AM and 13% PM credits were taken.

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TABLE 2–2
EXISTING + PROJECT INTERSECTION OPERATIONS
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Intersection	Control Type	Peak Hour	Existing		Existing With Alternative (Retail, Office and R&D)		Δ[c]	Sig	Proposed Project Impacts (from TIA)
			Delay[a]	LOS[b]	Delay	LOS			
14. Genesee Avenue / Esplanade Court	Signal	AM	31.4	C	**63.5**	**E**	**32.1**	**Yes**	**Yes**
		PM	**61.7**	**E**	**85.1**	**F**	**23.4**	**Yes**	**Yes**
29. Genesee Avenue / Governor Drive	Signal	AM	**225.8**	**F**	**239.9**	**F**	**14.1**	**Yes**	**Yes**
		PM	**57.1**	**E**	**57.6**	**E**	0.5	No	No
30. Genesee Avenue / SR 52 WB Ramps	MSSC[d]	AM	18.7	C	19.0	C	0.3	No	No
		PM	**71.9**	**F**	**89.9**	**F**	**18.0**	**Yes**	**Yes**
31. Genesee Avenue / SR 52 EB Ramps	Signal	AM	44.4	D	47.4	D	3.0	No	No
		PM	**152.4**	**F**	**171.4**	**F**	**19.0**	**Yes**	**Yes**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. "Δ" denotes the project-induced increase in delay.
d. MSSC – Minor-street Stop-controlled intersection.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the delay increases by 2 seconds for LOS E or 1 second for LOS F.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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TABLE 2–3
NEAR-TERM (OPENING DAY 2023) + PROJECT INTERSECTION OPERATIONS
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Intersection	Control Type	Peak Hour	Near-Term (Opening Day 2023)		Near-Term (Opening Day 2023) With Alternative (Retail, Office and R&D)		Δ[c]	Sig	Proposed Project Impacts (from TIA)
			Delay[a]	LOS[b]	Delay	LOS			
14. Genesee Avenue / Esplanade Court	Signal	AM	27.4	C	46.7	D	19.3	No	No
		PM	**67.4**	**E**	**87.0**	**F**	**19.6**	**Yes**	**Yes**
28. Genesee Avenue / Decoro Street	Signal	AM	30.9	C	43.1	D	12.2	No	No
		PM	**279.3**	**F**	**298.9**	**F**	**19.6**	**Yes**	**Yes**
29. Genesee Avenue / Governor Drive	Signal	AM	**368.4**	**F**	**384.3**	**F**	**15.9**	**Yes**	**Yes**
		PM	**65.1**	**E**	**66.4**	**E**	1.3	No	No
30. Genesee Avenue / SR 52 WB Ramps	MSSC[d]	AM	26.8	D	27.5	D	0.7	No	No
		PM	**135.0**	**F**	**162.9**	**F**	**27.9**	**Yes**	**Yes**
31. Genesee Avenue / SR 52 EB Ramps	Signal	AM	53.3	D	**57.9**	**E**	**4.6**	**Yes**	**Yes**
		PM	**152.6**	**F**	**171.7**	**F**	**19.1**	**Yes**	**Yes**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. "Δ" denotes the project-induced increase in delay.
d. MSSC – Minor-street Stop-controlled intersection.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the delay increases by 2 seconds for LOS E or 1 second for LOS F.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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TABLE 2–4
YEAR 2035 (HORIZON YEAR) + PROJECT INTERSECTION OPERATIONS
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Intersection	Control Type	Peak Hour	Year 2035 (Horizon Year)		Year 2035 (Horizon Year) With Alternative (Retail, Office and R&D)		Δ[c]	Sig	Proposed Project Impacts (from TIA)
			Delay[a]	LOS[b]	Delay	LOS			
7. La Jolla Village Drive / Genesee Avenue	Signal	AM	**107.1**	**F**	**114.3**	**F**	**7.2**	**Yes**	**Yes**
		PM	**71.7**	**E**	**78.1**	**E**	**6.4**	**Yes**	**Yes**
13. Costa Verde Boulevard / Loop Road (South)	MSSC[d]	AM	18.6	C	20.5	C	1.9	No	No
		PM	**97.7**	**F**	**158.7**	**F**	**61.0**	**Yes**	**Yes**
14. Genesee Avenue / Esplanade Court	Signal	AM	51.9	D	**69.0**	**E**	**17.1**	**Yes**	**Yes**
		PM	**112.3**	**F**	**126.1**	**F**	**13.8**	**Yes**	**Yes**
20. Nobel Drive / Costa Verde Boulevard / Cargill Avenue	Signal	AM	**58.3**	**E**	**74.6**	**E**	**16.3**	**Yes**	**Yes**
		PM	54.4	D	**60.1**	**E**	**5.7**	**Yes**	**Yes**
22. Nobel Drive / Genesee Avenue	Signal	AM	**93.4**	**F**	**109.6**	**F**	**16.2**	**Yes**	**Yes**
		PM	**73.6**	**E**	**76.7**	**E**	**3.1**	**Yes**	**Yes**
28. Genesee Avenue / Decoro Street	Signal	AM	**157.5**	**F**	**173.0**	**F**	**15.5**	**Yes**	**Yes**
		PM	**328.7**	**F**	**346.2**	**F**	**17.5**	**Yes**	**Yes**
29. Genesee Avenue / Governor Drive	Signal	AM	**507.1**	**F**	**527.8**	**F**	**20.7**	**Yes**	**Yes**
		PM	**86.4**	**F**	**91.9**	**F**	**5.5**	**Yes**	**Yes**
30. Genesee Avenue / SR 52 WB Ramps	MSSC[d]	AM	**38.0**	**E**	**38.9**	**E**	0.9	No	No
		PM	**249.4**	**F**	**288.7**	**F**	**39.3**	**Yes**	**Yes**
31. Genesee Avenue / SR 52 EB Ramps	Signal	AM	**87.8**	**F**	**94.7**	**F**	**6.9**	**Yes**	**Yes**
		PM	**179.6**	**F**	**199.2**	**F**	**19.6**	**Yes**	**Yes**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. "Δ" denotes the project-induced increase in delay.
d. MSSC – Minor-street Stop-controlled intersection.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the delay increases by 2 seconds for LOS E or 1 second for LOS F.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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TABLE 2–5
NEAR-TERM (OPENING DAY 2023) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Near-Term (Opening Day 2023)			Retail, Office and R&D Alternative ADT 3,241		Near-Term (Opening Day 2023) With Alternative (Retail, Office and R&D)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
Genesee Avenue													
Decoro Street to Centurion Square	4-Lane Major Arterial	40,000	**35,110**	**E**	**0.878**	22%	710	**35,820**	**E**	**0.896**	0.018	No	**Yes**
Centurion Square to Governor Drive	4-Lane Major Arterial	40,000	**36,540**	**E**	**0.914**	22%	710	**37,250**	**E**	**0.931**	0.017	No	**Yes**

Footnotes:
a. Capacities based on City of San Diego Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.
d. Volume to Capacity.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.02 for LOS E or 0.01 for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–6
YEAR 2035 (HORIZON YEAR) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Year 2035 (Horizon Year)			Retail, Office and R&D Alternative ADT 3,241		Year 2035 (Horizon Year) With Alternative (Retail, Office and R&D)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
La Jolla Village Drive													
Genesee Avenue to Executive Way	6-Lane Major Arterial	50,000	**55,400**	**F**	**1.108**	15%	490	**55,890**	**F**	**1.118**	0.010	No	**Yes**
Genesee Avenue													
La Jolla Village Drive to Esplanade Court	6-Lane Major Arterial	50,000	**45,100**	**E**	**0.902**	31%	1,010	**46,110**	**E**	**0.922**	0.020	No	**Yes**
Nobel Drive to Decoro Street	4-Lane Major Arterial	40,000	**45,700**	**F**	**1.143**	22%	710	**46,410**	**F**	**1.160**	**0.017**	**Yes**	**Yes**
Decoro Street to Centurion Square	4-Lane Major Arterial	40,000	**47,750**	**F**	**1.194**	22%	710	**48,460**	**F**	**1.212**	**0.018**	**Yes**	**Yes**
Centurion Square to Governor Drive	4-Lane Major Arterial	40,000	**55,850**	**F**	**1.396**	22%	710	**56,560**	**F**	**1.414**	**0.018**	**Yes**	**Yes**

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–6
YEAR 2035 (HORIZON YEAR) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Street Segment	Functional Classification	Capacity (LOS E) [a]	Year 2035 (Horizon Year)			Retail, Office and R&D Alternative ADT 3,241		Year 2035 (Horizon Year) With Alternative (Retail, Office and R&D)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
Governor Drive to SR 52	4-Lane Major Arterial	40,000	**44,750**	**F**	**1.119**	17%	550	**45,300**	**F**	**1.133**	**0.014**	**Yes**	**Yes**

Footnotes:
a. Capacities based on City of San Diego Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.
d. Volume to Capacity.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.02 for LOS E or 0.01 for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–7A
EXISTING + PROJECT FREEWAY SEGMENT OPERATIONS—AM PEAK HOUR
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Freeway and Segment	Existing ADT	Existing + Project ADT	Direction &Number of Lanes	Existing			Existing With Alternative (Retail, Office and R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-805												
Governor Drive to Nobel Drive	205,790	206,080	NB Mainlines 4M+ 1A	**1.046**	**>45.00**	**F**	**1.051**	**>45.00**	**F**	**0.005**	**Yes [c]**	**Yes**
			SB Mainlines 4M+ 1A	0.427	15.40	B	0.428	15.50	B	0.001	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–7B
EXISTING + PROJECT FREEWAY SEGMENT OPERATIONS—PM PEAK HOUR
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Freeway and Segment	Existing ADT	Existing + Project ADT	Direction, &Number of Lanes	Existing			Existing With Alternative (Retail, Office and R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-5												
Gilman Drive to Nobel Drive	172,110	172,400	NB Mainlines 4M	0.851	34.00	D	0.851	34.00	D	0.000	No	No
			SB Mainlines 4M	**0.825**	**>45.00**	**F**	**0.830**	**>45.00**	**F**	**0.005**	**Yes [c]**	**Yes**
SR 52												
Genesee Avenue to I-805	91,080	91,440	EB Mainlines 2M	**1.098**	**>45.00**	**F**	**1.109**	**>45.00**	**F**	**0.011**	**Yes**	**Yes**
			WB Mainlines 2M	0.714	27.30	D	0.715	27.40	D	0.001	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–8A
NEAR-TERM (OPENING DAY 2023) + PROJECT FREEWAY SEGMENT OPERATIONS—AM PEAK HOUR
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Freeway and Segment	Near-Term (Opening Day 2023) ADT	Near-Term (Opening Day 2023) + Project ADT	Direction & Number of Lanes	Near-Term (Opening Day 2023)			Near-Term (Opening Day 2023) With Alternative (Retail, Office and R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-805												
Governor Drive to Nobel Drive	212,680	212,970	NB Mainlines 4M+ 1A	**1.100**	**>45.00**	**F**	**1.103**	**>45.00**	**F**	**0.003**	**Yes [c]**	**Yes**
			SB Mainlines 4M+ 1A	0.449	16.20	B	0.449	16.30	B	0.000	No	No
SR 52												
Genesee Avenue to I-805	102,210	102,570	EB Mainlines 2M	**1.074**	**>45.00**	**F**	**1.075**	**>45.00**	**F**	0.001	No	No
			WB Mainlines 2M	0.865	34.80	D	**0.877**	**35.50**	**E**	**0.012**	**Yes**	**Yes**

Footnotes:
a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–8B
NEAR-TERM (OPENING DAY 2023) + PROJECT FREEWAY SEGMENT OPERATIONS—PM PEAK HOUR
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Freeway and Segment	Near-Term (Opening Day 2023) ADT	Near-Term (Opening Day 2023) + Project ADT	Direction & Number of Lanes	Near-Term (Opening Day 2023)			Near-Term (Opening Day 2023) With Alternative (Retail, Office and R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-5												
Gilman Drive to Nobel Drive	177,990	178,280	NB Mainlines 4M	**0.877**	**35.60**	**E**	**0.877**	**35.60**	**E**	0.000	No	No
			SB Mainlines 4M	**0.878**	**>45.00**	**F**	**0.883**	**>45.00**	**F**	**0.005**	**Yes [c]**	**Yes**
SR 52												
Genesee Avenue to I-805	102,210	102,570	EB Mainlines 2M	**1.237**	**>45.00**	**F**	**1.247**	**>45.00**	**F**	**0.010**	**Yes**	**Yes**
			WB Mainlines 2M	0.799	31.10	D	0.801	31.20	D	0.002	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–9A
YEAR 2035 (HORIZON YEAR) + PROJECT FREEWAY SEGMENT OPERATIONS—AM PEAK HOUR
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Freeway and Segment	2035 ADT	2035 + Project ADT	Direction & Number of Lanes		Year 2035 (Horizon Year) V/C[a]	Year 2035 (Horizon Year) Density	Year 2035 (Horizon Year) LOS[b]	Year 2035 (Horizon Year) With Alternative (Retail, Office and R&D) V/C[a]	Year 2035 (Horizon Year) With Alternative (Retail, Office and R&D) Density	Year 2035 (Horizon Year) With Alternative (Retail, Office and R&D) LOS[b]	V/C Delta	Sig	Proposed Project Impacts (from TIA)
I-805													
Governor Drive to Nobel Drive	286,270	286,560	NB Mainlines	4M+ 1A	**1.456**	**>45.00**	**F**	**1.460**	**>45.00**	**F**	**0.004**	**Yes [c]**	**Yes**
			SB Mainlines	4M+ 1A	0.594	21.50	C	0.594	21.50	C	0.000	No	No
SR 52													
Genesee Avenue to I-805	114,961	115,321	EB Mainlines	2M	**1.205**	**>45.00**	**F**	**1.206**	**>45.00**	**F**	0.001	No	No
			WB Mainlines	2M	**1.112**	**>45.00**	**F**	**1.124**	**>45.00**	**F**	**0.012**	**Yes**	**Yes**

Footnotes:
a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–9B
YEAR 2035 (HORIZON YEAR) + PROJECT FREEWAY SEGMENT OPERATIONS—PM PEAK HOUR
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Freeway and Segment	2035 ADT	2035 + Project ADT	Direction & Number of Lanes	Year 2035 (Horizon Year)			Year 2035 (Horizon Year) With Alternative (Retail, Office and R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-5												
Gilman Drive to Nobel Drive	203,460	203,750	NB Mainlines 4M	**1.071**	**>45.00**	**F**	**1.072**	**>45.00**	**F**	0.001	No	No
			SB Mainlines 4M	**0.976**	**>45.00**	**F**	**0.981**	**>45.00**	**F**	**0.005**	**Yes [c]**	**Yes**
SR 52												
Genesee Avenue to I-805	114,961	115,321	EB Mainlines 2M	**1.431**	**>45.00**	**F**	**1.442**	**>45.00**	**F**	**0.011**	**Yes**	**Yes**
			WB Mainlines 2M	**0.883**	**35.80**	**E**	**0.884**	**35.90**	**E**	0.001	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–10
EXISTING + PROJECT RAMP METER OPERATIONS
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Location/Condition	Peak Hour	Peak Hour Demand	SOV Demand (veh/hr/lane)	Ramp Meter Rate (Flow) (veh/hr/lane)	Excess Demand (veh/hr/lane)	Delay per Lane [a]	Queue per Lane [b]
Nobel Drive to SB I-805 (2 SOV + 1 HOV)							
Existing	PM	802	321	229	92	**24**	2300
Existing + Project	PM	830	332	229	103	**27**	2575
Project Increase	PM	28	11	229	11	**3**	275

Footnotes:
a. Delay expressed in minutes per lane.
b. Queue expressed in feet per lane.

General Notes:
1. **Bold** typeface indicates a significant ramp meter impact.
2. SOV demand is shown per lane after subtracting HOV demand (i.e. 20%) from the total demand.

TABLE 2–11
NEAR-TERM (OPENING DAY 2023) + PROJECT RAMP METER OPERATIONS
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Location/Condition	Peak Hour	Peak Hour Demand	SOV Demand (veh/hr/lane)	Ramp Meter Rate (Flow) (veh/hr/lane)	Excess Demand (veh/hr/lane)	Delay per Lane [a]	Queue per Lane [b]
Nobel Drive to SB I-805 (2 SOV + 1 HOV)							
Near-Term (Opening Day 2023)	PM	1093	437	229	208	**54**	5200
Near-Term (Opening Day 2023) + Project	PM	1121	449	229	220	**58**	5488
Project Increase	PM	28	12	229	12	**4**	288

Footnotes:
a. Delay expressed in minutes per lane.
b. Queue expressed in feet per lane.

General Notes:
1. **Bold** typeface indicates a significant ramp meter impact.
2. SOV demand is shown per lane after subtracting HOV demand (i.e. 20%) from the total demand.

LINSCOTT LAW & GREENSPAN engineers

TABLE 2–12
YEAR 2035 (HORIZON YEAR) + PROJECT RAMP METER OPERATIONS
RETAIL, OFFICE AND R&D ALTERNATIVE (NO HOTEL)

Location/Condition	Peak Hour	Peak Hour Demand	SOV Demand (veh/hr/lane)	Ramp Meter Rate (Flow) (veh/hr/lane)	Excess Demand (veh/hr/lane)	Delay per Lane [a]	Queue per Lane [b]
WB La Jolla Village Drive to NB I-5 (1 SOV)							
Year 2035 (Horizon Year)	PM	753	753	555	198	**21**	4950
Year 2035 (Horizon Year) + Project	PM	777	777	555	222	**24**	5550
Project Increase	PM	24	24	555	24	**3**	600
Nobel Drive to SB I-805 (2 SOV + 1 HOV)							
Year 2035 (Horizon Year)	PM	1245	498	229	269	**70**	6725
Year 2035 (Horizon Year) + Project	PM	1273	509	229	280	**73**	7000
Project Increase	PM	28	11	229	11	**3**	275

Footnotes:
a. Delay expressed in minutes per lane.
b. Queue expressed in feet per lane.

General Notes:
1. **Bold** typeface indicates a significant ramp meter impact.
2. SOV demand is shown per lane after subtracting HOV demand (i.e. 20%) from the total demand.

LINSCOTT LAW & GREENSPAN engineers

TABLE 3–1
PROJECT TRIP GENERATION
Retail, Hotel, Office and Reduced R&D Alternative

Land Use & Size	Daily Trip Ends (ADT) [a]		AM Peak Hour					PM Peak Hour				
	Rate	Volume	% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
					In	Out	Total			In	Out	Total
Scientific Research and Development *210,000 SF*	*Trip Rate: 8 / KSF* [b]	1,680	16%	90:10	242	27	269	14%	10:90	24	211	235
Office *40,000 SF*	*Trip Rate: Ln Formula* [c]	845	13%	90:10	99	11	110	14%	20:80	24	94	118
Hotel *200 rooms*	*Trip Rate: 10 / Room* [d]	2,000	6%	60:40	72	48	120	8%	60:40	96	64	160
	Subtotal	*4,525*			*413*	*86*	*499*			*144*	*369*	*513*
	MXD Credit [e] *(13% ADT, 10% AM, 13% PM)*	*588*			*41*	*9*	*50*			*19*	*48*	*67*
	Total Primary Trips	***3,937***			***372***	***77***	***449***			***125***	***321***	***446***

Footnotes:

a. Trip-ends are one-way traffic movements, either entering or leaving.

b. Per the City's Trip Generation Manual, the scientific research and development trip rate of 8 weekday trips/ KSF was used.

c. Per the City's Trip Generation Manual, the commercial office ln formula of Ln(T) = 0.756 Ln(x) + 3.95 was used, where X = office KSF and T = total trips.

d. Per the City's Trip Generation Manual, the hotel trip rate of 10 weekday trips/ room was used.

e. Per SANDAG MXD Model for the project site, 13% ADT, 10% AM and 13% PM credits were taken.

LINSCOTT LAW & GREENSPAN engineers

TABLE 3–2
EXISTING + PROJECT INTERSECTION OPERATIONS
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Intersection	Control Type	Peak Hour	Existing		Existing With Alternative (Retail, Hotel, Office and Reduced R&D)		Δ[c]	Sig	Proposed Project Impacts (from TIA)
			Delay[a]	LOS[b]	Delay	LOS			
14. Genesee Avenue / Esplanade Court	Signal	AM	31.4	C	53.1	D	21.7	No	**Yes**
		PM	**61.7**	**E**	**82.8**	**F**	**21.1**	**Yes**	**Yes**
29. Genesee Avenue / Governor Drive	Signal	AM	**225.8**	**F**	**236.9**	**F**	**11.1**	**Yes**	**Yes**
		PM	**57.1**	**E**	**57.5**	**E**	0.4	No	No
30. Genesee Avenue / SR 52 WB Ramps	MSSC[d]	AM	18.7	C	19.1	C	0.4	No	No
		PM	**71.9**	**F**	**85.4**	**F**	**13.5**	**Yes**	**Yes**
31. Genesee Avenue / SR 52 EB Ramps	Signal	AM	44.4	D	47.1	D	2.7	No	No
		PM	**152.4**	**F**	**167.2**	**F**	**14.8**	**Yes**	**Yes**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. "Δ" denotes the project-induced increase in delay.
d. MSSC – Minor-street Stop-controlled intersection.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the delay increases by 2 seconds for LOS E or 1 second for LOS F.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

LINSCOTT LAW & GREENSPAN engineers

TABLE 3–3
NEAR-TERM (OPENING DAY 2023) + PROJECT INTERSECTION OPERATIONS
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Intersection	Control Type	Peak Hour	Near-Term (Opening Day 2023)		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel, Office and Reduced R&D)		Δ[c]	Sig	Proposed Project Impacts (from TIA)
			Delay[a]	LOS[b]	Delay	LOS			
14. Genesee Avenue / Esplanade Court	Signal	AM	27.4	C	41.3	D	13.9	No	No
		PM	**67.4**	**E**	**85.4**	**F**	**18.0**	**Yes**	**Yes**
28. Genesee Avenue / Decoro Street	Signal	AM	30.9	C	40.6	D	9.7	No	No
		PM	**279.3**	**F**	**293.8**	**F**	**14.5**	**Yes**	**Yes**
29. Genesee Avenue / Governor Drive	Signal	AM	**368.4**	**F**	**381.0**	**F**	**12.6**	**Yes**	**Yes**
		PM	**65.1**	**E**	**66.2**	**E**	1.1	No	No
30. Genesee Avenue / SR 52 WB Ramps	MSSC[d]	AM	26.8	D	27.8	D	1.0	No	No
		PM	**135.0**	**F**	**156.3**	**F**	**21.3**	**Yes**	**Yes**
31. Genesee Avenue / SR 52 EB Ramps	Signal	AM	53.3	D	**57.4**	**E**	**4.1**	**Yes**	**Yes**
		PM	**152.6**	**F**	**167.6**	**F**	**15.0**	**Yes**	**Yes**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. "Δ" denotes the project-induced increase in delay.
d. MSSC – Minor-street Stop-controlled intersection.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the delay increases by 2 seconds for LOS E or 1 second for LOS F.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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TABLE 3–4
YEAR 2035 (HORIZON YEAR) + PROJECT INTERSECTION OPERATIONS
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Intersection	Control Type	Peak Hour	Year 2035 (Horizon Year)		Year 2035 (Horizon Year) With Alternative (Retail, Hotel, Office and Reduced R&D)		Δ[c]	Sig	Proposed Project Impacts (from TIA)
			Delay[a]	LOS[b]	Delay	LOS			
7. La Jolla Village Drive / Genesee Avenue	Signal	AM	**107.1**	**F**	**113.2**	**F**	**6.1**	**Yes**	**Yes**
		PM	**71.7**	**E**	**77.9**	**E**	**6.2**	**Yes**	**Yes**
13. Costa Verde Boulevard / Loop Road (South)	MSSC[d]	AM	18.6	C	20.4	C	1.8	No	No
		PM	**97.7**	**F**	**148.3**	**F**	**50.6**	**Yes**	**Yes**
14. Genesee Avenue / Esplanade Court	Signal	AM	51.9	D	**65.7**	**E**	**13.8**	**Yes**	**Yes**
		PM	**112.3**	**F**	**125.2**	**F**	**12.9**	**Yes**	**Yes**
20. Nobel Drive / Costa Verde Boulevard / Cargill Avenue	Signal	AM	**58.3**	**E**	**70.5**	**E**	**12.2**	**Yes**	**Yes**
		PM	54.4	D	**59.5**	**E**	**5.1**	**Yes**	**Yes**
22. Nobel Drive / Genesee Avenue	Signal	AM	**93.4**	**F**	**105.8**	**F**	**12.4**	**Yes**	**Yes**
		PM	**73.6**	**E**	**76.4**	**E**	**2.8**	**Yes**	**Yes**
28. Genesee Avenue / Decoro Street	Signal	AM	**157.5**	**F**	**169.7**	**F**	**12.2**	**Yes**	**Yes**
		PM	**328.7**	**F**	**341.6**	**F**	**12.9**	**Yes**	**Yes**
29. Genesee Avenue / Governor Drive	Signal	AM	**507.1**	**F**	**523.4**	**F**	**16.3**	**Yes**	**Yes**
		PM	**86.4**	**F**	**91.0**	**F**	**4.6**	**Yes**	**Yes**
30. Genesee Avenue / SR 52 WB Ramps	MSSC[d]	AM	**38.0**	**E**	**39.7**	**E**	1.7	No	No
		PM	**249.4**	**F**	**280.4**	**F**	**31.0**	**Yes**	**Yes**
31. Genesee Avenue / SR 52 EB Ramps	Signal	AM	**87.8**	**F**	**93.8**	**F**	**6.0**	**Yes**	**Yes**
		PM	**179.6**	**F**	**196.0**	**F**	**16.4**	**Yes**	**Yes**

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. "Δ" denotes the project-induced increase in delay.
d. MSSC – Minor-street Stop-controlled intersection.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the delay increases by 2 seconds for LOS E or 1 second for LOS F.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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TABLE 3–5
NEAR-TERM (OPENING DAY 2023) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Street Segment	Functional Classification	Capacity (LOS E) [a]	Near-Term (Opening Day 2023)			Retail, Hotel, Office and Reduced R&D Alternative ADT 3,937		Near-Term (Opening Day 2023) With Alternative (Retail, Hotel, Office and Reduced R&D)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT		LOS[c]	V/C[d]			
Genesee Avenue													
Decoro Street to Centurion Square	4-Lane Major Arterial	40,000	**35,110**	**E**	**0.878**	22%	870	**Yes**	**E**	**0.900**	**0.022**	**Yes**	**Yes**
Centurion Square to Governor Drive	4-Lane Major Arterial	40,000	**36,540**	**E**	**0.914**	22%	870	**Yes**	**E**	**0.935**	**0.021**	**Yes**	**Yes**

Footnotes:
a. Capacities based on City of San Diego Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.
d. Volume to Capacity.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.02 for LOS E or 0.01 for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 3–6
YEAR 2035 (HORIZON YEAR) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Street Segment	Functional Classification	Capacity (LOS E) [a]	Year 2035 (Horizon Year)			Retail, Hotel, Office and Reduced R&D Alternative ADT 3,937		Year 2035 (Horizon Year) With Alternative (Retail, Hotel, Office and Reduced R&D)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
La Jolla Village Drive													
Genesee Avenue to Executive Way	6-Lane Major Arterial	50,000	**55,400**	**F**	**1.108**	15%	590	**55,990**	**F**	**1.120**	**0.012**	**Yes**	**Yes**
Genesee Avenue													
La Jolla Village Drive to Esplanade Court	6-Lane Major Arterial	50,000	**45,100**	**E**	**0.902**	31%	1,220	**46,320**	**E**	**0.926**	**0.024**	**Yes**	**Yes**
Nobel Drive to Decoro Street	4-Lane Major Arterial	40,000	**45,700**	**F**	**1.143**	22%	870	**46,570**	**F**	**1.164**	**0.021**	**Yes**	**Yes**
Decoro Street to Centurion Square	4-Lane Major Arterial	40,000	**47,750**	**F**	**1.194**	22%	870	**48,620**	**F**	**1.216**	**0.022**	**Yes**	**Yes**
Centurion Square to Governor Drive	4-Lane Major Arterial	40,000	**55,850**	**F**	**1.396**	22%	870	**56,720**	**F**	**1.418**	**0.022**	**Yes**	**Yes**

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TABLE 3–6
YEAR 2035 (HORIZON YEAR) + PROJECT STREET SEGMENT OPERATIONS
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Street Segment	Functional Classification	Capacity (LOS E) [a]	Year 2035 (Horizon Year)			Retail, Hotel, Office and Reduced R&D Alternative ADT 3,937		Year 2035 (Horizon Year) With Alternative (Retail, Hotel, Office and Reduced R&D)			V/C Increase	Sig	Proposed Project Impacts (from TIA)
			ADT[b]	LOS[c]	V/C[d]	% Dist	Land Use ADT	ADT[b]	LOS[c]	V/C[d]			
Governor Drive to SR 52	4-Lane Major Arterial	40,000	**44,750**	**F**	**1.119**	17%	670	**45,420**	**F**	**1.136**	**0.017**	**Yes**	**Yes**

Footnotes:
a. Capacities based on City of San Diego Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.
d. Volume to Capacity.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.02 for LOS E or 0.01 for LOS F.

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TABLE 3–7A
EXISTING + PROJECT FREEWAY SEGMENT OPERATIONS—AM PEAK HOUR
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Freeway and Segment	Existing ADT	Existing + Project ADT	Direction & Number of Lanes	Existing			Existing With Alternative (Retail, Hotel, Office and Reduced R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-805												
Governor Drive to Nobel Drive	205,790	206,140	NB Mainlines 4M+ 1A	**1.046**	**>45.00**	**F**	**1.050**	**>45.00**	**F**	0.004	No	**Yes**
			SB Mainlines 4M+ 1A	0.427	15.40	B	0.428	15.50	B	0.001	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

LINSCOTT LAW & GREENSPAN engineers

TABLE 3–7B
EXISTING + PROJECT FREEWAY SEGMENT OPERATIONS—PM PEAK HOUR
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Freeway and Segment	Existing ADT	Existing + Project ADT	Direction, &Number of Lanes	Existing			Existing With Alternative (Retail, Hotel, Office and Reduced R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-5												
Gilman Drive to Nobel Drive	172,110	172,460	NB Mainlines 4M	0.851	34.00	D	0.852	34.10	D	0.001	No	No
			SB Mainlines 4M	**0.825**	**>45.00**	**F**	**0.829**	**>45.00**	**F**	**0.004**	**Yes [c]**	**Yes**
SR 52												
Genesee Avenue to I-805	91,080	91,510	EB Mainlines 2M	**1.098**	**>45.00**	**F**	**1.106**	**>45.00**	**F**	**0.008**	**Yes**	**Yes**
			WB Mainlines 2M	0.714	27.30	D	0.717	27.50	D	0.003	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

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TABLE 3–8A
NEAR-TERM (OPENING DAY 2023) + PROJECT FREEWAY SEGMENT OPERATIONS—AM PEAK HOUR
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Freeway and Segment	Near-Term (Opening Day 2023) ADT	Near-Term (Opening Day 2023) + Project ADT	Direction & Number of Lanes	Near-Term (Opening Day 2023)			Near-Term (Opening Day 2023) With Alternative (Retail, Hotel, Office and Reduced R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-805												
Governor Drive to Nobel Drive	212,680	213,030	NB Mainlines 4M+ 1A	**1.100**	**>45.00**	**F**	**1.103**	**>45.00**	**F**	**0.003**	**Yes [c]**	**Yes**
			SB Mainlines 4M+ 1A	0.449	16.20	B	0.449	16.30	B	0.000	No	No
SR 52												
Genesee Avenue to I-805	102,210	102,640	EB Mainlines 2M	**1.074**	**>45.00**	**F**	**1.076**	**>45.00**	**F**	0.002	No	No
			WB Mainlines 2M	0.865	34.80	D	**0.875**	**35.30**	**E**	0.010	No	**Yes**

Footnotes:
a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

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TABLE 3–8B
NEAR-TERM (OPENING DAY 2023) + PROJECT FREEWAY SEGMENT OPERATIONS—PM PEAK HOUR
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Freeway and Segment	Near-Term (Opening Day 2023) ADT	Near-Term (Opening Day 2023) + Project ADT	Direction & Number of Lanes	Near-Term (Opening Day 2023)			Near-Term (Opening Day 2023) With Alternative (Retail, Hotel, Office and Reduced R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
				V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-5												
Gilman Drive to Nobel Drive	177,990	178,340	NB Mainlines 4M	**0.877**	**35.60**	**E**	**0.878**	**35.60**	**E**	0.001	No	No
			SB Mainlines 4M	**0.878**	**>45.00**	**F**	**0.882**	**>45.00**	**F**	**0.004**	**Yes [c]**	**Yes**
SR 52												
Genesee Avenue to I-805	102,210	102,640	EB Mainlines 2M	**1.237**	**>45.00**	**F**	**1.245**	**>45.00**	**F**	**0.008**	**Yes**	**Yes**
			WB Mainlines 2M	0.799	31.10	D	0.803	31.30	D	0.004	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

LINSCOTT LAW & GREENSPAN engineers

TABLE 3–9A
YEAR 2035 (HORIZON YEAR) + PROJECT FREEWAY SEGMENT OPERATIONS—AM PEAK HOUR
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Freeway and Segment	2035 ADT	2035 + Project ADT	Direction & Number of Lanes		Year 2035 (Horizon Year) V/C[a]	Year 2035 (Horizon Year) Density	Year 2035 (Horizon Year) LOS[b]	Year 2035 (Horizon Year) With Alternative (Retail, Hotel, Office and Reduced R&D) V/C[a]	Year 2035 (Horizon Year) With Alternative (Retail, Hotel, Office and Reduced R&D) Density	Year 2035 (Horizon Year) With Alternative (Retail, Hotel, Office and Reduced R&D) LOS[b]	V/C Delta	Sig	Proposed Project Impacts (from TIA)
I-805													
Governor Drive to Nobel Drive	286,270	286,620	NB Mainlines	4M+ 1A	**1.456**	**>45.00**	**F**	**1.459**	**>45.00**	**F**	**0.003**	**Yes [c]**	**Yes**
			SB Mainlines	4M+ 1A	0.594	21.50	C	0.595	21.50	C	0.001	No	No
SR 52													
Genesee Avenue to I-805	114,961	115,391	EB Mainlines	2M	**1.205**	**>45.00**	**F**	**1.207**	**>45.00**	**F**	0.002	No	No
			WB Mainlines	2M	**1.112**	**>45.00**	**F**	**1.122**	**>45.00**	**F**	**0.010**	**Yes**	**Yes**

Footnotes:

a. Volume to Capacity.
b. Level of Service.
c. A significant impact is identified at this location since the reduction in speed due to the project exceeds the allowable threshold.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

General Notes:

1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LINSCOTT LAW & GREENSPAN engineers

TABLE 3–9B
YEAR 2035 (HORIZON YEAR) + PROJECT FREEWAY SEGMENT OPERATIONS—PM PEAK HOUR
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Freeway and Segment	2035 ADT	2035 + Project ADT	Direction & Number of Lanes		Year 2035 (Horizon Year)			Year 2035 (Horizon Year) With Alternative (Retail, Hotel, Office and Reduced R&D)			V/C Delta	Sig	Proposed Project Impacts (from TIA)
					V/C[a]	Density	LOS[b]	V/C[a]	Density	LOS[b]			
I-5													
Gilman Drive to Nobel Drive	203,460	203,810	NB Mainlines	4M	**1.071**	**>45.00**	**F**	**1.072**	**>45.00**	**F**	0.001	No	No
			SB Mainlines	4M	**0.976**	**>45.00**	**F**	**0.980**	**>45.00**	**F**	0.004	No	**Yes**
SR 52													
Genesee Avenue to I-805	114,961	115,391	EB Mainlines	2M	**1.431**	**>45.00**	**F**	**1.439**	**>45.00**	**F**	**0.008**	**Yes**	**Yes**
			WB Mainlines	2M	**0.883**	**35.80**	**E**	**0.886**	**36.00**	**E**	0.003	No	No

Footnotes:
a. Volume to Capacity.
b. Level of Service.

General Notes:
1. Based on the City of San Diego significance criteria, a proposed project's traffic contribution is deemed to be significant if the V/C ratio increases by 0.010 for LOS E or 0.005 for LOS F, or if the speed decreases by 1.0 mph for LOS E or 0.5 mph for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

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TABLE 3–10
EXISTING + PROJECT RAMP METER OPERATIONS
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Location/Condition	Peak Hour	Peak Hour Demand	SOV Demand (veh/hr/lane)	Ramp Meter Rate (Flow) (veh/hr/lane)	Excess Demand (veh/hr/lane)	Delay per Lane [a]	Queue per Lane [b]
Nobel Drive to SB I-805 (2 SOV + 1 HOV)							
Existing	PM	802	321	229	92	**24**	2300
Existing + Project	PM	824	330	229	101	**26**	2513
Project Increase	PM	22	9	229	9	**2**	213

Footnotes:
a. Delay expressed in minutes per lane.
b. Queue expressed in feet per lane.

General Notes:
1. **Bold** typeface indicates a significant ramp meter impact.
2. SOV demand is shown per lane after subtracting HOV demand (i.e. 20%) from the total demand.

TABLE 3–11
NEAR-TERM (OPENING DAY 2023) + PROJECT RAMP METER OPERATIONS
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

Location/Condition	Peak Hour	Peak Hour Demand	SOV Demand (veh/hr/lane)	Ramp Meter Rate (Flow) (veh/hr/lane)	Excess Demand (veh/hr/lane)	Delay per Lane [a]	Queue per Lane [b]
Nobel Drive to SB I-805 (2 SOV + 1 HOV)							
Near-Term (Opening Day 2023)	PM	1093	437	229	208	**54**	5200
Near-Term (Opening Day 2023) + Project	PM	1115	446	229	217	**57**	5425
Project Increase	PM	22	9	229	9	**3**	225

Footnotes:
a. Delay expressed in minutes per lane.
b. Queue expressed in feet per lane.

General Notes:
1. **Bold** typeface indicates a significant ramp meter impact.
2. SOV demand is shown per lane after subtracting HOV demand (i.e. 20%) from the total demand.

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TABLE 3–12
YEAR 2035 (HORIZON YEAR) + PROJECT RAMP METER OPERATIONS
RETAIL, HOTEL, OFFICE AND REDUCED R&D ALTERNATIVE

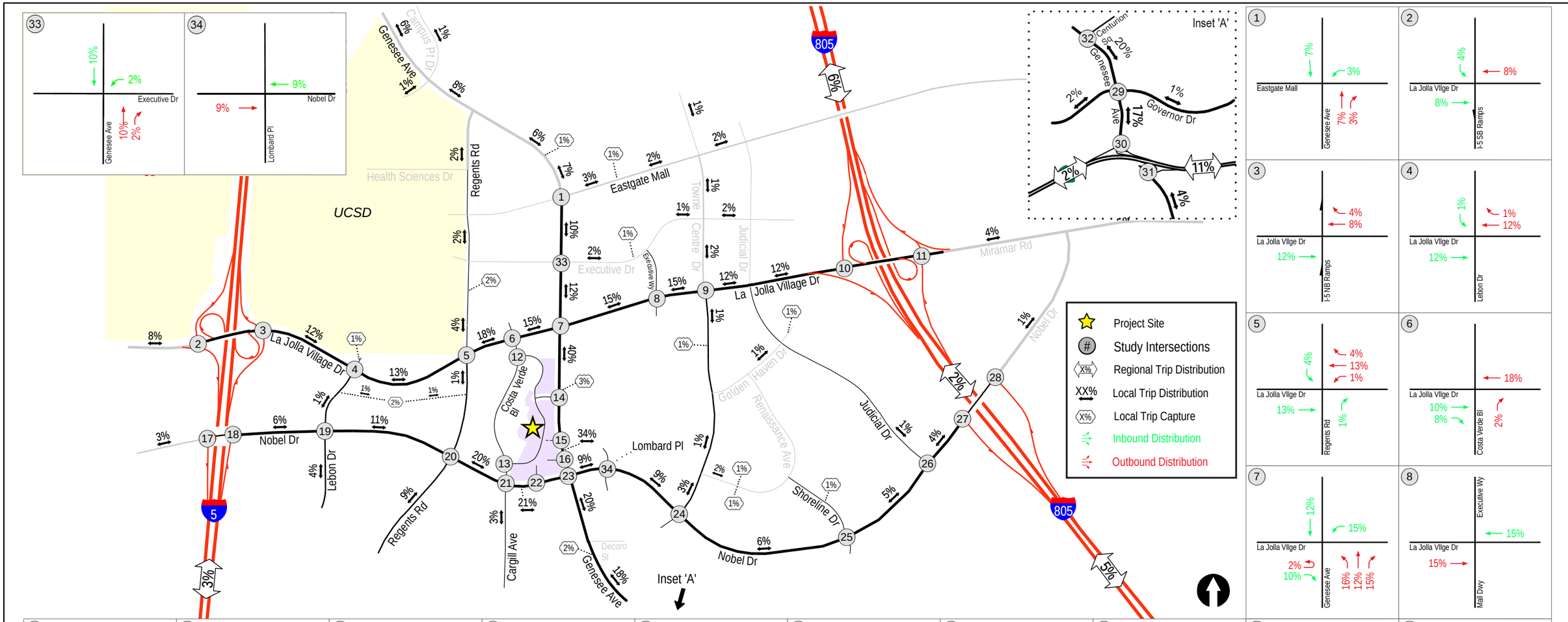
Location/Condition	Peak Hour	Peak Hour Demand	SOV Demand (veh/hr/lane)	Ramp Meter Rate (Flow) (veh/hr/lane)	Excess Demand (veh/hr/lane)	Delay per Lane [a]	Queue per Lane [b]
WB La Jolla Village Drive to NB I-5 (1 SOV)							
Year 2035 (Horizon Year)	PM	753	753	555	198	21	4950
Year 2035 (Horizon Year) + Project	PM	772	772	555	217	23	5425
Project Increase	PM	19	19	555	19	2	475
Nobel Drive to SB I-805 (2 SOV + 1 HOV)							
Year 2035 (Horizon Year)	PM	1245	498	229	269	**70**	6725
Year 2035 (Horizon Year) + Project	PM	1267	507	229	278	**73**	6950
Project Increase	PM	22	9	229	9	**3**	225

Footnotes:
a. Delay expressed in minutes per lane.
b. Queue expressed in feet per lane.

General Notes:
1. **Bold** typeface indicates a significant ramp meter impact.
2. SOV demand is shown per lane after subtracting HOV demand (i.e. 20%) from the total demand.

Attachments

ATTACHMENT A



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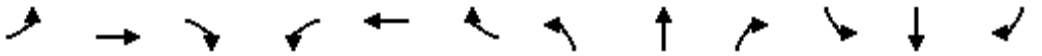
Date: 03/15/16

Figure 8-1

Project Trip Distribution

COSTA VERDE CENTER REVITALIZATION PROJECT



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	12	47	51	18	82	78	1431	136	90	278	125
Future Volume (veh/h)	155	12	47	51	18	82	78	1431	136	90	278	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.76	1.00		0.85	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	13	52	56	0	103	86	1573	149	99	305	137
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	13	52	573	0	435	106	1977	185	71	1390	607
Arrive On Green	0.05	0.05	0.05	0.16	0.00	0.16	0.08	0.80	0.80	0.08	1.00	1.00
Sat Flow, veh/h	3456	258	1033	3563	0	2704	1781	3272	306	1781	2378	1039
Grp Volume(v), veh/h	170	0	65	56	0	103	86	846	876	99	226	216
Grp Sat Flow(s),veh/h/ln	1728	0	1292	1781	0	1352	1781	1777	1801	1781	1777	1639
Q Serve(g_s), s	6.9	0.0	7.0	1.9	0.0	4.7	6.7	35.7	37.9	5.6	0.0	0.0
Cycle Q Clear(g_c), s	6.9	0.0	7.0	1.9	0.0	4.7	6.7	35.7	37.9	5.6	0.0	0.0
Prop In Lane	1.00		0.80	1.00		1.00	1.00		0.17	1.00		0.63
Lane Grp Cap(c), veh/h	175	0	66	573	0	435	106	1073	1088	71	1039	958
V/C Ratio(X)	0.97	0.00	0.99	0.10	0.00	0.24	0.81	0.79	0.81	1.39	0.22	0.23
Avail Cap(c_a), veh/h	175	0	66	967	0	734	116	1073	1088	71	1039	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	66.3	0.0	66.4	50.1	0.0	51.2	63.7	8.9	9.2	64.4	0.0	0.0
Incr Delay (d2), s/veh	58.7	0.0	108.3	0.0	0.0	0.1	28.5	5.9	6.4	229.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	4.3	0.8	0.0	1.6	3.8	10.5	11.4	7.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.0	0.0	174.7	50.1	0.0	51.3	92.2	14.8	15.6	294.0	0.4	0.4
LnGrp LOS	F	A	F	D	A	D	F	B	B	F	A	A
Approach Vol, veh/h		235			159			1808			541	
Approach Delay, s/veh		138.8			50.9			18.8			54.1	
Approach LOS		F			D			B			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	90.6		12.0	12.7	87.8		27.4				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	5.6	69.1		7.1	9.1	* 66		38.0				
Max Q Clear Time (g_c+I1), s	7.6	39.9		9.0	8.7	2.0		6.7				
Green Ext Time (p_c), s	0.0	20.3		0.0	0.0	4.7		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		37.9	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	458	306	142	247	236	250	71	1373	223	182	521	259
Future Volume (veh/h)	458	306	142	247	236	250	71	1373	223	182	521	259
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	520	348	161	281	268	284	81	1560	253	207	592	294
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1143	462	138	1143	496	71	1408	619	138	1408	623
Arrive On Green	0.04	0.32	0.32	0.04	0.32	0.32	0.04	0.40	0.40	0.04	0.40	0.40
Sat Flow, veh/h	3456	3554	1435	3456	3554	1541	1781	3554	1561	3456	3554	1573
Grp Volume(v), veh/h	520	348	161	281	268	284	81	1560	253	207	592	294
Grp Sat Flow(s),veh/h/ln	1728	1777	1435	1728	1777	1541	1781	1777	1561	1728	1777	1573
Q Serve(g_s), s	4.0	7.4	8.6	4.0	5.5	15.3	4.0	39.6	11.7	4.0	12.1	13.9
Cycle Q Clear(g_c), s	4.0	7.4	8.6	4.0	5.5	15.3	4.0	39.6	11.7	4.0	12.1	13.9
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	1143	462	138	1143	496	71	1408	619	138	1408	623
V/C Ratio(X)	3.76	0.30	0.35	2.03	0.23	0.57	1.14	1.11	0.41	1.50	0.42	0.47
Avail Cap(c_a), veh/h	138	1411	570	138	1386	601	71	1408	619	138	1408	623
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	48.0	25.5	25.9	48.0	24.9	28.2	48.0	30.2	21.8	48.0	21.9	22.4
Incr Delay (d2), s/veh	1260.3	0.3	1.0	489.1	0.2	2.0	148.6	59.3	2.0	257.9	0.9	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.9	3.1	3.0	11.1	2.3	5.8	4.7	27.0	4.5	6.6	4.9	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1308.3	25.8	26.9	537.1	25.1	30.2	196.6	89.5	23.8	305.9	22.8	25.0
LnGrp LOS	F	C	C	F	C	C	F	F	C	F	C	C
Approach Vol, veh/h		1029			833			1894			1093	
Approach Delay, s/veh		674.1			199.6			85.3			77.0	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	45.3	8.4	37.9	8.4	45.3	8.4	37.9
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.7	4.4	* 5.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	32.8	4.0	* 40	4.0	* 33	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	41.6	6.0	10.6	6.0	15.9	6.0	17.3
Green Ext Time (p_c), s	0.0	0.0	0.0	6.0	0.0	8.3	0.0	5.1

Intersection Summary		
HCM 6th Ctrl Delay	228.0	
HCM 6th LOS	F	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	131	0	0	868	420	951	0	0	906	116
Future Vol, veh/h	0	0	131	0	0	868	420	951	0	0	906	116
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	142	0	0	943	457	1034	0	0	985	126

Major/Minor	Minor2					Major1			Major2		
Conflicting Flow All	-	-	493			985	0	-	-	-	0
Stage 1	-	-	-			-	-	-	-	-	-
Stage 2	-	-	-			-	-	-	-	-	-
Critical Hdwy	-	-	6.94			4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-			-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-			-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32			2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	522			697	-	0	0	-	-
Stage 1	0	0	-			-	-	0	0	-	-
Stage 2	0	0	-			-	-	0	0	-	-
Platoon blocked, %							-			-	-
Mov Cap-1 Maneuver	-	0	522			697	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-			-	-	-	-	-	-
Stage 1	-	0	-			-	-	-	-	-	-
Stage 2	-	0	-			-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	5.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	697	-	522	-	-
HCM Lane V/C Ratio	0.655	-	0.273	-	-
HCM Control Delay (s)	19.4	-	14.5	-	-
HCM Lane LOS	C	-	B	-	-
HCM 95th %tile Q(veh)	4.9	-	1.1	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	132	173	1198	721	446	591
Future Volume (veh/h)	132	173	1198	721	446	591
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	143	188	1302	0	485	642
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	260	232	1500		385	2476
Arrive On Green	0.15	0.15	0.42	0.00	0.22	0.70
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	143	188	1302	0	485	642
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	6.0	9.2	26.8	0.0	17.3	5.4
Cycle Q Clear(g_c), s	6.0	9.2	26.8	0.0	17.3	5.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	260	232	1500		385	2476
V/C Ratio(X)	0.55	0.81	0.87		1.26	0.26
Avail Cap(c_a), veh/h	712	633	1500		385	2476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	33.1	21.1	0.0	31.4	4.5
Incr Delay (d2), s/veh	0.7	2.6	7.1	0.0	136.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.6	11.0	0.0	21.4	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.4	35.7	28.2	0.0	168.1	4.8
LnGrp LOS	C	D	C		F	A
Approach Vol, veh/h	331		1302	A		1127
Approach Delay, s/veh	34.3		28.2			75.1
Approach LOS	C		C			E

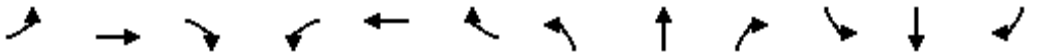
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	41.3		16.8		63.3
Change Period (Y+Rc), s	* 4.7	7.5		5.1		* 7.5
Max Green Setting (Gmax), s	* 17	33.4		32.0		* 56
Max Q Clear Time (g_c+I1), s	19.3	28.8		11.2		7.4
Green Ext Time (p_c), s	0.0	2.5		0.5		2.7

Intersection Summary						
HCM 6th Ctrl Delay			48.1			
HCM 6th LOS			D			

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	53	103	249	67	169	176	354	215	300	1068	377
Future Volume (veh/h)	230	53	103	249	67	169	176	354	215	300	1068	377
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.86	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	242	56	108	262	151	124	185	373	226	316	1124	397
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	49	94	823	432	316	197	804	477	257	1064	367
Arrive On Green	0.11	0.11	0.11	0.23	0.23	0.23	0.07	0.26	0.26	0.14	0.42	0.42
Sat Flow, veh/h	3456	453	873	3563	1870	1370	1781	2099	1246	1781	2556	881
Grp Volume(v), veh/h	242	0	164	262	151	124	185	315	284	316	773	748
Grp Sat Flow(s),veh/h/ln	1728	0	1326	1781	1870	1370	1781	1777	1569	1781	1777	1660
Q Serve(g_s), s	10.1	0.0	16.1	9.2	10.1	11.5	15.5	22.4	23.0	21.6	62.5	62.5
Cycle Q Clear(g_c), s	10.1	0.0	16.1	9.2	10.1	11.5	15.5	22.4	23.0	21.6	62.5	62.5
Prop In Lane	1.00		0.66	1.00		1.00	1.00		0.79	1.00		0.53
Lane Grp Cap(c), veh/h	371	0	142	823	432	316	197	681	601	257	740	691
V/C Ratio(X)	0.65	0.00	1.15	0.32	0.35	0.39	0.94	0.46	0.47	1.23	1.04	1.08
Avail Cap(c_a), veh/h	371	0	142	929	488	357	197	681	601	257	740	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.34	0.34	0.34
Uniform Delay (d), s/veh	64.3	0.0	67.0	47.9	48.3	48.8	68.9	42.7	43.0	64.2	43.8	43.8
Incr Delay (d2), s/veh	3.2	0.0	122.2	0.1	0.2	0.3	46.2	2.3	2.7	115.8	32.0	46.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	10.3	4.1	4.8	4.0	9.8	10.8	9.8	18.1	33.8	34.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	0.0	189.2	48.0	48.4	49.1	115.2	45.0	45.6	180.0	75.8	90.3
LnGrp LOS	E	A	F	D	D	D	F	D	D	F	F	F
Approach Vol, veh/h		406			537			784			1837	
Approach Delay, s/veh		116.6			48.3			61.8			99.6	
Approach LOS		F			D			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.0	63.5		21.0	21.0	68.5		39.5				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	21.6	53.0		16.1	16.6	* 58		39.1				
Max Q Clear Time (g_c+I1), s	23.6	25.0		18.1	17.5	64.5		13.5				
Green Ext Time (p_c), s	0.0	5.4		0.0	0.0	0.0		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		85.5	
HCM 6th LOS		F	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	279	118	314	334	117	189	562	250	405	1419	469
Future Volume (veh/h)	201	279	118	314	334	117	189	562	250	405	1419	469
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	214	297	126	334	355	124	201	598	266	431	1510	499
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	502	211	369	635	272	218	1403	621	843	1859	824
Arrive On Green	0.07	0.14	0.14	0.11	0.18	0.18	0.12	0.39	0.39	0.24	0.52	0.52
Sat Flow, veh/h	3456	3554	1496	3456	3554	1521	1781	3554	1573	3456	3554	1576
Grp Volume(v), veh/h	214	297	126	334	355	124	201	598	266	431	1510	499
Grp Sat Flow(s),veh/h/ln	1728	1777	1496	1728	1777	1521	1781	1777	1573	1728	1777	1576
Q Serve(g_s), s	11.6	14.9	12.0	18.2	17.3	8.8	21.2	23.3	23.4	20.5	66.9	42.0
Cycle Q Clear(g_c), s	11.6	14.9	12.0	18.2	17.3	8.8	21.2	23.3	23.4	20.5	66.9	42.0
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	251	502	211	369	635	272	218	1403	621	843	1859	824
V/C Ratio(X)	0.85	0.59	0.60	0.91	0.56	0.46	0.92	0.43	0.43	0.51	0.81	0.61
Avail Cap(c_a), veh/h	327	729	307	393	784	335	240	1403	621	843	1859	824
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	87.1	76.4	48.9	83.9	71.2	28.0	82.5	41.8	41.9	62.0	37.6	31.6
Incr Delay (d2), s/veh	12.7	2.4	5.6	22.3	1.5	2.3	34.4	0.9	2.2	0.2	4.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	7.0	4.9	9.3	8.1	3.5	11.8	10.4	9.7	9.0	29.4	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.8	78.8	54.6	106.2	72.7	30.3	116.8	42.8	44.0	62.2	41.6	34.9
LnGrp LOS	F	E	D	F	E	C	F	D	D	E	D	C
Approach Vol, veh/h		637			813			1065			2440	
Approach Delay, s/veh		81.1			80.0			57.1			43.9	
Approach LOS		F			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	80.7	26.0	31.9	27.7	104.5	18.2	39.6
Change Period (Y+Rc), s	5.1	* 5.7	5.7	* 5	4.4	5.1	4.4	5.7
Max Green Setting (Gmax), s	34.9	* 75	21.6	* 39	25.6	84.9	18.0	41.9
Max Q Clear Time (g_c+I1), s	22.5	25.4	20.2	16.9	23.2	68.9	13.6	19.3
Green Ext Time (p_c), s	0.7	10.6	0.1	4.4	0.1	14.5	0.2	4.9

Intersection Summary	
HCM 6th Ctrl Delay	57.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	48

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	422	0	0	384	331	473	0	0	1596	343
Future Vol, veh/h	0	0	422	0	0	384	331	473	0	0	1596	343
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	459	0	0	417	360	514	0	0	1735	373

Major/Minor	Minor2				Major1			Major2		
Conflicting Flow All	-	-	868		1735	0	-	-	-	0
Stage 1	-	-	-		-	-	-	-	-	-
Stage 2	-	-	-		-	-	-	-	-	-
Critical Hdwy	-	-	6.94		4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-		-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-		-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32		2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 296		~ 359	-	0	0	-	-
Stage 1	0	0	-		-	-	0	0	-	-
Stage 2	0	0	-		-	-	0	0	-	-
Platoon blocked, %						-			-	-
Mov Cap-1 Maneuver	-	0	~ 296		~ 359	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-		-	-	-	-	-	-
Stage 1	-	0	-		-	-	-	-	-	-
Stage 2	-	0	-		-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	295	34.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 359	-	296	-	-
HCM Lane V/C Ratio	1.002	-	1.55	-	-
HCM Control Delay (s)	82.8	-	295	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	11.7	-	26.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	352	231	573	300	788	1230
Future Volume (veh/h)	352	231	573	300	788	1230
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	383	251	623	0	857	1337
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	445	396	1211		384	2165
Arrive On Green	0.25	0.25	0.34	0.00	0.22	0.61
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	383	251	623	0	857	1337
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	18.4	12.6	12.5	0.0	19.3	21.1
Cycle Q Clear(g_c), s	18.4	12.6	12.5	0.0	19.3	21.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	445	396	1211		384	2165
V/C Ratio(X)	0.86	0.63	0.51		2.23	0.62
Avail Cap(c_a), veh/h	755	671	1211		384	2165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	29.9	23.6	0.0	35.1	11.0
Incr Delay (d2), s/veh	5.2	1.7	1.6	0.0	562.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	4.9	5.1	0.0	67.8	7.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.3	31.6	25.1	0.0	597.1	12.3
LnGrp LOS	D	C	C		F	B
Approach Vol, veh/h	634		623	A		2194
Approach Delay, s/veh	35.0		25.1			240.7
Approach LOS	D		C			F

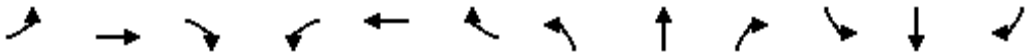
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.0	38.0		27.5		62.0
Change Period (Y+Rc), s	* 4.7	7.5		5.1		7.5
Max Green Setting (Gmax), s	* 19	30.5		37.9		54.5
Max Q Clear Time (g_c+I1), s	21.3	14.5		20.4		23.1
Green Ext Time (p_c), s	0.0	3.4		2.0		11.3

Intersection Summary		
HCM 6th Ctrl Delay		164.0
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	47	168	54	27	86	106	1840	145	99	400	152
Future Volume (veh/h)	242	47	168	54	27	86	106	1840	145	99	400	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		0.91	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	303	0	185	59	79	62	116	2022	159	109	440	167
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	0	127	582	306	237	137	2689	210	141	1909	688
Arrive On Green	0.09	0.00	0.09	0.16	0.16	0.16	0.15	1.00	1.00	0.08	1.00	1.00
Sat Flow, veh/h	3563	0	1361	3563	1870	1447	1781	4820	376	3456	3659	1319
Grp Volume(v), veh/h	303	0	185	59	79	62	116	1424	757	109	408	199
Grp Sat Flow(s),veh/h/ln	1781	0	1361	1781	1870	1447	1781	1702	1792	1728	1702	1574
Q Serve(g_s), s	11.8	0.0	13.1	2.0	5.2	5.2	8.9	0.0	0.0	4.3	0.0	0.0
Cycle Q Clear(g_c), s	11.8	0.0	13.1	2.0	5.2	5.2	8.9	0.0	0.0	4.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.84
Lane Grp Cap(c), veh/h	333	0	127	582	306	237	137	1899	1000	141	1776	821
V/C Ratio(X)	0.91	0.00	1.45	0.10	0.26	0.26	0.85	0.75	0.76	0.77	0.23	0.24
Avail Cap(c_a), veh/h	333	0	127	970	509	394	160	1899	1000	141	1776	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	62.9	0.0	63.4	49.8	51.1	51.2	58.4	0.0	0.0	63.7	0.0	0.0
Incr Delay (d2), s/veh	27.0	0.0	241.8	0.0	0.2	0.2	25.9	2.8	5.4	18.5	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	13.1	0.9	2.5	1.9	4.7	0.7	1.5	2.2	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.9	0.0	305.3	49.8	51.3	51.4	84.3	2.8	5.4	82.2	0.3	0.6
LnGrp LOS	F	A	F	D	D	D	F	A	A	F	A	A
Approach Vol, veh/h		488			200			2297			716	
Approach Delay, s/veh		171.6			50.9			7.7			12.8	
Approach LOS		F			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	84.1		18.0	15.2	79.0		27.8				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	5.7	62.9		13.1	12.6	* 56		38.1				
Max Q Clear Time (g_c+I1), s	6.3	2.0		15.1	10.9	2.0		7.2				
Green Ext Time (p_c), s	0.0	41.0		0.0	0.0	7.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		32.7	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	29	187	63	35	30	157	2337	133	14	749	54
Future Volume (veh/h)	35	29	187	63	35	30	157	2337	133	14	749	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	130	135	68	38	32	169	2513	143	15	805	58
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	262	293	107	58	38	191	2342	132	22	1985	143
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.21	1.00	1.00	0.01	0.59	0.59
Sat Flow, veh/h	270	1365	1524	358	304	200	1781	3411	192	1781	3352	241
Grp Volume(v), veh/h	168	0	135	138	0	0	169	1294	1362	15	427	436
Grp Sat Flow(s),veh/h/ln	1635	0	1524	862	0	0	1781	1777	1826	1781	1777	1817
Q Serve(g_s), s	0.0	0.0	11.0	11.3	0.0	0.0	12.9	96.1	96.1	1.2	18.0	18.0
Cycle Q Clear(g_c), s	12.3	0.0	11.0	23.7	0.0	0.0	12.9	96.1	96.1	1.2	18.0	18.0
Prop In Lane	0.23		1.00	0.49		0.23	1.00		0.10	1.00		0.13
Lane Grp Cap(c), veh/h	346	0	293	204	0	0	191	1220	1254	22	1052	1076
V/C Ratio(X)	0.49	0.00	0.46	0.68	0.00	0.00	0.89	1.06	1.09	0.67	0.41	0.41
Avail Cap(c_a), veh/h	384	0	327	234	0	0	298	1220	1254	51	1052	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	0.0	50.1	58.1	0.0	0.0	54.2	0.0	0.0	68.8	15.3	15.3
Incr Delay (d2), s/veh	0.4	0.0	0.4	4.4	0.0	0.0	1.3	29.4	40.4	11.9	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	4.3	5.1	0.0	0.0	5.1	10.0	14.1	0.6	7.2	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	0.0	50.6	62.5	0.0	0.0	55.5	29.4	40.4	80.7	16.5	16.5
LnGrp LOS	D	A	D	E	A	A	E	F	F	F	B	B
Approach Vol, veh/h		303			138			2825			878	
Approach Delay, s/veh		50.7			62.5			36.3			17.6	
Approach LOS		D			E			D			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.4	88.8		31.8	6.2	102.0		31.8
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	23.4	71.4		30.0	4.0	* 91		30.0
Max Q Clear Time (g_c+I1), s	14.3	20.0		25.7	3.2	98.1		14.3
Green Ext Time (p_c), s	0.1	7.9		0.2	0.0	0.0		0.8

Intersection Summary		
HCM 6th Ctrl Delay	34.2	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	634	316	156	260	242	331	84	1620	232	241	632	352
Future Volume (veh/h)	634	316	156	260	242	331	84	1620	232	241	632	352
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	720	359	177	295	275	376	95	1841	264	274	718	400
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1156	467	138	1156	501	71	1395	613	138	1395	618
Arrive On Green	0.04	0.33	0.33	0.04	0.33	0.33	0.04	0.39	0.39	0.04	0.39	0.39
Sat Flow, veh/h	3456	3554	1436	3456	3554	1541	1781	3554	1561	3456	3554	1573
Grp Volume(v), veh/h	720	359	177	295	275	376	95	1841	264	274	718	400
Grp Sat Flow(s),veh/h/ln	1728	1777	1436	1728	1777	1541	1781	1777	1561	1728	1777	1573
Q Serve(g_s), s	4.0	7.6	9.5	4.0	5.7	21.8	4.0	39.3	12.4	4.0	15.4	20.7
Cycle Q Clear(g_c), s	4.0	7.6	9.5	4.0	5.7	21.8	4.0	39.3	12.4	4.0	15.4	20.7
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	1156	467	138	1156	501	71	1395	613	138	1395	618
V/C Ratio(X)	5.21	0.31	0.38	2.13	0.24	0.75	1.33	1.32	0.43	1.98	0.51	0.65
Avail Cap(c_a), veh/h	138	1411	570	138	1386	601	71	1395	613	138	1395	618
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	48.0	25.3	26.0	48.0	24.7	30.1	48.0	30.4	22.2	48.0	23.1	24.7
Incr Delay (d2), s/veh	1909.9	0.3	1.1	533.8	0.2	5.8	219.1	148.8	2.2	466.9	1.4	5.2
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 BackOfQ(50%),veh/ln	38.4	3.2	3.3	12.0	2.4	8.7	6.1	44.2	4.8	10.6	6.3	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1957.9	25.6	27.0	581.8	24.9	35.9	267.1	179.2	24.4	514.9	24.5	29.9
LnGrp LOS	F	C	C	F	C	D	F	F	C	F	C	C
Approach Vol, veh/h		1256			946			2200			1392	
Approach Delay, s/veh		1133.5			202.9			164.4			122.6	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	45.0	8.4	38.2	8.4	45.0	8.4	38.2
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.7	4.4	* 5.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	32.8	4.0	* 40	4.0	* 33	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	41.3	6.0	11.5	6.0	22.7	6.0	23.8
Green Ext Time (p_c), s	0.0	0.0	0.0	6.3	0.0	7.1	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	370.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	153	0	0	907	439	1053	0	0	990	125
Future Vol, veh/h	0	0	153	0	0	907	439	1053	0	0	990	125
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	166	0	0	986	477	1145	0	0	1076	136

Major/Minor	Minor2					Major1			Major2			
Conflicting Flow All	-	-	538			1076	0	-	-	-	0	
Stage 1	-	-	-			-	-	-	-	-	-	
Stage 2	-	-	-			-	-	-	-	-	-	
Critical Hdwy	-	-	6.94			4.3	-	-	-	-	-	
Critical Hdwy Stg 1	-	-	-			-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-			-	-	-	-	-	-	
Follow-up Hdwy	-	-	3.32			2.22	-	-	-	-	-	
Pot Cap-1 Maneuver	0	0	488			614	-	0	0	-	-	
Stage 1	0	0	-			-	-	0	0	-	-	
Stage 2	0	0	-			-	-	0	0	-	-	
Platoon blocked, %							-			-	-	
Mov Cap-1 Maneuver	-	0	488			614	-	-	-	-	-	
Mov Cap-2 Maneuver	-	0	-			-	-	-	-	-	-	
Stage 1	-	0	-			-	-	-	-	-	-	
Stage 2	-	0	-			-	-	-	-	-	-	

Approach	EB	NB	SB
HCM Control Delay, s	16.1	8.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	614	-	488	-	-
HCM Lane V/C Ratio	0.777	-	0.341	-	-
HCM Control Delay (s)	28.3	-	16.1	-	-
HCM Lane LOS	D	-	C	-	-
HCM 95th %tile Q(veh)	7.3	-	1.5	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	140	197	1358	769	448	680
Future Volume (veh/h)	140	197	1358	769	448	680
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	214	1476	0	487	739
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	289	257	1471		377	2429
Arrive On Green	0.16	0.16	0.41	0.00	0.21	0.68
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	152	214	1476	0	487	739
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	6.4	10.7	33.8	0.0	17.3	6.8
Cycle Q Clear(g_c), s	6.4	10.7	33.8	0.0	17.3	6.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	289	257	1471		377	2429
V/C Ratio(X)	0.53	0.83	1.00		1.29	0.30
Avail Cap(c_a), veh/h	698	621	1471		377	2429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	33.1	23.9	0.0	32.2	5.2
Incr Delay (d2), s/veh	0.6	2.7	24.2	0.0	149.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.2	17.2	0.0	22.5	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.9	35.8	48.1	0.0	181.3	5.5
LnGrp LOS	C	D	F		F	A
Approach Vol, veh/h	366		1476	A		1226
Approach Delay, s/veh	34.2		48.1			75.3
Approach LOS	C		D			E

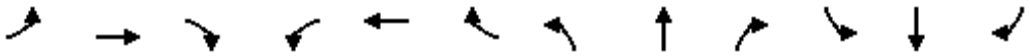
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	41.3		18.3		63.3
Change Period (Y+Rc), s	* 4.7	7.5		5.1		* 7.5
Max Green Setting (Gmax), s	* 17	33.4		32.0		* 56
Max Q Clear Time (g_c+I1), s	19.3	35.8		12.7		8.8
Green Ext Time (p_c), s	0.0	0.0		0.6		3.2

Intersection Summary			
HCM 6th Ctrl Delay		57.3	
HCM 6th LOS		E	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	72	154	275	105	196	287	591	241	327	1558	484
Future Volume (veh/h)	267	72	154	275	105	196	287	591	241	327	1558	484
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.87	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	178	219	162	289	182	158	302	622	254	344	1640	509
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	201	124	835	439	322	197	1455	580	394	1585	478
Arrive On Green	0.11	0.11	0.11	0.23	0.23	0.23	0.22	0.82	0.82	0.08	0.28	0.28
Sat Flow, veh/h	1781	1870	1152	3563	1870	1373	1781	3555	1415	3456	3841	1157
Grp Volume(v), veh/h	178	219	162	289	182	158	302	595	281	344	1448	701
Grp Sat Flow(s),veh/h/ln	1781	1870	1152	1781	1870	1373	1781	1702	1566	1728	1702	1594
Q Serve(g_s), s	14.9	16.1	16.1	10.1	12.4	14.9	16.6	7.3	7.6	14.8	61.9	61.9
Cycle Q Clear(g_c), s	14.9	16.1	16.1	10.1	12.4	14.9	16.6	7.3	7.6	14.8	61.9	61.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.90	1.00		0.73
Lane Grp Cap(c), veh/h	191	201	124	835	439	322	197	1394	641	394	1405	658
V/C Ratio(X)	0.93	1.09	1.31	0.35	0.41	0.49	1.53	0.43	0.44	0.87	1.03	1.07
Avail Cap(c_a), veh/h	191	201	124	929	488	358	197	1394	641	498	1405	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.45	0.45	0.45
Uniform Delay (d), s/veh	66.4	67.0	66.9	47.8	48.7	49.7	58.4	8.7	8.7	68.2	54.3	54.3
Incr Delay (d2), s/veh	45.2	89.9	185.8	0.1	0.2	0.4	263.3	1.0	2.2	5.6	24.6	43.2
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 BackOfQ(50%),veh/ln	9.2	12.7	11.1	4.6	5.9	5.2	21.2	2.3	2.4	7.0	32.2	33.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.6	156.8	252.7	47.9	48.9	50.1	321.7	9.6	10.9	73.8	78.8	97.5
LnGrp LOS	F	F	F	D	D	D	F	A	B	E	F	F
Approach Vol, veh/h		559			629			1178			2493	
Approach Delay, s/veh		170.2			48.8			89.9			83.4	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.5	67.4		21.0	21.0	67.9		40.1				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	21.6	53.0		16.1	16.6	* 58		39.1				
Max Q Clear Time (g_c+I1), s	16.8	9.6		18.1	18.6	63.9		16.9				
Green Ext Time (p_c), s	0.3	9.6		0.0	0.0	0.0		1.6				

Intersection Summary		
HCM 6th Ctrl Delay		90.5
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	29	219	251	38	26	186	1059	37	22	2571	67
Future Volume (veh/h)	33	29	219	251	38	26	186	1059	37	22	2571	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	152	145	259	39	27	192	1092	38	23	2651	69
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	634	649	374	50	34	162	1581	55	48	1371	35
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.18	0.90	0.90	0.03	0.39	0.39
Sat Flow, veh/h	278	1509	1545	788	119	82	1781	3498	122	1781	3534	91
Grp Volume(v), veh/h	186	0	145	325	0	0	192	555	575	23	1325	1395
Grp Sat Flow(s),veh/h/ln	1788	0	1545	989	0	0	1781	1777	1843	1781	1777	1848
Q Serve(g_s), s	0.0	0.0	9.0	37.3	0.0	0.0	13.6	12.0	12.0	1.9	58.2	58.2
Cycle Q Clear(g_c), s	9.6	0.0	9.0	46.9	0.0	0.0	13.6	12.0	12.0	1.9	58.2	58.2
Prop In Lane	0.18		1.00	0.80		0.08	1.00		0.07	1.00		0.05
Lane Grp Cap(c), veh/h	779	0	649	458	0	0	162	803	833	48	689	717
V/C Ratio(X)	0.24	0.00	0.22	0.71	0.00	0.00	1.19	0.69	0.69	0.48	1.92	1.94
Avail Cap(c_a), veh/h	779	0	649	458	0	0	162	803	833	68	689	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	0.0	27.8	43.1	0.0	0.0	61.4	4.5	4.5	72.0	45.9	45.9
Incr Delay (d2), s/veh	0.7	0.0	0.8	9.0	0.0	0.0	126.8	4.3	4.2	2.8	420.3	430.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	3.5	11.9	0.0	0.0	11.1	2.9	3.0	0.9	105.2	111.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	28.6	52.1	0.0	0.0	188.2	8.8	8.7	74.8	466.2	476.2
LnGrp LOS	C	A	C	D	A	A	F	A	A	E	F	F
Approach Vol, veh/h		331			325			1322			2743	
Approach Delay, s/veh		28.7			52.1			34.8			468.0	
Approach LOS		C			D			C			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	64.1		67.9	8.4	73.7		67.9
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	13.6	58.2		63.0	5.7	* 66		63.0
Max Q Clear Time (g_c+I1), s	15.6	60.2		48.9	3.9	14.0		11.6
Green Ext Time (p_c), s	0.0	0.0		1.4	0.0	15.4		1.0

Intersection Summary		
HCM 6th Ctrl Delay	287.3	
HCM 6th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	293	120	328	361	155	191	675	260	504	1683	645
Future Volume (veh/h)	284	293	120	328	361	155	191	675	260	504	1683	645
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	302	312	128	349	384	165	203	718	277	536	1790	686
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	514	217	344	550	234	184	1281	567	975	1941	861
Arrive On Green	0.09	0.14	0.14	0.10	0.15	0.15	0.10	0.36	0.36	0.28	0.55	0.55
Sat Flow, veh/h	3456	3554	1498	3456	3554	1514	1781	3554	1572	3456	3554	1576
Grp Volume(v), veh/h	302	312	128	349	384	165	203	718	277	536	1790	686
Grp Sat Flow(s),veh/h/ln	1728	1777	1498	1728	1777	1514	1781	1777	1572	1728	1777	1576
Q Serve(g_s), s	16.5	15.6	12.5	18.9	19.5	11.8	19.6	30.8	26.0	25.0	87.5	66.4
Cycle Q Clear(g_c), s	16.5	15.6	12.5	18.9	19.5	11.8	19.6	30.8	26.0	25.0	87.5	66.4
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	320	514	217	344	550	234	184	1281	567	975	1941	861
V/C Ratio(X)	0.94	0.61	0.59	1.01	0.70	0.70	1.10	0.56	0.49	0.55	0.92	0.80
Avail Cap(c_a), veh/h	320	733	309	344	729	311	184	1281	567	975	1941	861
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	85.7	76.2	51.3	85.5	76.1	27.3	85.2	48.7	47.2	58.0	39.4	34.6
Incr Delay (d2), s/veh	35.2	2.5	5.4	51.9	3.3	7.9	97.2	1.8	3.0	0.4	8.8	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	7.4	5.1	11.0	9.2	4.9	13.9	13.9	10.8	10.9	39.1	27.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.9	78.7	56.7	137.5	79.4	35.2	182.4	50.5	50.2	58.4	48.2	42.2
LnGrp LOS	F	E	E	F	E	D	F	D	D	E	D	D
Approach Vol, veh/h		742			898			1198			3012	
Approach Delay, s/veh		92.1			93.9			72.8			48.6	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	58.7	74.2	24.6	32.5	24.0	108.9	22.0	35.1
Change Period (Y+Rc), s	5.1	* 5.7	5.7	* 5	4.4	5.1	4.4	5.7
Max Green Setting (Gmax), s	44.7	* 69	18.1	* 39	19.6	94.2	17.6	39.0
Max Q Clear Time (g_c+I1), s	27.0	32.8	20.9	17.6	21.6	89.5	18.5	21.5
Green Ext Time (p_c), s	0.9	12.0	0.0	4.6	0.0	4.6	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay	66.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	72.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	443	0	0	417	334	524	0	0	1768	347
Future Vol, veh/h	0	0	443	0	0	417	334	524	0	0	1768	347
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	482	0	0	453	363	570	0	0	1922	377

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	961	1922	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 256	~ 304	-	0	0	-	-
Stage 1	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	-	0	~ 256	~ 304	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 443.5	59	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 304	-	256	-	-
HCM Lane V/C Ratio	1.194	-	1.881	-	-
HCM Control Delay (s)	151.5	-	$ 443.5	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	15.9	-	33.6	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	368	253	657	321	799	1417
Future Volume (veh/h)	368	253	657	321	799	1417
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	400	275	714	0	868	1540
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	461	410	1223		373	2148
Arrive On Green	0.26	0.26	0.34	0.00	0.21	0.60
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	400	275	714	0	868	1540
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	19.8	14.3	15.2	0.0	19.3	27.9
Cycle Q Clear(g_c), s	19.8	14.3	15.2	0.0	19.3	27.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	461	410	1223		373	2148
V/C Ratio(X)	0.87	0.67	0.58		2.33	0.72
Avail Cap(c_a), veh/h	710	631	1223		373	2148
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	30.6	24.8	0.0	36.4	12.7
Incr Delay (d2), s/veh	7.2	1.9	2.0	0.0	605.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	5.6	6.2	0.0	70.6	9.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.9	32.5	26.8	0.0	641.5	14.8
LnGrp LOS	D	C	C		F	B
Approach Vol, veh/h	675		714	A		2408
Approach Delay, s/veh	36.9		26.8			240.7
Approach LOS	D		C			F

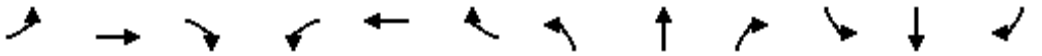
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.0	39.2		28.9		63.2
Change Period (Y+Rc), s	* 4.7	7.5		5.1		7.5
Max Green Setting (Gmax), s	* 19	31.7		36.7		55.7
Max Q Clear Time (g_c+I1), s	21.3	17.2		21.8		29.9
Green Ext Time (p_c), s	0.0	3.8		2.1		12.7

Intersection Summary	
HCM 6th Ctrl Delay	164.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	551	1920	154	276	1900	560	356	1694	425	330	454	100
Future Volume (veh/h)	551	1920	154	276	1900	560	356	1694	425	330	454	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	648	2259	181	325	2235	659	419	1993	500	388	534	118
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	459	2294	695	217	1937	730	380	1543	465	316	1448	436
Arrive On Green	0.27	0.90	0.90	0.04	0.25	0.25	0.15	0.40	0.40	0.09	0.28	0.28
Sat Flow, veh/h	3456	5106	1547	3456	5106	1543	3456	5106	1539	3456	5106	1537
Grp Volume(v), veh/h	648	2259	181	325	2235	659	419	1993	500	388	534	118
Grp Sat Flow(s),veh/h/ln	1728	1702	1547	1728	1702	1543	1728	1702	1539	1728	1702	1537
Q Serve(g_s), s	18.6	54.5	2.2	8.8	53.1	53.1	15.4	42.3	42.3	12.8	11.7	8.3
Cycle Q Clear(g_c), s	18.6	54.5	2.2	8.8	53.1	53.1	15.4	42.3	42.3	12.8	11.7	8.3
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	459	2294	695	217	1937	730	380	1543	465	316	1448	436
V/C Ratio(X)	1.41	0.98	0.26	1.50	1.15	0.90	1.10	1.29	1.08	1.23	0.37	0.27
Avail Cap(c_a), veh/h	459	2294	695	217	1937	730	380	1543	465	316	1459	439
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.14	0.14	0.14	0.63	0.63	0.63
Uniform Delay (d), s/veh	51.4	6.7	4.0	67.1	52.2	40.5	59.8	41.9	41.9	63.6	40.1	38.9
Incr Delay (d2), s/veh	197.7	15.5	0.9	225.5	69.9	2.0	52.3	132.0	40.3	119.2	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.7	6.1	0.8	10.8	36.0	21.4	9.3	35.6	20.3	10.9	5.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	249.1	22.2	4.9	292.6	122.2	42.5	112.1	173.9	82.2	182.8	40.3	39.2
LnGrp LOS	F	C	A	F	F	D	F	F	F	F	D	D
Approach Vol, veh/h		3088			3219			2912			1040	
Approach Delay, s/veh		68.8			123.0			149.3			93.3	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	68.6	19.8	45.4	23.0	58.8	17.2	48.0
Change Period (Y+Rc), s	4.4	* 5.5	4.4	* 5.7	4.4	5.5	4.4	5.7
Max Green Setting (Gmax), s	8.8	* 56	15.4	* 40	18.6	46.3	12.8	42.3
Max Q Clear Time (g_c+I1), s	10.8	56.5	17.4	13.7	20.6	55.1	14.8	44.3
Green Ext Time (p_c), s	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	111.2
HCM 6th LOS	F

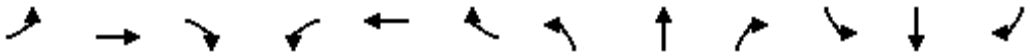
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	134	100	310	144	50	160
Future Volume (Veh/h)	134	100	310	144	50	160
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	154	115	356	166	57	184
Pedestrians	10		12			10
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		1			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			313			
pX, platoon unblocked						
vC, conflicting volume	667	281			532	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	667	281			532	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	58	84			94	
cM capacity (veh/h)	363	704			1023	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	269	237	285	118	123
Volume Left	154	0	0	57	0
Volume Right	115	0	166	0	0
cSH	458	1700	1700	1023	1700
Volume to Capacity	0.59	0.14	0.17	0.06	0.07
Queue Length 95th (ft)	92	0	0	4	0
Control Delay (s)	23.4	0.0	0.0	4.5	0.0
Lane LOS	C			A	
Approach Delay (s)	23.4	0.0		2.2	
Approach LOS	C				

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	61	203	80	41	110	111	2190	170	130	613	172
Future Volume (veh/h)	265	61	203	80	41	110	111	2190	170	130	613	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		0.92	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	339	0	223	88	102	83	122	2407	187	143	674	189
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	0	127	607	319	248	144	2660	203	141	2015	554
Arrive On Green	0.09	0.00	0.09	0.17	0.17	0.17	0.11	0.73	0.73	0.08	1.00	1.00
Sat Flow, veh/h	3563	0	1361	3563	1870	1452	1781	4829	369	3456	3945	1085
Grp Volume(v), veh/h	339	0	223	88	102	83	122	1684	910	143	580	283
Grp Sat Flow(s),veh/h/ln	1781	0	1361	1781	1870	1452	1781	1702	1794	1728	1702	1626
Q Serve(g_s), s	13.1	0.0	13.1	2.9	6.7	7.0	9.4	54.1	58.4	5.7	0.0	0.0
Cycle Q Clear(g_c), s	13.1	0.0	13.1	2.9	6.7	7.0	9.4	54.1	58.4	5.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.67
Lane Grp Cap(c), veh/h	333	0	127	607	319	248	144	1875	988	141	1738	830
V/C Ratio(X)	1.02	0.00	1.75	0.14	0.32	0.34	0.85	0.90	0.92	1.02	0.33	0.34
Avail Cap(c_a), veh/h	333	0	127	970	509	395	160	1875	988	141	1738	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	63.5	0.0	63.4	49.4	50.9	51.1	61.6	15.6	16.2	64.3	0.0	0.0
Incr Delay (d2), s/veh	53.7	0.0	368.2	0.0	0.2	0.3	27.5	7.3	14.9	65.0	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.0	17.6	1.3	3.2	2.6	5.3	18.0	22.4	3.7	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.1	0.0	431.6	49.4	51.2	51.4	89.1	22.9	31.1	129.3	0.3	0.7
LnGrp LOS	F	A	F	D	D	D	F	C	C	F	A	A
Approach Vol, veh/h		562			273			2716			1006	
Approach Delay, s/veh		241.9			50.7			28.7			18.8	
Approach LOS		F			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	83.1		18.0	15.7	77.5		28.8				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	5.7	62.9		13.1	12.6	* 56		38.1				
Max Q Clear Time (g_c+I1), s	7.7	60.4		15.1	11.4	2.0		9.0				
Green Ext Time (p_c), s	0.0	2.5		0.0	0.0	11.2		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			54.1									
HCM 6th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	766	50	40	824	140	100	131	80	130	41	133
Future Volume (veh/h)	173	766	50	40	824	140	100	131	80	130	41	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.95	1.00		0.93	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	190	842	55	44	905	154	110	144	88	143	45	146
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	2115	138	56	1758	298	77	296	181	134	116	376
Arrive On Green	0.12	0.87	0.87	0.03	0.40	0.40	0.04	0.28	0.28	0.08	0.31	0.31
Sat Flow, veh/h	1781	4874	317	1781	4360	738	1781	1053	643	1781	371	1203
Grp Volume(v), veh/h	190	587	310	44	705	354	110	0	232	143	0	191
Grp Sat Flow(s),veh/h/ln	1781	1702	1787	1781	1702	1694	1781	0	1696	1781	0	1574
Q Serve(g_s), s	6.6	3.7	3.7	2.6	16.5	16.7	4.6	0.0	12.1	8.0	0.0	10.1
Cycle Q Clear(g_c), s	6.6	3.7	3.7	2.6	16.5	16.7	4.6	0.0	12.1	8.0	0.0	10.1
Prop In Lane	1.00		0.18	1.00		0.44	1.00		0.38	1.00		0.76
Lane Grp Cap(c), veh/h	111	1477	775	56	1373	683	77	0	476	134	0	492
V/C Ratio(X)	1.71	0.40	0.40	0.78	0.51	0.52	1.42	0.00	0.49	1.06	0.00	0.39
Avail Cap(c_a), veh/h	111	1477	775	101	1373	683	77	0	602	134	0	609
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	4.2	4.2	51.0	23.8	23.9	50.7	0.0	31.8	49.0	0.0	28.5
Incr Delay (d2), s/veh	347.9	0.6	1.2	8.5	1.4	2.8	250.0	0.0	0.3	95.7	0.0	0.2
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 BackOfQ(50%),veh/ln	18.4	1.1	1.3	1.3	6.8	7.1	7.4	0.0	5.0	7.1	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	394.3	4.8	5.4	59.5	25.2	26.6	300.7	0.0	32.1	144.7	0.0	28.7
LnGrp LOS	F	A	A	E	C	C	F	A	C	F	A	C
Approach Vol, veh/h		1087			1103			342			334	
Approach Delay, s/veh		73.0			27.0			118.5			78.3	
Approach LOS		E			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	51.2	9.0	38.1	11.0	47.9	12.4	34.7
Change Period (Y+Rc), s	4.4	5.2	4.4	4.9	4.4	5.2	4.4	4.9
Max Green Setting (Gmax), s	6.3	35.5	4.6	41.0	6.6	34.9	8.0	37.6
Max Q Clear Time (g_c+I1), s	14.6	5.7	6.6	12.1	8.6	18.7	10.0	14.1
Green Ext Time (p_c), s	0.0	11.1	0.0	0.8	0.0	9.4	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	61.4
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	266	730	220	140	553	191	414	1984	280	184	487	161
Future Volume (veh/h)	266	730	220	140	553	191	414	1984	280	184	487	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	286	785	237	151	595	205	445	2133	301	198	524	173
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	870	369	198	855	362	449	1861	812	114	2178	660
Arrive On Green	0.06	0.24	0.24	0.06	0.24	0.24	0.13	0.52	0.52	0.01	0.14	0.14
Sat Flow, veh/h	3456	3554	1509	3456	3554	1505	3456	3554	1550	3456	5106	1547
Grp Volume(v), veh/h	286	785	237	151	595	205	445	2133	301	198	524	173
Grp Sat Flow(s),veh/h/ln	1728	1777	1509	1728	1777	1505	1728	1777	1550	1728	1702	1547
Q Serve(g_s), s	8.6	30.0	19.7	6.0	21.4	16.8	18.0	73.3	16.1	4.6	12.8	14.0
Cycle Q Clear(g_c), s	8.6	30.0	19.7	6.0	21.4	16.8	18.0	73.3	16.1	4.6	12.8	14.0
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	870	369	198	855	362	449	1861	812	114	2178	660
V/C Ratio(X)	1.35	0.90	0.64	0.76	0.70	0.57	0.99	1.15	0.37	1.74	0.24	0.26
Avail Cap(c_a), veh/h	212	899	381	207	888	376	449	1861	812	114	2178	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
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	65.7	51.2	47.4	65.1	48.5	46.7	60.8	33.3	19.7	69.2	40.0	40.5
Incr Delay (d2), s/veh	184.2	12.3	4.1	13.0	2.3	1.9	39.8	72.6	1.3	368.5	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	14.8	7.9	3.0	9.8	6.5	10.4	49.3	6.1	7.9	5.9	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	249.9	63.6	51.4	78.1	50.8	48.6	100.6	106.0	21.0	437.7	40.2	41.5
LnGrp LOS	F	E	D	E	D	D	F	F	C	F	D	D
Approach Vol, veh/h		1308			951			2879			895	
Approach Delay, s/veh		102.1			54.7			96.3			128.4	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	79.2	12.4	39.4	22.6	65.6	13.0	38.8
Change Period (Y+Rc), s	4.4	* 5.9	4.4	* 5.1	4.4	5.9	4.4	5.1
Max Green Setting (Gmax), s	4.6	* 72	8.4	* 35	18.2	58.4	8.6	35.0
Max Q Clear Time (g_c+I1), s	10.6	75.3	8.0	32.0	20.0	16.0	10.6	23.4
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	7.0	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	95.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	29	198	69	43	37	163	2927	143	19	934	64
Future Volume (veh/h)	43	29	198	69	43	37	163	2927	143	19	934	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.97	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	133	145	74	46	40	175	3147	154	20	1004	69
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	307	373	132	81	58	197	2131	103	51	1807	124
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.15	0.82	0.82	0.03	0.54	0.54
Sat Flow, veh/h	326	1259	1533	388	332	240	1781	3441	167	1781	3364	231
Grp Volume(v), veh/h	179	0	145	160	0	0	175	1608	1693	20	530	543
Grp Sat Flow(s),veh/h/ln	1586	0	1533	959	0	0	1781	1777	1831	1781	1777	1819
Q Serve(g_s), s	0.0	0.0	11.1	12.5	0.0	0.0	13.5	86.7	86.7	1.5	27.6	27.6
Cycle Q Clear(g_c), s	13.0	0.0	11.1	25.5	0.0	0.0	13.5	86.7	86.7	1.5	27.6	27.6
Prop In Lane	0.26		1.00	0.46		0.25	1.00		0.09	1.00		0.13
Lane Grp Cap(c), veh/h	419	0	373	271	0	0	197	1100	1134	51	954	977
V/C Ratio(X)	0.43	0.00	0.39	0.59	0.00	0.00	0.89	1.46	1.49	0.39	0.56	0.56
Avail Cap(c_a), veh/h	419	0	373	271	0	0	198	1100	1134	771	954	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	44.2	52.4	0.0	0.0	58.8	12.3	12.3	66.8	21.4	21.4
Incr Delay (d2), s/veh	3.2	0.0	3.0	9.1	0.0	0.0	4.7	208.1	222.2	1.8	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	4.6	6.0	0.0	0.0	6.0	76.9	83.7	0.7	11.5	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	0.0	47.3	61.5	0.0	0.0	63.5	220.5	234.6	68.6	23.7	23.7
LnGrp LOS	D	A	D	E	A	A	E	F	F	E	C	C
Approach Vol, veh/h		324			160			3476			1093	
Approach Delay, s/veh		47.6			61.5			219.4			24.5	
Approach LOS		D			E			F			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.9	81.1		39.0	8.4	92.6		39.0
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	15.6	75.1		34.1	60.6	* 30		34.1
Max Q Clear Time (g_c+I1), s	15.5	29.6		27.5	3.5	88.7		15.0
Green Ext Time (p_c), s	0.0	10.8		0.3	0.0	0.0		0.9

Intersection Summary	
HCM 6th Ctrl Delay	161.2
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	774	324	168	270	247	396	94	1922	239	288	744	426
Future Volume (veh/h)	774	324	168	270	247	396	94	1922	239	288	744	426
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	880	368	191	307	281	450	107	2184	272	327	845	484
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1215	493	138	1215	527	71	1336	587	138	1336	591
Arrive On Green	0.04	0.34	0.34	0.04	0.34	0.34	0.04	0.38	0.38	0.04	0.38	0.38
Sat Flow, veh/h	3456	3554	1443	3456	3554	1542	1781	3554	1560	3456	3554	1572
Grp Volume(v), veh/h	880	368	191	307	281	450	107	2184	272	327	845	484
Grp Sat Flow(s),veh/h/ln	1728	1777	1443	1728	1777	1542	1781	1777	1560	1728	1777	1572
Q Serve(g_s), s	4.0	7.6	10.0	4.0	5.7	27.1	4.0	37.6	13.2	4.0	19.5	27.7
Cycle Q Clear(g_c), s	4.0	7.6	10.0	4.0	5.7	27.1	4.0	37.6	13.2	4.0	19.5	27.7
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	1215	493	138	1215	527	71	1336	587	138	1336	591
V/C Ratio(X)	6.37	0.30	0.39	2.22	0.23	0.85	1.50	1.63	0.46	2.37	0.63	0.82
Avail Cap(c_a), veh/h	138	1411	573	138	1386	601	71	1336	587	138	1336	591
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	48.0	24.2	25.0	48.0	23.5	30.6	48.0	31.2	23.6	48.0	25.5	28.1
Incr Delay (d2), s/veh	2430.2	0.3	1.1	572.2	0.2	11.9	285.6	288.8	2.6	636.3	2.3	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	48.4	3.2	3.5	12.7	2.4	11.5	7.4	68.3	5.2	13.9	8.0	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2478.2	24.5	26.0	620.2	23.7	42.5	333.6	320.0	26.2	684.3	27.8	40.1
LnGrp LOS	F	C	C	F	C	D	F	F	C	F	C	D
Approach Vol, veh/h		1439			1038			2563			1656	
Approach Delay, s/veh		1525.2			208.3			289.4			161.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	43.3	8.4	39.9	8.4	43.3	8.4	39.9
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.7	4.4	* 5.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	32.8	4.0	* 40	4.0	* 33	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	39.6	6.0	12.0	6.0	29.7	6.0	29.1
Green Ext Time (p_c), s	0.0	0.0	0.0	6.5	0.0	3.1	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	510.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	171	0	0	977	454	1200	0	0	1073	141
Future Vol, veh/h	0	0	171	0	0	977	454	1200	0	0	1073	141
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	186	0	0	1062	493	1304	0	0	1166	153

Major/Minor	Minor2					Major1			Major2		
Conflicting Flow All	-	-	583			1166	0	-	-	-	0
Stage 1	-	-	-			-	-	-	-	-	-
Stage 2	-	-	-			-	-	-	-	-	-
Critical Hdwy	-	-	6.94			4.3	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-			-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-			-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32			2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	456			565	-	0	0	-	-
Stage 1	0	0	-			-	-	0	0	-	-
Stage 2	0	0	-			-	-	0	0	-	-
Platoon blocked, %							-			-	-
Mov Cap-1 Maneuver	-	0	456			565	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-			-	-	-	-	-	-
Stage 1	-	0	-			-	-	-	-	-	-
Stage 2	-	0	-			-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	11.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	565	-	456	-	-
HCM Lane V/C Ratio	0.873	-	0.408	-	-
HCM Control Delay (s)	40.5	-	18.2	-	-
HCM Lane LOS	E	-	C	-	-
HCM 95th %tile Q(veh)	9.8	-	2	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	147	256	1513	808	458	759
Future Volume (veh/h)	147	256	1513	808	458	759
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	160	278	1645	0	498	825
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	358	319	1403		360	2316
Arrive On Green	0.20	0.20	0.39	0.00	0.20	0.65
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	160	278	1645	0	498	825
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	6.8	14.5	33.8	0.0	17.3	9.0
Cycle Q Clear(g_c), s	6.8	14.5	33.8	0.0	17.3	9.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	358	319	1403		360	2316
V/C Ratio(X)	0.45	0.87	1.17		1.38	0.36
Avail Cap(c_a), veh/h	666	592	1403		360	2316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	33.1	25.9	0.0	34.2	6.8
Incr Delay (d2), s/veh	0.3	2.9	85.6	0.0	189.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	5.7	29.2	0.0	25.9	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.3	36.1	111.5	0.0	223.2	7.2
LnGrp LOS	C	D	F		F	A
Approach Vol, veh/h	438		1645	A		1323
Approach Delay, s/veh	34.0		111.5			88.5
Approach LOS	C		F			F

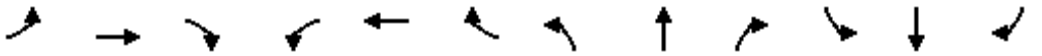
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	41.3		22.3		63.3
Change Period (Y+Rc), s	* 4.7	7.5		5.1		* 7.5
Max Green Setting (Gmax), s	* 17	33.4		32.0		* 56
Max Q Clear Time (g_c+I1), s	19.3	35.8		16.5		11.0
Green Ext Time (p_c), s	0.0	0.0		0.7		3.7

Intersection Summary			
HCM 6th Ctrl Delay		92.6	
HCM 6th LOS		F	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	1460	548	682	1720	220	403	479	323	660	1420	480
Future Volume (veh/h)	222	1460	548	682	1720	220	403	479	323	660	1420	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.92	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	236	1553	583	726	1830	234	429	510	344	702	1511	511
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	2219	661	544	2614	1119	359	899	258	733	1450	427
Arrive On Green	0.16	0.87	0.87	0.05	0.17	0.17	0.03	0.06	0.06	0.21	0.28	0.28
Sat Flow, veh/h	3456	5106	1522	3456	5106	1528	3456	5106	1466	3456	5106	1503
Grp Volume(v), veh/h	236	1553	583	726	1830	234	429	510	344	702	1511	511
Grp Sat Flow(s),veh/h/ln	1728	1702	1522	1728	1702	1528	1728	1702	1466	1728	1702	1503
Q Serve(g_s), s	10.0	15.2	32.1	23.6	50.7	11.4	15.6	14.6	26.4	30.1	42.6	42.6
Cycle Q Clear(g_c), s	10.0	15.2	32.1	23.6	50.7	11.4	15.6	14.6	26.4	30.1	42.6	42.6
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	276	2219	661	544	2614	1119	359	899	258	733	1450	427
V/C Ratio(X)	0.85	0.70	0.88	1.34	0.70	0.21	1.19	0.57	1.33	0.96	1.04	1.20
Avail Cap(c_a), veh/h	290	2219	661	544	2614	1119	359	899	258	733	1450	427
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.77	0.77	0.77	0.44	0.44	0.44
Uniform Delay (d), s/veh	62.1	6.5	7.6	71.1	51.5	12.4	72.4	65.1	70.6	58.4	53.7	53.7
Incr Delay (d2), s/veh	19.3	1.9	15.6	152.1	0.1	0.0	106.6	0.7	169.1	13.4	28.0	98.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	3.0	6.0	22.5	23.3	4.6	12.6	6.8	22.6	14.5	21.9	27.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.4	8.4	23.3	223.2	51.6	12.4	179.0	65.8	239.8	71.8	81.7	152.4
LnGrp LOS	F	A	C	F	D	B	F	E	F	E	F	F
Approach Vol, veh/h		2372			2790			1283			2724	
Approach Delay, s/veh		19.3			93.0			150.3			92.4	
Approach LOS		B			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	71.2	20.0	48.3	16.4	82.8	36.2	32.1
Change Period (Y+Rc), s	4.4	* 5.5	4.4	* 5.7	4.4	5.5	4.4	5.7
Max Green Setting (Gmax), s	23.6	* 49	15.6	* 43	12.6	59.5	31.8	26.1
Max Q Clear Time (g_c+I1), s	25.6	34.1	17.6	44.6	12.0	52.7	32.1	28.4
Green Ext Time (p_c), s	0.0	14.0	0.0	0.0	0.0	6.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	81.8
HCM 6th LOS	F

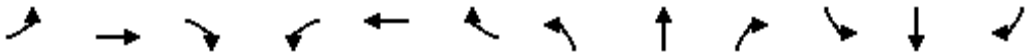
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	258	90	310	238	90	310
Future Volume (Veh/h)	258	90	310	238	90	310
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	274	96	330	253	96	330
Pedestrians	16		10			10
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		1			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			313			
pX, platoon unblocked						
vC, conflicting volume	840	318			599	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	840	318			599	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	86			90	
cM capacity (veh/h)	268	664			961	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	370	220	363	206	220
Volume Left	274	0	0	96	0
Volume Right	96	0	253	0	0
cSH	317	1700	1700	961	1700
Volume to Capacity	1.17	0.13	0.21	0.10	0.13
Queue Length 95th (ft)	389	0	0	8	0
Control Delay (s)	140.0	0.0	0.0	4.8	0.0
Lane LOS	F			A	
Approach Delay (s)	140.0	0.0		2.3	
Approach LOS	F				

Intersection Summary			
Average Delay	38.3		
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	305	103	198	330	132	260	322	680	330	420	1796	545
Future Volume (veh/h)	305	103	198	330	132	260	322	680	330	420	1796	545
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.87	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	214	257	208	347	240	206	339	716	347	442	1891	574
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	201	124	854	449	330	197	1287	581	484	1587	453
Arrive On Green	0.11	0.11	0.11	0.24	0.24	0.24	0.15	0.50	0.50	0.14	0.41	0.41
Sat Flow, veh/h	1781	1870	1152	3563	1870	1377	1781	3404	1537	3456	3895	1112
Grp Volume(v), veh/h	214	257	208	347	240	206	339	716	347	442	1638	827
Grp Sat Flow(s),veh/h/ln	1781	1870	1152	1781	1870	1377	1781	1702	1537	1728	1702	1604
Q Serve(g_s), s	16.1	16.1	16.1	12.3	16.8	20.1	16.6	21.8	24.1	18.9	61.1	61.1
Cycle Q Clear(g_c), s	16.1	16.1	16.1	12.3	16.8	20.1	16.6	21.8	24.1	18.9	61.1	61.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	191	201	124	854	449	330	197	1287	581	484	1387	653
V/C Ratio(X)	1.12	1.28	1.68	0.41	0.53	0.62	1.72	0.56	0.60	0.91	1.18	1.27
Avail Cap(c_a), veh/h	191	201	124	929	488	359	197	1287	581	498	1387	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	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	0.09	0.09	0.09
Uniform Delay (d), s/veh	66.9	67.0	66.9	48.0	49.7	51.0	64.0	28.6	29.2	63.6	44.4	44.4
Incr Delay (d2), s/veh	100.7	158.6	339.4	0.1	0.4	1.9	344.4	1.7	4.5	2.6	82.0	121.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	16.6	16.4	5.5	8.0	7.1	26.2	8.7	9.1	8.5	41.3	46.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	167.7	225.6	406.4	48.1	50.1	52.9	408.3	30.3	33.6	66.2	126.4	165.4
LnGrp LOS	F	F	F	D	D	D	F	C	C	E	F	F
Approach Vol, veh/h		679			793			1402			2907	
Approach Delay, s/veh		262.7			50.0			122.6			128.4	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.4	62.7		21.0	21.0	67.1		40.9				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	21.6	53.0		16.1	16.6	* 58		39.1				
Max Q Clear Time (g_c+I1), s	20.9	26.1		18.1	18.6	63.1		22.1				
Green Ext Time (p_c), s	0.1	10.7		0.0	0.0	0.0		2.0				

Intersection Summary		
HCM 6th Ctrl Delay		132.0
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	1011	240	220	1411	190	70	82	70	170	163	246
Future Volume (veh/h)	286	1011	240	220	1411	190	70	82	70	170	163	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87	1.00		0.92	1.00		0.91	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	304	1076	255	234	1501	202	74	87	74	181	173	262
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	327	1541	365	252	1547	208	93	207	176	203	188	285
Arrive On Green	0.06	0.13	0.13	0.28	0.69	0.69	0.05	0.23	0.23	0.11	0.29	0.29
Sat Flow, veh/h	1781	3994	945	1781	4502	605	1781	889	757	1781	638	967
Grp Volume(v), veh/h	304	917	414	234	1134	569	74	0	161	181	0	435
Grp Sat Flow(s),veh/h/ln	1781	1702	1536	1781	1702	1702	1781	0	1646	1781	0	1605
Q Serve(g_s), s	25.5	38.7	38.8	19.2	46.8	47.2	6.2	0.0	12.5	15.0	0.0	39.3
Cycle Q Clear(g_c), s	25.5	38.7	38.8	19.2	46.8	47.2	6.2	0.0	12.5	15.0	0.0	39.3
Prop In Lane	1.00		0.62	1.00		0.36	1.00		0.46	1.00		0.60
Lane Grp Cap(c), veh/h	327	1314	593	252	1170	585	93	0	383	203	0	473
V/C Ratio(X)	0.93	0.70	0.70	0.93	0.97	0.97	0.80	0.00	0.42	0.89	0.00	0.92
Avail Cap(c_a), veh/h	340	1314	593	268	1170	585	126	0	407	245	0	504
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.34	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.5	57.1	57.1	53.0	22.7	22.8	70.3	0.0	49.0	65.5	0.0	51.2
Incr Delay (d2), s/veh	13.8	1.1	2.4	34.3	19.9	30.9	15.9	0.0	0.3	25.0	0.0	20.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.6	18.0	16.5	10.0	15.5	17.4	3.2	0.0	5.2	8.3	0.0	18.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.3	58.1	59.5	87.4	42.6	53.7	86.2	0.0	49.2	90.5	0.0	71.9
LnGrp LOS	F	E	E	F	D	D	F	A	D	F	A	E
Approach Vol, veh/h		1635			1937			235			616	
Approach Delay, s/veh		63.2			51.3			60.9			77.4	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	63.1	12.2	49.1	31.9	56.8	21.5	39.8
Change Period (Y+Rc), s	4.4	5.2	4.4	4.9	4.4	5.2	4.4	4.9
Max Green Setting (Gmax), s	22.6	50.8	10.6	47.1	28.6	44.8	20.6	37.1
Max Q Clear Time (g_c+I1), s	11.2	40.8	8.2	41.3	27.5	49.2	17.0	14.5
Green Ext Time (p_c), s	0.1	7.7	0.0	1.0	0.1	0.0	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	59.8
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	361	680	280	560	1205	162	428	688	150	318	1816	285
Future Volume (veh/h)	361	680	280	560	1205	162	428	688	150	318	1816	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	368	694	286	571	1230	165	437	702	153	324	1853	291
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	874	373	567	1111	478	452	1538	667	244	1903	573
Arrive On Green	0.03	0.08	0.08	0.16	0.31	0.31	0.13	0.43	0.43	0.14	0.75	0.75
Sat Flow, veh/h	3456	3554	1518	3456	3554	1528	3456	3554	1542	3456	5106	1538
Grp Volume(v), veh/h	368	694	286	571	1230	165	437	702	153	324	1853	291
Grp Sat Flow(s),veh/h/ln	1728	1777	1518	1728	1777	1528	1728	1777	1542	1728	1702	1538
Q Serve(g_s), s	14.6	28.8	27.7	24.6	46.9	12.5	18.9	20.9	9.4	10.6	50.6	11.6
Cycle Q Clear(g_c), s	14.6	28.8	27.7	24.6	46.9	12.5	18.9	20.9	9.4	10.6	50.6	11.6
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	336	874	373	567	1111	478	452	1538	667	244	1903	573
V/C Ratio(X)	1.09	0.79	0.77	1.01	1.11	0.35	0.97	0.46	0.23	1.33	0.97	0.51
Avail Cap(c_a), veh/h	336	879	375	567	1111	478	452	1538	667	244	1903	573
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
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	72.6	65.2	64.7	62.7	51.5	39.7	64.9	30.1	26.8	64.4	18.4	13.5
Incr Delay (d2), s/veh	76.7	5.3	9.7	39.7	61.3	0.4	33.8	1.0	0.8	172.5	15.3	3.2
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 BackOfQ(50%),veh/ln	10.4	14.5	12.4	13.9	30.3	4.8	10.5	9.3	3.7	10.2	13.6	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	149.3	70.5	74.4	102.4	112.9	40.2	98.7	31.1	27.6	236.9	33.7	16.7
LnGrp LOS	F	E	E	F	F	D	F	C	C	F	C	B
Approach Vol, veh/h		1348			1966			1292			2468	
Approach Delay, s/veh		92.8			103.7			53.5			58.4	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	71.0	29.0	42.0	24.0	62.0	19.0	52.0
Change Period (Y+Rc), s	4.4	* 5.9	4.4	* 5.1	4.4	5.9	4.4	5.1
Max Green Setting (Gmax), s	10.6	* 58	24.6	* 37	19.6	49.1	14.6	46.9
Max Q Clear Time (g_c+I1), s	12.6	22.9	26.6	30.8	20.9	52.6	16.6	48.9
Green Ext Time (p_c), s	0.0	10.0	0.0	3.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	76.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	32	227	256	38	34	192	1318	44	27	3219	81
Future Volume (veh/h)	43	32	227	256	38	34	192	1318	44	27	3219	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	151	156	264	39	35	198	1359	45	28	3319	84
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	514	555	300	38	34	162	1787	59	51	1585	40
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.18	1.00	1.00	0.03	0.45	0.45
Sat Flow, veh/h	347	1427	1542	715	106	95	1781	3505	116	1781	3537	89
Grp Volume(v), veh/h	195	0	156	338	0	0	198	688	716	28	1658	1745
Grp Sat Flow(s),veh/h/ln	1773	0	1542	916	0	0	1781	1777	1844	1781	1777	1849
Q Serve(g_s), s	0.0	0.0	10.8	42.5	0.0	0.0	13.6	0.0	0.0	2.3	67.2	67.2
Cycle Q Clear(g_c), s	11.5	0.0	10.8	54.0	0.0	0.0	13.6	0.0	0.0	2.3	67.2	67.2
Prop In Lane	0.23		1.00	0.78		0.10	1.00		0.06	1.00		0.05
Lane Grp Cap(c), veh/h	668	0	555	372	0	0	162	906	940	51	796	829
V/C Ratio(X)	0.29	0.00	0.28	0.91	0.00	0.00	1.23	0.76	0.76	0.54	2.08	2.11
Avail Cap(c_a), veh/h	668	0	555	372	0	0	162	906	940	68	796	829
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	34.2	54.3	0.0	0.0	61.4	0.0	0.0	71.9	41.4	41.4
Incr Delay (d2), s/veh	1.1	0.0	1.3	28.2	0.0	0.0	137.8	4.9	4.7	3.3	491.5	501.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	4.3	15.8	0.0	0.0	11.6	1.2	1.2	1.1	136.7	144.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	0.0	35.4	82.5	0.0	0.0	199.2	4.9	4.7	75.2	532.9	543.3
LnGrp LOS	D	A	D	F	A	A	F	A	A	E	F	F
Approach Vol, veh/h		351			338			1602			3431	
Approach Delay, s/veh		35.4			82.5			28.8			534.5	
Approach LOS		D			F			C			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	73.1		58.9	8.7	82.4		58.9
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	13.6	67.2		54.0	5.7	* 75		54.0
Max Q Clear Time (g_c+I1), s	15.5	69.2		56.0	4.3	2.0		13.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	24.8		1.0

Intersection Summary	
HCM 6th Ctrl Delay	335.6
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	305	122	339	382	186	193	805	268	583	2007	785
Future Volume (veh/h)	350	305	122	339	382	186	193	805	268	583	2007	785
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	372	324	130	361	406	198	205	856	285	620	2135	835
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	523	221	355	570	243	184	1281	567	955	1921	852
Arrive On Green	0.09	0.15	0.15	0.10	0.16	0.16	0.10	0.36	0.36	0.28	0.54	0.54
Sat Flow, veh/h	3456	3554	1499	3456	3554	1516	1781	3554	1572	3456	3554	1576
Grp Volume(v), veh/h	372	324	130	361	406	198	205	856	285	620	2135	835
Grp Sat Flow(s),veh/h/ln	1728	1777	1499	1728	1777	1516	1781	1777	1572	1728	1777	1576
Q Serve(g_s), s	17.6	16.3	12.6	19.5	20.6	14.5	19.6	38.6	26.9	30.1	102.7	98.3
Cycle Q Clear(g_c), s	17.6	16.3	12.6	19.5	20.6	14.5	19.6	38.6	26.9	30.1	102.7	98.3
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	320	523	221	355	570	243	184	1281	567	955	1921	852
V/C Ratio(X)	1.16	0.62	0.59	1.02	0.71	0.81	1.12	0.67	0.50	0.65	1.11	0.98
Avail Cap(c_a), veh/h	320	733	309	355	729	311	184	1281	567	955	1921	852
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	86.2	76.0	51.0	85.2	75.6	28.0	85.2	51.2	47.5	60.6	43.6	42.6
Incr Delay (d2), s/veh	101.8	2.5	5.3	52.1	3.7	15.8	100.8	2.8	3.2	1.2	58.2	26.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	7.7	5.2	11.4	9.8	6.5	14.1	17.5	11.2	13.2	58.8	44.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	188.0	78.6	56.2	137.3	79.3	43.8	186.0	54.0	50.6	61.9	101.9	69.0
LnGrp LOS	F	E	E	F	E	D	F	D	D	E	F	E
Approach Vol, veh/h		826			965			1346			3590	
Approach Delay, s/veh		124.3			93.7			73.4			87.3	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	57.6	74.2	25.2	33.0	24.0	107.8	22.0	36.2
Change Period (Y+Rc), s	5.1	* 5.7	5.7	* 5	4.4	5.1	4.4	5.7
Max Green Setting (Gmax), s	44.7	* 69	18.1	* 39	19.6	94.2	17.6	39.0
Max Q Clear Time (g_c+I1), s	32.1	40.6	21.5	18.3	21.6	104.7	19.6	22.6
Green Ext Time (p_c), s	1.0	12.9	0.0	4.7	0.0	0.0	0.0	5.3

Intersection Summary	
HCM 6th Ctrl Delay	90.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	103.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	460	0	0	458	337	589	0	0	1976	393
Future Vol, veh/h	0	0	460	0	0	458	337	589	0	0	1976	393
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	500	0	0	498	366	640	0	0	2148	427

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	1074	2148	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 216	~ 247	-	0	0	-	-
Stage 1	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	-	0	~ 216	~ 247	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 641.3	100.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 247	-	216	-	-
HCM Lane V/C Ratio	1.483	-	2.315	-	-
HCM Control Delay (s)	275	-	$ 641.3	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	21.3	-	40.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	380	293	735	338	850	1595
Future Volume (veh/h)	380	293	735	338	850	1595
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	413	318	799	0	924	1734
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	475	423	1243		351	2123
Arrive On Green	0.27	0.27	0.35	0.00	0.20	0.60
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	413	318	799	0	924	1734
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	20.6	17.1	17.5	0.0	18.3	35.6
Cycle Q Clear(g_c), s	20.6	17.1	17.5	0.0	18.3	35.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	475	423	1243		351	2123
V/C Ratio(X)	0.87	0.75	0.64		2.63	0.82
Avail Cap(c_a), veh/h	708	630	1243		351	2123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	31.2	25.3	0.0	37.3	14.7
Incr Delay (d2), s/veh	7.7	2.8	2.6	0.0	743.1	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	6.7	7.3	0.0	79.9	12.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.2	34.0	27.9	0.0	780.3	18.3
LnGrp LOS	D	C	C		F	B
Approach Vol, veh/h	731		799	A		2658
Approach Delay, s/veh	37.5		27.9			283.2
Approach LOS	D		C			F

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.0	40.0		29.9		63.0
Change Period (Y+Rc), s	* 4.7	7.5		5.1		7.5
Max Green Setting (Gmax), s	* 18	32.5		36.9		55.5
Max Q Clear Time (g_c+I1), s	20.3	19.5		22.6		37.6
Green Ext Time (p_c), s	0.0	4.1		2.2		11.6

Intersection Summary		
HCM 6th Ctrl Delay		191.6
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive NB – Ex + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	10655	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2197
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.05
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive SB – Ex + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4307	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	897
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	15.5
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive NB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	11195	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2308
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.10
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive SB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4527	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	943
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.3
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Information

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Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 EB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4572	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2485
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.08
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Information

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3762	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2001
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.87
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.0
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	14825	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	3057
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.46
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Jurisdiction	I-805 from Governor Drive to Nobel Drive SB – LT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5988	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1248
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	21.5
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5128	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2787
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.21
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4830	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2569
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.12
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Jurisdiction	I-5 from Gilman Drive to Nobel Drive NB – Ex + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7653	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1952
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2292
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.85
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.3
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	34.1
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	59.2		

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Jurisdiction	I-5 from Gilman Drive to Nobel Drive SB – Ex + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	0.280
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6543	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1818
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	16.7		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4690	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2549
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.10
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3221	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1660
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	27.6
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7883	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2011
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2292
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	56.5
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.6
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	59.2		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	0.280
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6963	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1934
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	16.7		

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Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5278	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2868
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.24
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3604	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1858
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.9
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	31.5
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-5 from Gilman Drive to Nobel Drive NB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9632	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2457
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2292
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.07
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	59.2		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-5 from Gilman Drive to Nobel Drive SB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	0.280
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7740	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	2150
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.98
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	16.7		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 EB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6103	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	3317
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.44
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 WB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3976	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2050
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.89
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	56.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	36.3
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Costa Verde Survey Results

Questions:

1. Where are you coming from?

2. Where are you going to after the Costa Verde Shopping Center?

3. How did you get to the Costa Verde Shopping Center? (walk, car, bike, bus)

Surveyed Times:

Tuesday: 7 – 10AM & 3 – 6PM

Wednesday: 11 – 2PM & 3 – 6PM

Thursday: 7 – 10AM & 11 – 2PM

Total Surveyed	Car	Walk	Bike	Bus	Motorcycle
376	268	76	5	23	4
	71%	20%	1%	6%	1%

Density	Origin
41%	UTC area
17%	La Jolla
3%	Pacific Beach
3%	Clairemont
3%	Sorrento Valley
3%	Mira Mesa
3%	Carmel Valley
<1%	San Diego Region

Tuesday (10/20/15) 7-10AM

	Travel Mode	Origin	Origin Zip Code	Destination	Destination Zip Code
1	Walking	UCSD	92122	"work"	92122
2	Car	Mission Hills	92103	Mission Hills	92103
3	Walking	UCSD	92122	UCSD	92122
4	Walking	UCSD	92122	UCSD	92122
5	Car	Clairemont	92117	UCSD	92122
6	Car	Costa Verde	92122	Costa Verde	92122
7	Walking	Costa Verde	92122	UCSD	92122
8	Car	Scripps Ranch	92131	Scripps Ranch	92131
9	Car	UCSD	92122	UCSD	92122
10	Walking	UCSD	92122	UCSD	92122
11	Walking	UCSD	92122	UCSD	92122
12	Car	Mission Valley	92108	UCSD	92122

Tuesday (10/20/15) 3-6PM

	Travel Mode	Origin	Origin Zip Code	Destination	Destination Zip Code
1	Walk	UTC	92122	UTC	92122
2	Car	Carlsbad	92008	Carlsbad	92008
3	Car	Del Mar	92014	Del Mar	92014
4	Car	Oceanside	92054	Oceanside	92054
5	Car	La Jolla	92037	La Jolla	92037
6	Car	Solana Beach	92075	UTC	92122
7	Car	Carlsbad	92008	Carlsbad	92008
8	Car	Mission Valley	92108	Mission Valley	92108
9	Walk	UTC	92122	UTC	92122
10	Walk	UTC	92122	UTC	92122
11	Walk	UTC	92122	UTC	92122
12	Car	UTC	92122	UTC	92122
13	Car	Mira Mesa	92126	Mira Mesa	92126
14	Car	Tierrasanta	92124	Mission Valley	92108
15	Car	Downtown	92101	La Jolla	92037
16	Car	Miramar	92145	Rancho San Diego	92019
17	Bus	Clairemont	92117	Clairemont	92117
18	Bus	Clairemont	92117	Clairemont	92117
19	Bus	Clairemont	92117	Clairemont	92117
20	Car	UTC	92122	UTC	92122
21	Car	University City	92122	University City	92122
22	Car	University City	92122	University City	92122
23	Car	UTC	92122	UTC	92122
24	Car	OB	92107	OB	92107
25	Car	Mission Valley	92108	Mission Valley	92108
26	Car	San Marcos	92069	San Marcos	92069
27	Car	San Marcos	92069	San Marcos	92069
28	Car	UCSD	92037	UCSD	92037
29	Bus	Clairemont	92117	La Jolla	92037
30	Walk	UTC	92122	UTC	92122
31	Walk	UTC	92122	UTC	92122
32	Car	Sorrento Valley	92121	UTC	92122
33	Car	UTC	92122	UTC	92122
34	Car	UTC	92122	UTC	92122
35	Walk	UTC	92122	UCSD	92037
36	Car	Carmel Valley	92130	Del Mar	92014
37	Car	La Jolla	92037	La Jolla	92037
38	Walk	UTC	92122	UTC	92122
39	Walk	UTC	92122	UTC	92122
40	Walk	UTC	92122	UTC	92122
41	Walk	UTC	92122	UTC	92122
42	Car	Mission Valley	92108	Santee	92071
43	Bus	Mira Mesa	92126	UTC	92122
44	Car	UTC	92122	UTC	92122
45	Car	UTC	92122	UTC	92122
46	Car	PB	92109	UTC	92122
47	Car	UTC	92122	UTC	92122
48	Car	Mira Mesa	92126	UTC	92122
49	Bus	Mira Mesa	92126	Mira Mesa	92126
50	Bus	Mira Mesa	92126	Mira Mesa	92126
51	Car	University City	92122	University City	92122
52	Car	UTC	92122	Miramar	92145
53	Bus	UTC	92122	UTC	92122
54	Car	Coronado	92118	Coronado	92118
55	Car	Pt Loma	92106	Kearny Mesa	92111
56	Car	Miramar	92145	Tierrasanta	92124
57	Car	University City	92122	UCSD	92037
58	Car	Rancho Bernardo	92128	Rancho Bernardo	92128
59	Walk	UTC	92122	UTC	92122
60	Walk	UTC	92122	UTC	92122
61	Car	La Jolla	92037	La Jolla	92037

Tuesday (10/20/15) 3-6PM

62	Car	UTC	92122	UTC	92122
63	Car	Lake Elsinore	92530	UTC	92122
64	Car	Lake Elsinore	92530	UTC	92122
65	Walk	UTC	92122	UTC	92122
66	Walk	UTC	92122	UTC	92122
67	Car	UTC	92122	UTC	92122
68	Car	La Jolla	92037	Carlsbad	92008
69	Car	University City	92122	UCSD	92037
70	Walk	UTC	92122	UTC	92122
71	Car	UTC	92122	UTC	92122
72	Car	UTC	92122	UTC	92122
73	Walk	UTC	92122	UTC	92122
74	Bus	Mission Valley	92108	Kearny Mesa	92111
75	Walk	UTC	92122	UTC	92122
76	Car	UTC	92122	UTC	92122
77	Walk	UTC	92122	UTC	92122
78	Car	Orange County	91101	Orange County	91101
79	Car	University City	92122	University City	92122
80	Walk	UTC	92122	UTC	92122
81	Walk	UTC	92122	UCSD	92037
82	Car	UTC	92122	UTC	92122
83	Car	UTC	92122	UTC	92122
84	Car	UTC	92122	UTC	92122
85	Car	Carmel Valley	92130	Carmel Valley	92130
86	Walk	UTC	92122	UTC	92122
87	Car	Del Mar	92014	Downtown	92101
88	Car	Serra Mesa	92123	Del Mar	92014
89	Car	UTC	92122	UTC	92122
90	Bike	UTC	92122	UCSD	92037
91	Car	UCSD	92037	North Park	92104
92	Car	UCSD	92037	North Park	92104
93	Bike	UTC	92122	UTC	92122
94	Car	UTC	92122	UTC	92122
95	Car	UTC	92122	UTC	92122
96	Car	UTC	92122	UTC	92122
97	Car	UTC	92122	Tierrasanta	92124
98	Car	UTC	92122	Del Mar	92014
99	car	UTC	92122	University City	92122
100	Bus	PB	92109	PB	92109
101	Bus	La Jolla	92037	UTC	92122
102	Car	Pt Loma	92106	UTC	92122
103	Car	UTC	92122	UTC	92122
104	Car	Sea World	92109	La Jolla	92037
105	Car	UCSD	92037	Scripps Ranch	92131
106	Bus	UCSD	92037	UTC	92122
107	Car	Del Mar	92014	Del Mar	92014
108	Car	Del Mar	92014	Del Mar	92014
109	Car	Clairemont	92117	Clairemont	92117
110	Car	North Park	92104	North Park	92104
111	Walk	UTC	92122	UTC	92122
112	Walk	UTC	92122	UTC	92122
113	Car	Chico	91101	UCSD	92037
114	Car	Los Angeles	91101	El Centro	92243
115	Car	Mira Mesa	92126	La Jolla	92037
116	Car	PB	92109	Clairemont	92117
117	Car	Carmel Valley	92130	La Jolla	92037
118	Car	North County	92025	UTC	92122
119	Car	UTC	92122	UTC	92122
120	Car	University City	92122	University City	92122
121	Car	Carmel Valley	92130	UTC	92122

Wednesday (10/21/15) 11-2PM

	Travel Mode	Origin	Origin Zip Code	Destination	Destination Zip Code
1	Car	UCSD	92037	UCSD	92037
2	Car	La Jolla	92037	La Jolla	92037
3	Car	Poway	92064	Downtown	92101
4	Car	Poway	92064	La Mesa	91941
5	Car	La Jolla	92037	La Jolla	92037
6	Car	La Jolla	92037	La Jolla	92037
7	Car	Clairemont	92117	Clairemont	92117
8	Bus	UCSD	92037	UCSD	92037
9	Car	Murietta	92562	UTC	92122
10	Car	La Jolla	92037	La Jolla	92037
11	Car	UTC	92122	UTC	92122
12	Walk	UTC	92122	UTC	92122
13	Car	La Jolla	92037	Clairemont	92117
14	Car	La Jolla	92037	La Jolla	92037
15	Car	La Jolla	92037	La Jolla	92037
16	Walk	UTC	92122	UTC	92122
17	Car	Mira Mesa	92126	Mira Mesa	92126
18	Car	Escondido	92025	Escondido	92025
19	Car	Del Mar	92014	UTC	92122
20	Car	Del Mar	92014	UTC	92122
21	Car	University City	92122	University City	92122
22	Walk	UTC	92122	UTC	92122
23	Car	UTC	92122	UTC	92122
24	Car	Rancho Bernardo	92128	Rancho Bernardo	92128
25	Car	UTC	92122	Clairemont	92117
26	Car	UTC	92122	UTC	92122
27	Car	Torrey Pines	92037	Torrey Pines	92037
28	Car	El Cajon	92019	Downtown	92101
29	Car	UTC	92122	Mission Valley	92108
30	Car	UTC	92122	UTC	92122
31	Car	UTC	92122	UTC	92122
32	Car	UTC	92122	UTC	92122
33	Car	UTC	92122	UTC	92122
34	Motorcycle	UTC	92122	Clairemont	92117
35	Car	Clairemont Mesa	92117	North County	
36	Car	Torrey Pines	92037	Torrey Pines	92037
37	Car	La Jolla	92037	La Mesa	91941
38	Walk	UTC	92122	UTC	92122
39	Walk	UTC	92122	UTC	92122
40	Car	UTC	92122	UTC	92122
41	Car	North Park	92104	PB	92109
42	Car	La Jolla	92037	Coronado	92118
43	Car	Carmel Valley	92130	La Mesa	91941
44	Car	UTC	92122	UTC	92122
45	Car	Del Mar	92014	Del Mar	92014
46	Car	Mira Mesa	92126	Vista	92083
47	Car	Clairemont	92117	UTC	92122
48	Car	UTC	92122	Clairemont	92117
49	Car	Carmel Valley	92130	Carmel Valley	92130

Wednesday (10/21/15) 11-2PM

50	Bus	UTC	92122	Clairemont	92117
51	Car	Torrey Pines	92037	Torrey Pines	92037
52	Car	Tierrasanta	92124	Tierrasanta	92124
53	Car	UTC	92122	UTC	92122
54	Car	UTC	92122	UTC	92122
55	Car	UTC	92122	UTC	92122
56	Car	UTC	92122	UTC	92122
57	Car	UTC	92122	UTC	92122
58	Car	La Jolla	92037	Clairemont	92117
59	Walk	UTC	92122	UTC	92122
60	Car	La Jolla	92037	La Jolla	92037
61	Car	PB	92109	UTC	92122
62	Car	UTC	92122	Torrey Pines	92037
63	Car	Kearny Mesa	92111	Kearny Mesa	92111
64	Car	Miramar	92145	Miramar	92145
65	Motorcycle	East County	92019	East County	
66	Car	UTC	92122	UTC	92122
67	Car	UTC	92122	UTC	92122
68	Car	UTC	92122	UTC	92122
69	Walk	UTC	92122	UTC	92122
70	Walk	UTC	92122	UTC	92122
71	Car	UTC	92122	UTC	92122
72	Car	UTC	92122	UTC	92122
73	Car	Golden Hill	92102	Golden Hill	92102
74	Car	UTC	92122	UTC	92122
75	Car	Poway	92064	Poway	92064
76	Car	Poway	92064	Poway	92064
77	Car	La Jolla	92037	La Jolla	92037
78	Car	Lemon Grove	91945	La Mesa	91941
79	Car	La Jolla	92037	La Jolla	92037
80	Car	Encinitas	92023	Encinitas	92024
81	Car	UTC	92122	UTC	92122
82	Car	UTC	92122	UTC	92122
83	Car	University City	92122	University City	92122
84	Car	Mission Viejo	92690	Mission Viejo	92692
85	Car	University City	92122	University City	92122
86	Car	La Jolla	92037	La Jolla	92037
87	Car	UTC	92122	Clairemont	92117
88	Bus	UCSD	92037	UTC	92122
89	Car	Sorrento Valley	92121	Sorrento Valley	92121
90	Walk	UTC	92122	UTC	92122
91	Walk	UTC	92122	UTC	92122
92	Walk	UTC	92122	UTC	92122
93	Walk	UTC	92122	UTC	92122
94	Walk	UTC	92122	UTC	92122
95	Car	UCSD	92037	Campus Pointe	92122
96	Car	Carmel Valley	92130	Carmel Valley	92130
97	Walk	UTC	92122	UTC	92122

Wednesday (10/21/15) 3-6PM

	Travel Mode	Origin	Origin Zip Code	Destination	Destination Zip Code
1	Car	Normal Heights	92116	Normal Heights	92116
2	Car	Chula Vista	91909	Chula Vista	91910
3	Car	Downtown	92101	Downtown	92101
4	Walk	UTC	92122	UTC	92122
5	Walk	UTC	92122	UTC	92122
6	Walk	UTC	92122	UTC	92122
7	Walk	UTC	92122	UTC	92122
8	Walk	UTC	92122	UTC	92122
9	Bike	UCSD	92037	UCSD	92037
10	Car	Mission Hills	91345	UCSD	92037
11	Walk	UTC	92122	UTC	92122
12	Walk	UTC	92122	UTC	92122
13	Car	La Jolla	92037	UCSD	92037
14	Car	UCSD	92037	UCSD	92037
15	Car	UTC	92122	Mission Valley	92108
16	Car	UCSD	92037	UCSD	92037
17	Car	PB	92109	PB	92109
18	Car	Clairemont	92117	Clairemont	92117
19	Car	Clairemont	92117	Clairemont	92117
20	Walk	UCSD	92037	UCSD	92037
21	Car	UTC	92122	North Park	92104
22	Car	UTC	92122	Mission Valley	92108
23	Car	Scripps Ranch	92131	Scripps Ranch	92131
24	Bike	UCSD	92037	UCSD	92037
25	Car	La Jolla	92037	La Jolla	92037
26	Bike	UTC	92122	UTC	92122
27	Car	UTC	92122	UTC	92122
28	Walk	UCSD	92037	UCSD	92037
29	Walk	UTC	92122	UTC	92122
30	Car	Poway	92064	Poway	92064
31	Car	Poway	92064	Poway	92064
32	Car	UCSD	92037	UCSD	92037
33	Walk	UTC	92122	UTC	92122
34	Car	UTC	92122	UTC	92122
35	Car	La Jolla	92037	La Jolla	92037
36	Car	La Jolla	92037	La Jolla	92037
37	Car	Mira Mesa	92126	Mira Mesa	92126
38	Car	UCSD	92037	UCSD	92037
39	Car	Clairemont	92117	UCSD	92037
40	Car	UTC	92122	UTC	92122
41	Car	UTC	92122	Downtown	92101
42	Car	UCSD	92037	UCSD	92037
43	Car	Mission Valley	92108	Mission Valley	92108

Thursday (10/22/15) 7-10AM

	Travel Mode	Origin	Origin Zip Code	Destination	Destination Zip Code
1	Bus	La Mesa	91941	Sorrento Valley	92121
2	Car	Pt Loma	92106	UTC	92122
3	Car	PB	92109	Sorrento Valley	92121
4	Walk	UTC	92122	UTC	92122
5	Walk	UTC	92122	UTC	92122
6	Car	La Jolla	92037	UTC	92122
7	Car	El Cajon	92019	UTC	92122
8	Bus	UTC	92122	UTC	92122
9	Walk	UTC	92122	UTC	92122
10	Car	UTC	92122	UTC	92122
11	Car	La Jolla	92037	Sorrento Valley	92121
12	Walk	UTC	92122	UCSD	92037
13	Car	UCSD	92037	La Jolla	92037
14	Car	La Jolla	92037	Del Mar	92014
15	Car	La Jolla	92037	UTC	92122
16	Bus	La Jolla	92037	UTC	92122
17	Car	La Jolla	92037	UTC	92122
18	Walk	UTC	92122	La Jolla	92037
19	Car	Mission Valley	92108	UTC	92122
20	Car	PB	92109	Sorrento Valley	92121
21	Car	Del Mar	92014	La Jolla	92037
22	Walk	UTC	92122	UTC	92122
23	Bus	UCSD	92037	UTC	92122
24	Walk	UTC	92122	UCSD	92037
25	Walk	UTC	92122	UCSD	92037

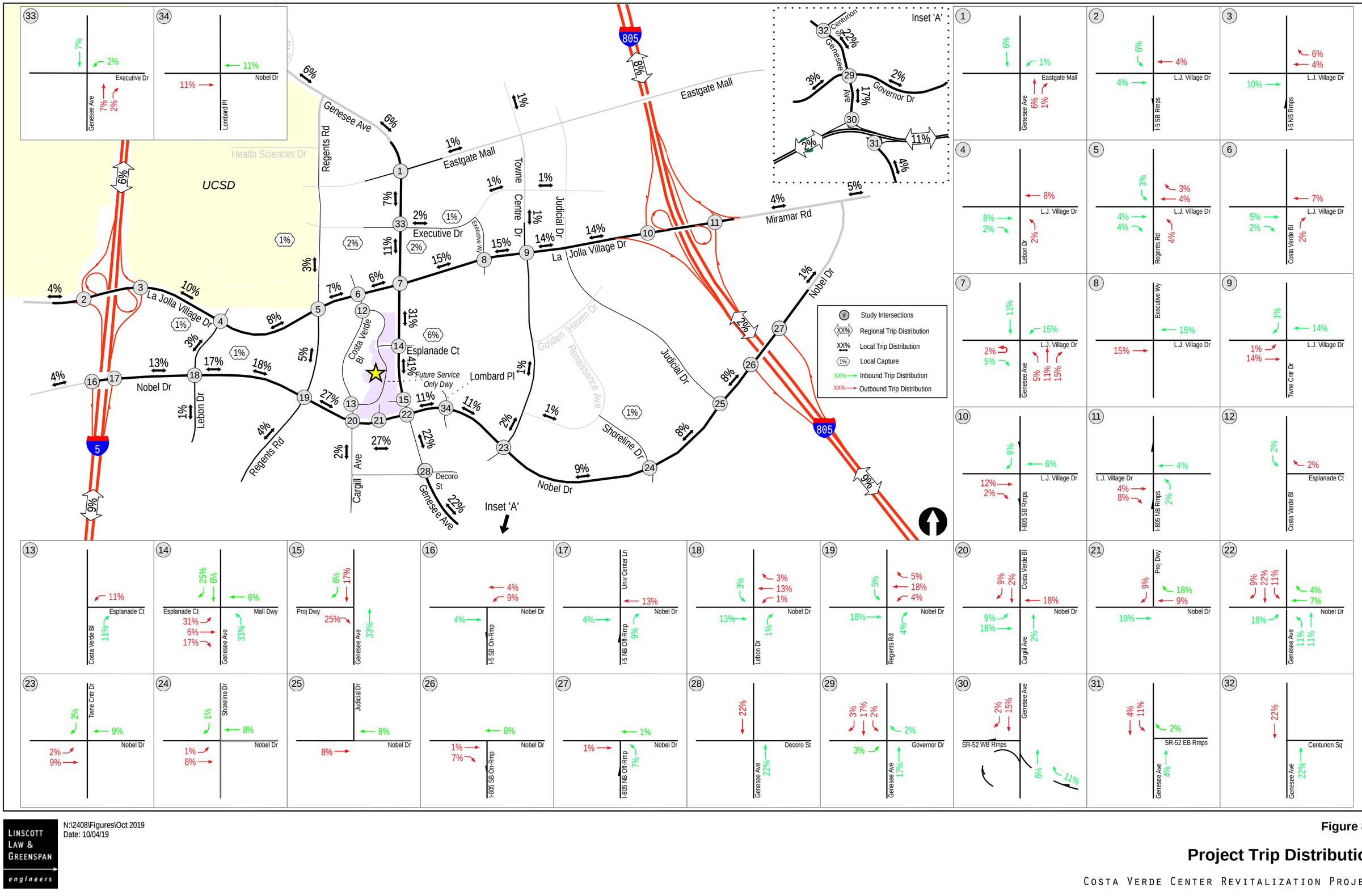
Thursday (10/22/15) 11-2PM

	Travel Mode	Origin	Origin Zip Code
1	Car	92130	92130
2	Car	92121	92121
3	Car	92130	92130
4	Car	92126	92126
5	Car	92128	92128
6	Car	93314	93314
7	Car	92122	92122
8	Car	75219	75219
9	Car	92116	92116
10	Car	92024	92024
11	Car	92037	92037
12	Car	92037	92037
13	Car	92122	92122
14	Car	92024	92024
15	Car	91945	91945
16	Car	92037	92037
17	Car	91911	91911
18	Car	92037	92037
19	Car	92069	92069
20	Car	92122	92122
21	Car	92024	92024
22	Walk	92583	92583
23	Walk	92037	92037
24	Walk	92122	92122
25	Walk	92037	92037
26	Walk	92122	92122
27	Car	Kearny Mesa	92111
28	Car	92109	92109
29	Moped	92648	92648
30	Car	Sorrento Valley	92121
31	Car	Chula Vista	91909
32	Car	San Marcos	92069
33	Car	92121	92121
34	Car	SDSU	92182
35	Car	92110	92110
36	Car	92113	92113
37	Car	92128	92128
38	Car	91945	91945
39	Car	91911	91911
40	Car	92109	92109
41	Car	92109	92109
42	Car	92122	92122

Thursday (10/22/15) 11-2PM

43	Car	92121	92121
44	Car	92121	92121
45	Car	92126	92126
46	Car	92037	92037
47	Walk	92122	92122
48	Walk	UTC	92122
49	Walk	UTC	92122
50	Walk	UTC	92122
51	Bus	92092	92092
52	Bus	92122	92122
53	Car	91921	91921
54	Car	92018	92018
55	Car	92122	92122
56	Car	92122	92122
57	Car	92103	92103
58	Car	91920	91920
59	Car	92129	92129
60	Car	92108	92108
61	Car	92054	92054
62	Car	92130	92130
63	Car	92037	92037
64	Car	92591	92591
65	Car	92145	92145
66	Car	92037	92037
67	Car	92037	92037
68	Car	92069	92069
69	Car	92069	92069
70	Car	92071	92071
71	Car	92109	92109
72	Motorcycle	92037	92037
73	Bus	92102	92102
74	Bus	92020	92020
75	Walk	92037	92037
76	Walk	92037	92037
77	Walk	92037	92037
78	Walk	92122	92122

ATTACHMENT B



LINSCOTT LAW & GREENSPAN engineers

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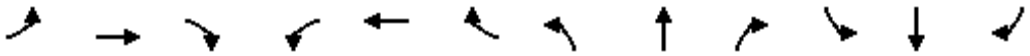
Date: 10/04/19

Figure 8-1

Project Trip Distribution

COSTA VERDE CENTER REVITALIZATION PROJECT



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	11	47	51	42	82	194	1431	136	90	296	198
Future Volume (veh/h)	116	11	47	51	42	82	194	1431	136	90	296	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.76	1.00		0.91	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	12	52	56	79	68	213	1573	149	99	325	218
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	12	53	589	309	239	116	1962	184	71	1166	761
Arrive On Green	0.05	0.05	0.05	0.17	0.17	0.17	0.09	0.80	0.80	0.08	1.00	1.00
Sat Flow, veh/h	3456	241	1044	3563	1870	1448	1781	3272	306	1781	2028	1324
Grp Volume(v), veh/h	127	0	64	56	79	68	213	846	876	99	284	259
Grp Sat Flow(s),veh/h/ln	1728	0	1285	1781	1870	1448	1781	1777	1801	1781	1777	1576
Q Serve(g_s), s	5.1	0.0	7.0	1.9	5.2	5.8	9.1	36.7	39.1	5.6	0.0	0.0
Cycle Q Clear(g_c), s	5.1	0.0	7.0	1.9	5.2	5.8	9.1	36.7	39.1	5.6	0.0	0.0
Prop In Lane	1.00		0.81	1.00		1.00	1.00		0.17	1.00		0.84
Lane Grp Cap(c), veh/h	175	0	65	589	309	239	116	1066	1080	71	1021	905
V/C Ratio(X)	0.72	0.00	0.98	0.10	0.26	0.28	1.84	0.79	0.81	1.39	0.28	0.29
Avail Cap(c_a), veh/h	175	0	65	967	508	393	116	1066	1080	71	1021	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	65.5	0.0	66.4	49.5	50.9	51.2	63.9	9.4	9.6	64.4	0.0	0.0
Incr Delay (d2), s/veh	12.1	0.0	104.5	0.0	0.2	0.2	409.3	6.1	6.6	229.6	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	4.2	0.8	2.5	0.0	17.2	11.1	12.0	7.0	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.6	0.0	170.9	49.6	51.1	51.4	473.2	15.5	16.3	294.0	0.5	0.6
LnGrp LOS	E	A	F	D	D	D	F	B	B	F	A	A
Approach Vol, veh/h		191			203			1935			642	
Approach Delay, s/veh		108.9			50.8			66.2			45.8	
Approach LOS		F			D			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	90.0		12.0	13.5	86.5		28.0				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	5.6	69.1		7.1	9.1	* 66		38.0				
Max Q Clear Time (g_c+I1), s	7.6	41.1		9.0	11.1	2.0		7.8				
Green Ext Time (p_c), s	0.0	19.7		0.0	0.0	6.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		63.5	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	469	306	142	247	236	258	71	1428	223	182	508	258
Future Volume (veh/h)	469	306	142	247	236	258	71	1428	223	182	508	258
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	533	348	161	281	268	293	81	1623	253	207	577	293
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1143	462	138	1143	496	71	1408	619	138	1408	623
Arrive On Green	0.04	0.32	0.32	0.04	0.32	0.32	0.04	0.40	0.40	0.04	0.40	0.40
Sat Flow, veh/h	3456	3554	1435	3456	3554	1541	1781	3554	1561	3456	3554	1573
Grp Volume(v), veh/h	533	348	161	281	268	293	81	1623	253	207	577	293
Grp Sat Flow(s),veh/h/ln	1728	1777	1435	1728	1777	1541	1781	1777	1561	1728	1777	1573
Q Serve(g_s), s	4.0	7.4	8.6	4.0	5.5	15.9	4.0	39.6	11.7	4.0	11.7	13.8
Cycle Q Clear(g_c), s	4.0	7.4	8.6	4.0	5.5	15.9	4.0	39.6	11.7	4.0	11.7	13.8
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	1143	462	138	1143	496	71	1408	619	138	1408	623
V/C Ratio(X)	3.86	0.30	0.35	2.03	0.23	0.59	1.14	1.15	0.41	1.50	0.41	0.47
Avail Cap(c_a), veh/h	138	1411	570	138	1386	601	71	1408	619	138	1408	623
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	48.0	25.5	25.9	48.0	24.9	28.4	48.0	30.2	21.8	48.0	21.8	22.4
Incr Delay (d2), s/veh	1302.5	0.3	1.0	489.1	0.2	2.2	148.6	77.3	2.0	257.9	0.9	2.5
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 BackOfQ(50%),veh/ln	26.7	3.1	3.0	11.1	2.3	6.1	4.7	30.5	4.5	6.6	4.7	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1350.5	25.8	26.9	537.1	25.1	30.6	196.6	107.4	23.8	305.9	22.6	24.9
LnGrp LOS	F	C	C	F	C	C	F	F	C	F	C	C
Approach Vol, veh/h		1042			842			1957			1077	
Approach Delay, s/veh		703.6			197.9			100.3			77.7	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	45.3	8.4	37.9	8.4	45.3	8.4	37.9
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.7	4.4	* 5.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	32.8	4.0	* 40	4.0	* 33	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	41.6	6.0	10.6	6.0	15.8	6.0	17.9
Green Ext Time (p_c), s	0.0	0.0	0.0	6.0	0.0	8.2	0.0	5.2

Intersection Summary	
HCM 6th Ctrl Delay	239.9
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	131	0	0	903	420	970	0	0	895	114
Future Vol, veh/h	0	0	131	0	0	903	420	970	0	0	895	114
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	142	0	0	982	457	1054	0	0	973	124

Major/Minor	Minor2					Major1			Major2		
Conflicting Flow All	-	-	487			973	0	-	-	-	0
Stage 1	-	-	-			-	-	-	-	-	-
Stage 2	-	-	-			-	-	-	-	-	-
Critical Hdwy	-	-	6.94			4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-			-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-			-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32			2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	526			704	-	0	0	-	-
Stage 1	0	0	-			-	-	0	0	-	-
Stage 2	0	0	-			-	-	0	0	-	-
Platoon blocked, %							-			-	-
Mov Cap-1 Maneuver	-	0	526			704	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-			-	-	-	-	-	-
Stage 1	-	0	-			-	-	-	-	-	-
Stage 2	-	0	-			-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	5.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	704	-	526	-	-
HCM Lane V/C Ratio	0.648	-	0.271	-	-
HCM Control Delay (s)	19	-	14.4	-	-
HCM Lane LOS	C	-	B	-	-
HCM 95th %tile Q(veh)	4.8	-	1.1	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	132	179	1211	721	438	588
Future Volume (veh/h)	132	179	1211	721	438	588
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	143	195	1316	0	476	639
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	268	238	1492		383	2463
Arrive On Green	0.15	0.15	0.42	0.00	0.21	0.69
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	143	195	1316	0	476	639
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	6.0	9.6	27.5	0.0	17.3	5.4
Cycle Q Clear(g_c), s	6.0	9.6	27.5	0.0	17.3	5.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	268	238	1492		383	2463
V/C Ratio(X)	0.53	0.82	0.88		1.24	0.26
Avail Cap(c_a), veh/h	708	630	1492		383	2463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	33.1	21.5	0.0	31.6	4.6
Incr Delay (d2), s/veh	0.6	2.6	7.9	0.0	129.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.8	11.5	0.0	20.6	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.2	35.8	29.4	0.0	161.5	4.9
LnGrp LOS	C	D	C		F	A
Approach Vol, veh/h	338		1316	A		1115
Approach Delay, s/veh	34.3		29.4			71.7
Approach LOS	C		C			E

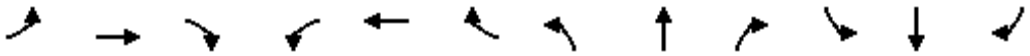
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	41.3		17.2		63.3
Change Period (Y+Rc), s	* 4.7	7.5		5.1		* 7.5
Max Green Setting (Gmax), s	* 17	33.4		32.0		* 56
Max Q Clear Time (g_c+I1), s	19.3	29.5		11.6		7.4
Green Ext Time (p_c), s	0.0	2.2		0.5		2.7

Intersection Summary	
HCM 6th Ctrl Delay	47.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	69	153	249	61	169	115	354	215	300	1050	300
Future Volume (veh/h)	245	69	153	249	61	169	115	354	215	300	1050	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.86	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	258	73	161	262	150	121	121	373	226	316	1105	316
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	44	97	822	431	316	143	805	478	257	1208	341
Arrive On Green	0.11	0.11	0.11	0.23	0.23	0.23	0.05	0.26	0.26	0.14	0.45	0.45
Sat Flow, veh/h	3456	408	901	3563	1870	1370	1781	2099	1246	1781	2704	763
Grp Volume(v), veh/h	258	0	234	262	150	121	121	315	284	316	721	700
Grp Sat Flow(s),veh/h/ln	1728	0	1309	1781	1870	1370	1781	1777	1569	1781	1777	1690
Q Serve(g_s), s	10.8	0.0	16.1	9.2	10.1	11.2	10.1	22.4	23.0	21.6	56.7	58.7
Cycle Q Clear(g_c), s	10.8	0.0	16.1	9.2	10.1	11.2	10.1	22.4	23.0	21.6	56.7	58.7
Prop In Lane	1.00		0.69	1.00		1.00	1.00		0.79	1.00		0.45
Lane Grp Cap(c), veh/h	371	0	140	822	431	316	143	681	601	257	794	755
V/C Ratio(X)	0.70	0.00	1.67	0.32	0.35	0.38	0.84	0.46	0.47	1.23	0.91	0.93
Avail Cap(c_a), veh/h	371	0	140	929	488	357	197	681	601	257	794	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.34	0.34	0.34
Uniform Delay (d), s/veh	64.6	0.0	67.0	47.9	48.3	48.7	70.0	42.7	42.9	64.2	38.6	39.2
Incr Delay (d2), s/veh	4.7	0.0	328.8	0.1	0.2	0.3	16.0	2.2	2.7	115.8	6.6	8.2
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 BackOfQ(50%),veh/ln	5.0	0.0	18.2	4.1	4.8	3.9	5.4	10.8	9.8	18.1	25.9	25.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.3	0.0	395.7	48.0	48.4	49.0	86.0	44.9	45.6	180.0	45.2	47.4
LnGrp LOS	E	A	F	D	D	D	F	D	D	F	D	D
Approach Vol, veh/h		492			533			720			1737	
Approach Delay, s/veh		224.5			48.3			52.1			70.6	
Approach LOS		F			D			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.0	63.5		21.0	16.5	73.0		39.5				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	21.6	53.0		16.1	16.6	* 58		39.1				
Max Q Clear Time (g_c+I1), s	23.6	25.0		18.1	12.1	60.7		13.2				
Green Ext Time (p_c), s	0.0	5.4		0.0	0.1	0.0		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		85.1	
HCM 6th LOS		F	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	279	118	314	334	115	189	521	250	410	1444	476
Future Volume (veh/h)	197	279	118	314	334	115	189	521	250	410	1444	476
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	210	297	126	334	355	122	201	554	266	436	1536	506
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	502	211	369	639	273	218	1403	621	843	1859	824
Arrive On Green	0.07	0.14	0.14	0.11	0.18	0.18	0.12	0.39	0.39	0.24	0.52	0.52
Sat Flow, veh/h	3456	3554	1496	3456	3554	1521	1781	3554	1573	3456	3554	1576
Grp Volume(v), veh/h	210	297	126	334	355	122	201	554	266	436	1536	506
Grp Sat Flow(s),veh/h/ln	1728	1777	1496	1728	1777	1521	1781	1777	1573	1728	1777	1576
Q Serve(g_s), s	11.4	14.9	12.0	18.2	17.3	8.6	21.2	21.2	23.4	20.7	69.0	42.8
Cycle Q Clear(g_c), s	11.4	14.9	12.0	18.2	17.3	8.6	21.2	21.2	23.4	20.7	69.0	42.8
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	247	502	211	369	639	273	218	1403	621	843	1859	824
V/C Ratio(X)	0.85	0.59	0.60	0.91	0.56	0.45	0.92	0.39	0.43	0.52	0.83	0.61
Avail Cap(c_a), veh/h	327	729	307	393	784	335	240	1403	621	843	1859	824
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	87.2	76.4	48.9	83.9	71.0	27.9	82.5	41.2	41.9	62.1	38.0	31.8
Incr Delay (d2), s/veh	12.0	2.4	5.6	22.3	1.5	2.2	34.4	0.8	2.2	0.3	4.4	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	7.0	4.9	9.3	8.1	3.4	11.8	9.5	9.7	9.1	30.4	17.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.2	78.8	54.6	106.2	72.5	30.1	116.8	42.1	44.0	62.4	42.4	35.2
LnGrp LOS	F	E	D	F	E	C	F	D	D	E	D	D
Approach Vol, veh/h		633			811			1021			2478	
Approach Delay, s/veh		80.7			80.0			57.3			44.5	
Approach LOS		F			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	51.5	80.7	26.0	31.9	27.7	104.5	18.0	39.9
Change Period (Y+Rc), s	5.1	* 5.7	5.7	* 5	4.4	5.1	4.4	5.7
Max Green Setting (Gmax), s	34.9	* 75	21.6	* 39	25.6	84.9	18.0	41.9
Max Q Clear Time (g_c+I1), s	22.7	25.4	20.2	16.9	23.2	71.0	13.4	19.3
Green Ext Time (p_c), s	0.7	9.8	0.1	4.4	0.1	12.8	0.2	4.9

Intersection Summary	
HCM 6th Ctrl Delay	57.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	50.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	422	0	0	357	331	458	0	0	1618	346
Future Vol, veh/h	0	0	422	0	0	357	331	458	0	0	1618	346
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	459	0	0	388	360	498	0	0	1759	376

Major/Minor	Minor2				Major1			Major2		
Conflicting Flow All	-	-	880		1759	0	-	-	-	0
Stage 1	-	-	-		-	-	-	-	-	-
Stage 2	-	-	-		-	-	-	-	-	-
Critical Hdwy	-	-	6.94		4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-		-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-		-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32		2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 290		~ 351	-	0	0	-	-
Stage 1	0	0	-		-	-	0	0	-	-
Stage 2	0	0	-		-	-	0	0	-	-
Platoon blocked, %						-			-	-
Mov Cap-1 Maneuver	-	0	~ 290		~ 351	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-		-	-	-	-	-	-
Stage 1	-	0	-		-	-	-	-	-	-
Stage 2	-	0	-		-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 309.4	37.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 351	-	290	-	-
HCM Lane V/C Ratio	1.025	-	1.582	-	-
HCM Control Delay (s)	89.9	-	$ 309.4	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	12.2	-	27.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	352	226	563	300	804	1236
Future Volume (veh/h)	352	226	563	300	804	1236
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	383	246	612	0	874	1343
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	445	396	1212		384	2165
Arrive On Green	0.25	0.25	0.34	0.00	0.22	0.61
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	383	246	612	0	874	1343
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	18.4	12.3	12.3	0.0	19.3	21.2
Cycle Q Clear(g_c), s	18.4	12.3	12.3	0.0	19.3	21.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	445	396	1212		384	2165
V/C Ratio(X)	0.86	0.62	0.51		2.27	0.62
Avail Cap(c_a), veh/h	755	672	1212		384	2165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	29.8	23.5	0.0	35.1	11.0
Incr Delay (d2), s/veh	5.2	1.6	1.5	0.0	581.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	4.8	5.0	0.0	69.9	7.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.3	31.4	25.0	0.0	616.6	12.3
LnGrp LOS	D	C	C		F	B
Approach Vol, veh/h	629		612	A		2217
Approach Delay, s/veh	35.0		25.0			250.6
Approach LOS	C		C			F

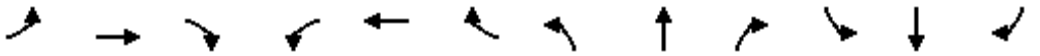
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.0	38.0		27.5		62.0
Change Period (Y+Rc), s	* 4.7	7.5		5.1		7.5
Max Green Setting (Gmax), s	* 19	30.5		37.9		54.5
Max Q Clear Time (g_c+I1), s	21.3	14.3		20.4		23.2
Green Ext Time (p_c), s	0.0	3.4		2.0		11.4

Intersection Summary		
HCM 6th Ctrl Delay		171.4
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	46	168	54	51	86	222	1840	145	99	418	225
Future Volume (veh/h)	203	46	168	54	51	86	222	1840	145	99	418	225
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		0.91	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	259	0	185	59	85	76	244	2022	159	109	459	247
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	0	127	598	314	243	160	2668	208	141	1716	770
Arrive On Green	0.09	0.00	0.09	0.17	0.17	0.17	0.18	1.00	1.00	0.08	1.00	1.00
Sat Flow, veh/h	3563	0	1361	3563	1870	1450	1781	4820	376	3456	3404	1526
Grp Volume(v), veh/h	259	0	185	59	85	76	244	1424	757	109	459	247
Grp Sat Flow(s),veh/h/ln	1781	0	1361	1781	1870	1450	1781	1702	1792	1728	1702	1526
Q Serve(g_s), s	9.9	0.0	13.1	2.0	5.5	6.4	12.6	0.0	0.0	4.3	0.0	0.0
Cycle Q Clear(g_c), s	9.9	0.0	13.1	2.0	5.5	6.4	12.6	0.0	0.0	4.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	333	0	127	598	314	243	160	1884	992	141	1716	770
V/C Ratio(X)	0.78	0.00	1.45	0.10	0.27	0.31	1.52	0.76	0.76	0.77	0.27	0.32
Avail Cap(c_a), veh/h	333	0	127	970	509	395	160	1884	992	141	1716	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	62.0	0.0	63.4	49.3	50.8	51.1	57.4	0.0	0.0	63.7	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	241.8	0.0	0.2	0.3	264.0	2.9	5.6	18.5	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	13.1	0.9	2.6	2.4	16.9	0.8	1.5	2.2	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.1	0.0	305.3	49.3	50.9	51.4	321.4	2.9	5.6	82.2	0.3	0.9
LnGrp LOS	E	A	F	D	D	D	F	A	A	F	A	A
Approach Vol, veh/h		444			220			2425			815	
Approach Delay, s/veh		169.3			50.7			35.8			11.5	
Approach LOS		F			D			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	83.5		18.0	17.0	76.6		28.4				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	5.7	62.9		13.1	12.6	* 56		38.1				
Max Q Clear Time (g_c+I1), s	6.3	2.0		15.1	14.6	2.0		8.4				
Green Ext Time (p_c), s	0.0	41.0		0.0	0.0	8.7		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		46.7	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	29	187	63	35	30	157	2410	133	14	734	54
Future Volume (veh/h)	35	29	187	63	35	30	157	2410	133	14	734	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	130	135	68	38	32	169	2591	143	15	789	58
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	262	293	107	58	38	191	2347	128	22	1982	146
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.21	1.00	1.00	0.01	0.59	0.59
Sat Flow, veh/h	270	1365	1524	358	304	200	1781	3418	186	1781	3347	246
Grp Volume(v), veh/h	168	0	135	138	0	0	169	1332	1402	15	419	428
Grp Sat Flow(s),veh/h/ln	1635	0	1524	862	0	0	1781	1777	1827	1781	1777	1816
Q Serve(g_s), s	0.0	0.0	11.0	11.3	0.0	0.0	12.9	96.1	96.1	1.2	17.6	17.6
Cycle Q Clear(g_c), s	12.3	0.0	11.0	23.7	0.0	0.0	12.9	96.1	96.1	1.2	17.6	17.6
Prop In Lane	0.23		1.00	0.49		0.23	1.00		0.10	1.00		0.14
Lane Grp Cap(c), veh/h	346	0	293	204	0	0	191	1220	1255	22	1052	1075
V/C Ratio(X)	0.49	0.00	0.46	0.68	0.00	0.00	0.89	1.09	1.12	0.67	0.40	0.40
Avail Cap(c_a), veh/h	384	0	327	234	0	0	298	1220	1255	51	1052	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	0.0	50.1	58.1	0.0	0.0	54.2	0.0	0.0	68.8	15.2	15.2
Incr Delay (d2), s/veh	0.4	0.0	0.4	4.4	0.0	0.0	1.3	42.7	54.1	11.9	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	4.3	5.1	0.0	0.0	5.1	14.5	18.8	0.6	7.1	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	0.0	50.6	62.5	0.0	0.0	55.5	42.7	54.1	80.7	16.4	16.3
LnGrp LOS	D	A	D	E	A	A	E	F	F	F	B	B
Approach Vol, veh/h		303			138			2903			862	
Approach Delay, s/veh		50.7			62.5			49.0			17.5	
Approach LOS		D			E			D			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.4	88.8		31.8	6.2	102.0		31.8
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	23.4	71.4		30.0	4.0	* 91		30.0
Max Q Clear Time (g_c+I1), s	14.3	19.6		25.7	3.2	98.1		14.3
Green Ext Time (p_c), s	0.1	7.7		0.2	0.0	0.0		0.8

Intersection Summary	
HCM 6th Ctrl Delay	43.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	645	316	156	260	242	339	84	1675	232	241	619	351
Future Volume (veh/h)	645	316	156	260	242	339	84	1675	232	241	619	351
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	733	359	177	295	275	385	95	1903	264	274	703	399
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1156	467	138	1156	501	71	1395	613	138	1395	618
Arrive On Green	0.04	0.33	0.33	0.04	0.33	0.33	0.04	0.39	0.39	0.04	0.39	0.39
Sat Flow, veh/h	3456	3554	1436	3456	3554	1541	1781	3554	1561	3456	3554	1573
Grp Volume(v), veh/h	733	359	177	295	275	385	95	1903	264	274	703	399
Grp Sat Flow(s),veh/h/ln	1728	1777	1436	1728	1777	1541	1781	1777	1561	1728	1777	1573
Q Serve(g_s), s	4.0	7.6	9.5	4.0	5.7	22.5	4.0	39.3	12.4	4.0	15.0	20.6
Cycle Q Clear(g_c), s	4.0	7.6	9.5	4.0	5.7	22.5	4.0	39.3	12.4	4.0	15.0	20.6
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	1156	467	138	1156	501	71	1395	613	138	1395	618
V/C Ratio(X)	5.30	0.31	0.38	2.13	0.24	0.77	1.33	1.36	0.43	1.98	0.50	0.65
Avail Cap(c_a), veh/h	138	1411	570	138	1386	601	71	1395	613	138	1395	618
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	48.0	25.3	26.0	48.0	24.7	30.3	48.0	30.4	22.2	48.0	23.0	24.7
Incr Delay (d2), s/veh	1952.2	0.3	1.1	533.8	0.2	6.5	219.1	168.4	2.2	466.9	1.3	5.2
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 BackOfQ(50%),veh/ln	39.2	3.2	3.3	12.0	2.4	9.0	6.1	47.9	4.8	10.6	6.1	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2000.2	25.6	27.0	581.8	24.9	36.9	267.1	198.7	24.4	514.9	24.3	29.9
LnGrp LOS	F	C	C	F	C	D	F	F	C	F	C	C
Approach Vol, veh/h		1269			955			2262			1376	
Approach Delay, s/veh		1166.4			201.7			181.3			123.6	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	45.0	8.4	38.2	8.4	45.0	8.4	38.2
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.7	4.4	* 5.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	32.8	4.0	* 40	4.0	* 33	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	41.3	6.0	11.5	6.0	22.6	6.0	24.5
Green Ext Time (p_c), s	0.0	0.0	0.0	6.3	0.0	7.1	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay	384.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	153	0	0	942	439	1072	0	0	979	123
Future Vol, veh/h	0	0	153	0	0	942	439	1072	0	0	979	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	166	0	0	1024	477	1165	0	0	1064	134

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	532	1064	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	4.3	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	492	620	-	0	0	-	-
Stage 1	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	-	0	492	620	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16	8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	620	-	492	-	-
HCM Lane V/C Ratio	0.77	-	0.338	-	-
HCM Control Delay (s)	27.5	-	16	-	-
HCM Lane LOS	D	-	C	-	-
HCM 95th %tile Q(veh)	7.2	-	1.5	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	140	203	1371	769	440	677
Future Volume (veh/h)	140	203	1371	769	440	677
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	221	1490	0	478	736
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	296	264	1464		376	2417
Arrive On Green	0.17	0.17	0.41	0.00	0.21	0.68
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	152	221	1490	0	478	736
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	6.4	11.1	33.8	0.0	17.3	6.9
Cycle Q Clear(g_c), s	6.4	11.1	33.8	0.0	17.3	6.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	296	264	1464		376	2417
V/C Ratio(X)	0.51	0.84	1.02		1.27	0.30
Avail Cap(c_a), veh/h	695	618	1464		376	2417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	33.1	24.1	0.0	32.4	5.3
Incr Delay (d2), s/veh	0.5	2.7	28.1	0.0	142.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.3	17.9	0.0	21.7	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.7	35.9	52.2	0.0	174.4	5.6
LnGrp LOS	C	D	F		F	A
Approach Vol, veh/h	373		1490	A		1214
Approach Delay, s/veh	34.2		52.2			72.1
Approach LOS	C		D			E

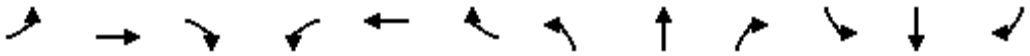
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	41.3		18.8		63.3
Change Period (Y+Rc), s	* 4.7	7.5		5.1		* 7.5
Max Green Setting (Gmax), s	* 17	33.4		32.0		* 56
Max Q Clear Time (g_c+I1), s	19.3	35.8		13.1		8.9
Green Ext Time (p_c), s	0.0	0.0		0.6		3.2

Intersection Summary			
HCM 6th Ctrl Delay		57.9	
HCM 6th LOS		E	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	88	204	275	99	196	226	591	241	327	1540	407
Future Volume (veh/h)	282	88	204	275	99	196	226	591	241	327	1540	407
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.87	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	195	236	215	289	180	155	238	622	254	344	1621	428
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	201	124	834	438	322	197	1457	580	394	1649	427
Arrive On Green	0.11	0.11	0.11	0.23	0.23	0.23	0.22	0.82	0.82	0.08	0.28	0.28
Sat Flow, veh/h	1781	1870	1152	3563	1870	1373	1781	3555	1415	3456	3992	1035
Grp Volume(v), veh/h	195	236	215	289	180	155	238	595	281	344	1378	671
Grp Sat Flow(s),veh/h/ln	1781	1870	1152	1781	1870	1373	1781	1702	1566	1728	1702	1623
Q Serve(g_s), s	16.1	16.1	16.1	10.1	12.2	14.6	16.6	7.3	7.6	14.8	60.2	62.0
Cycle Q Clear(g_c), s	16.1	16.1	16.1	10.1	12.2	14.6	16.6	7.3	7.6	14.8	60.2	62.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.90	1.00		0.64
Lane Grp Cap(c), veh/h	191	201	124	834	438	322	197	1395	642	394	1406	670
V/C Ratio(X)	1.02	1.18	1.74	0.35	0.41	0.48	1.21	0.43	0.44	0.87	0.98	1.00
Avail Cap(c_a), veh/h	191	201	124	929	488	358	197	1395	642	498	1406	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.45	0.45	0.45
Uniform Delay (d), s/veh	66.9	67.0	66.9	47.9	48.7	49.6	58.4	8.6	8.7	68.2	53.6	54.2
Incr Delay (d2), s/veh	70.4	118.9	363.8	0.1	0.2	0.4	131.1	1.0	2.2	5.6	12.0	23.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	14.3	17.2	4.6	5.8	5.1	13.9	2.3	2.4	7.0	29.0	30.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	137.3	185.9	430.7	48.0	48.9	50.0	189.5	9.6	10.8	73.8	65.6	77.9
LnGrp LOS	F	F	F	D	D	D	F	A	B	E	E	F
Approach Vol, veh/h		646			624			1114			2393	
Approach Delay, s/veh		252.7			48.7			48.4			70.2	
Approach LOS		F			D			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.5	67.5		21.0	21.0	68.0		40.0				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	21.6	53.0		16.1	16.6	* 58		39.1				
Max Q Clear Time (g_c+I1), s	16.8	9.6		18.1	18.6	64.0		16.6				
Green Ext Time (p_c), s	0.3	9.6		0.0	0.0	0.0		1.5				

Intersection Summary			
HCM 6th Ctrl Delay		87.0	
HCM 6th LOS		F	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	29	219	251	38	26	186	1011	37	22	2609	67
Future Volume (veh/h)	33	29	219	251	38	26	186	1011	37	22	2609	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	152	145	259	39	27	192	1042	38	23	2690	69
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	634	649	374	50	34	162	1578	58	48	1372	35
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.18	0.90	0.90	0.03	0.39	0.39
Sat Flow, veh/h	278	1509	1545	788	119	82	1781	3491	127	1781	3535	90
Grp Volume(v), veh/h	186	0	145	325	0	0	192	530	550	23	1344	1415
Grp Sat Flow(s),veh/h/ln	1788	0	1545	989	0	0	1781	1777	1841	1781	1777	1849
Q Serve(g_s), s	0.0	0.0	9.0	37.3	0.0	0.0	13.6	10.7	10.7	1.9	58.2	58.2
Cycle Q Clear(g_c), s	9.6	0.0	9.0	46.9	0.0	0.0	13.6	10.7	10.7	1.9	58.2	58.2
Prop In Lane	0.18		1.00	0.80		0.08	1.00		0.07	1.00		0.05
Lane Grp Cap(c), veh/h	779	0	649	458	0	0	162	803	832	48	689	717
V/C Ratio(X)	0.24	0.00	0.22	0.71	0.00	0.00	1.19	0.66	0.66	0.48	1.95	1.97
Avail Cap(c_a), veh/h	779	0	649	458	0	0	162	803	832	68	689	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	0.0	27.8	43.1	0.0	0.0	61.4	4.5	4.5	72.0	45.9	45.9
Incr Delay (d2), s/veh	0.7	0.0	0.8	9.0	0.0	0.0	126.8	3.8	3.7	2.8	432.6	442.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	3.5	11.9	0.0	0.0	11.1	2.7	2.8	0.9	107.5	113.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	28.6	52.1	0.0	0.0	188.2	8.2	8.1	74.8	478.5	488.6
LnGrp LOS	C	A	C	D	A	A	F	A	A	E	F	F
Approach Vol, veh/h		331			325			1272			2782	
Approach Delay, s/veh		28.7			52.1			35.4			480.3	
Approach LOS		C			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	64.1		67.9	8.4	73.7		67.9
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	13.6	58.2		63.0	5.7	* 66		63.0
Max Q Clear Time (g_c+I1), s	15.6	60.2		48.9	3.9	12.7		11.6
Green Ext Time (p_c), s	0.0	0.0		1.4	0.0	14.4		1.0

Intersection Summary		
HCM 6th Ctrl Delay	298.9	
HCM 6th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	293	120	328	361	153	191	634	260	509	1708	652
Future Volume (veh/h)	280	293	120	328	361	153	191	634	260	509	1708	652
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	298	312	128	349	384	163	203	674	277	541	1817	694
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	514	217	344	550	234	184	1281	567	975	1941	861
Arrive On Green	0.09	0.14	0.14	0.10	0.15	0.15	0.10	0.36	0.36	0.28	0.55	0.55
Sat Flow, veh/h	3456	3554	1498	3456	3554	1514	1781	3554	1572	3456	3554	1576
Grp Volume(v), veh/h	298	312	128	349	384	163	203	674	277	541	1817	694
Grp Sat Flow(s),veh/h/ln	1728	1777	1498	1728	1777	1514	1781	1777	1572	1728	1777	1576
Q Serve(g_s), s	16.3	15.6	12.5	18.9	19.5	11.6	19.6	28.4	26.0	25.3	90.2	67.8
Cycle Q Clear(g_c), s	16.3	15.6	12.5	18.9	19.5	11.6	19.6	28.4	26.0	25.3	90.2	67.8
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	320	514	217	344	550	234	184	1281	567	975	1941	861
V/C Ratio(X)	0.93	0.61	0.59	1.01	0.70	0.70	1.10	0.53	0.49	0.56	0.94	0.81
Avail Cap(c_a), veh/h	320	733	309	344	729	311	184	1281	567	975	1941	861
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	85.6	76.2	51.3	85.5	76.1	27.3	85.2	47.9	47.2	58.1	40.0	34.9
Incr Delay (d2), s/veh	32.4	2.5	5.4	52.1	3.3	7.5	97.2	1.5	3.0	0.4	10.0	8.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	7.4	5.1	11.0	9.2	4.8	13.9	12.8	10.8	11.1	40.6	28.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.0	78.7	56.7	137.6	79.4	34.8	182.4	49.5	50.2	58.5	50.1	42.9
LnGrp LOS	F	E	E	F	E	C	F	D	D	E	D	D
Approach Vol, veh/h		738			896			1154			3052	
Approach Delay, s/veh		90.7			94.0			73.0			49.9	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	58.7	74.2	24.6	32.5	24.0	108.9	22.0	35.1
Change Period (Y+Rc), s	5.1	* 5.7	5.7	* 5	4.4	5.1	4.4	5.7
Max Green Setting (Gmax), s	44.7	* 69	18.1	* 39	19.6	94.2	17.6	39.0
Max Q Clear Time (g_c+I1), s	27.3	30.4	20.9	17.6	21.6	92.2	18.3	21.5
Green Ext Time (p_c), s	0.9	11.5	0.0	4.6	0.0	2.0	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay	66.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	75

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	443	0	0	390	334	509	0	0	1790	350
Future Vol, veh/h	0	0	443	0	0	390	334	509	0	0	1790	350
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	482	0	0	424	363	553	0	0	1946	380

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	973	1946	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 252	~ 297	-	0	0	-	-
Stage 1	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	-	0	~ 252	~ 297	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 457.2	64.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 297	-	252	-	-
HCM Lane V/C Ratio	1.222	-	1.911	-	-
HCM Control Delay (s)	162.9	-	$ 457.2	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	16.5	-	34	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	368	253	647	321	815	1423
Future Volume (veh/h)	368	253	647	321	815	1423
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	400	275	703	0	886	1547
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	461	410	1223		373	2148
Arrive On Green	0.26	0.26	0.34	0.00	0.21	0.60
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	400	275	703	0	886	1547
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	19.8	14.3	14.9	0.0	19.3	28.1
Cycle Q Clear(g_c), s	19.8	14.3	14.9	0.0	19.3	28.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	461	410	1223		373	2148
V/C Ratio(X)	0.87	0.67	0.57		2.37	0.72
Avail Cap(c_a), veh/h	710	631	1223		373	2148
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	30.6	24.7	0.0	36.4	12.8
Incr Delay (d2), s/veh	7.2	1.9	2.0	0.0	626.7	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	5.6	6.1	0.0	72.8	9.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.9	32.5	26.7	0.0	663.1	14.9
LnGrp LOS	D	C	C		F	B
Approach Vol, veh/h	675		703	A		2433
Approach Delay, s/veh	36.9		26.7			250.9
Approach LOS	D		C			F

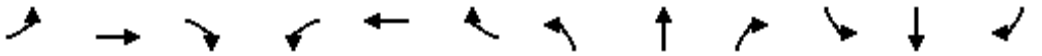
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.0	39.2		28.9		63.2
Change Period (Y+Rc), s	* 4.7	7.5		5.1		7.5
Max Green Setting (Gmax), s	* 19	31.7		36.7		55.7
Max Q Clear Time (g_c+I1), s	21.3	16.9		21.8		30.1
Green Ext Time (p_c), s	0.0	3.8		2.1		12.7

Intersection Summary		
HCM 6th Ctrl Delay		171.7
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	549	1920	163	324	1900	560	338	1685	414	330	488	100
Future Volume (veh/h)	549	1920	163	324	1900	560	338	1685	414	330	488	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	646	2259	192	381	2235	659	398	1982	487	388	574	118
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	459	2294	695	217	1937	730	380	1543	465	316	1448	436
Arrive On Green	0.27	0.90	0.90	0.04	0.25	0.25	0.15	0.40	0.40	0.09	0.28	0.28
Sat Flow, veh/h	3456	5106	1547	3456	5106	1543	3456	5106	1539	3456	5106	1537
Grp Volume(v), veh/h	646	2259	192	381	2235	659	398	1982	487	388	574	118
Grp Sat Flow(s),veh/h/ln	1728	1702	1547	1728	1702	1543	1728	1702	1539	1728	1702	1537
Q Serve(g_s), s	18.6	54.5	2.3	8.8	53.1	53.1	15.4	42.3	42.3	12.8	12.7	8.3
Cycle Q Clear(g_c), s	18.6	54.5	2.3	8.8	53.1	53.1	15.4	42.3	42.3	12.8	12.7	8.3
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	459	2294	695	217	1937	730	380	1543	465	316	1448	436
V/C Ratio(X)	1.41	0.98	0.28	1.75	1.15	0.90	1.05	1.28	1.05	1.23	0.40	0.27
Avail Cap(c_a), veh/h	459	2294	695	217	1937	730	380	1543	465	316	1459	439
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.21	0.21	0.21	0.63	0.63	0.63
Uniform Delay (d), s/veh	51.4	6.7	4.0	67.1	52.2	40.5	59.8	41.9	41.9	63.6	40.5	38.9
Incr Delay (d2), s/veh	195.8	15.5	1.0	341.0	69.9	2.0	34.7	129.2	32.9	119.2	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.6	6.1	0.9	14.3	36.0	21.4	8.4	35.2	19.3	10.9	5.4	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	247.2	22.2	5.0	408.1	122.2	42.5	94.4	171.1	74.8	182.8	40.6	39.2
LnGrp LOS	F	C	A	F	F	D	F	F	F	F	D	D
Approach Vol, veh/h		3097			3275			2867			1080	
Approach Delay, s/veh		68.1			139.4			144.1			91.6	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	68.6	19.8	45.4	23.0	58.8	17.2	48.0
Change Period (Y+Rc), s	4.4	* 5.5	4.4	* 5.7	4.4	5.5	4.4	5.7
Max Green Setting (Gmax), s	8.8	* 56	15.4	* 40	18.6	46.3	12.8	42.3
Max Q Clear Time (g_c+I1), s	10.8	56.5	17.4	14.7	20.6	55.1	14.8	44.3
Green Ext Time (p_c), s	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	114.3
HCM 6th LOS	F

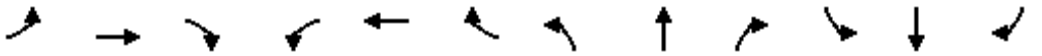
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	127	100	250	181	50	160
Future Volume (Veh/h)	127	100	250	181	50	160
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	146	115	287	208	57	184
Pedestrians	10		12			10
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		1			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			313			
pX, platoon unblocked						
vC, conflicting volume	619	268			505	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	619	268			505	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	63	84			95	
cM capacity (veh/h)	390	718			1047	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	261	191	304	118	123
Volume Left	146	0	0	57	0
Volume Right	115	0	208	0	0
cSH	489	1700	1700	1047	1700
Volume to Capacity	0.53	0.11	0.18	0.05	0.07
Queue Length 95th (ft)	78	0	0	4	0
Control Delay (s)	20.5	0.0	0.0	4.4	0.0
Lane LOS	C			A	
Approach Delay (s)	20.5	0.0		2.2	
Approach LOS	C				

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	60	203	80	65	110	227	2190	170	130	631	245
Future Volume (veh/h)	226	60	203	80	65	110	227	2190	170	130	631	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		0.92	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	157	193	223	88	108	96	249	2407	187	143	693	269
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	175	127	622	327	254	160	2640	202	141	1788	682
Arrive On Green	0.09	0.09	0.09	0.17	0.17	0.17	0.12	0.73	0.73	0.08	0.99	0.99
Sat Flow, veh/h	1781	1870	1361	3563	1870	1455	1781	4829	369	3456	3595	1370
Grp Volume(v), veh/h	157	193	223	88	108	96	249	1684	910	143	655	307
Grp Sat Flow(s),veh/h/ln	1781	1870	1361	1781	1870	1455	1781	1702	1794	1728	1702	1561
Q Serve(g_s), s	12.3	13.1	13.1	2.9	7.1	8.2	12.6	55.3	59.6	5.7	0.2	0.2
Cycle Q Clear(g_c), s	12.3	13.1	13.1	2.9	7.1	8.2	12.6	55.3	59.6	5.7	0.2	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.88
Lane Grp Cap(c), veh/h	167	175	127	622	327	254	160	1861	981	141	1693	777
V/C Ratio(X)	0.94	1.10	1.75	0.14	0.33	0.38	1.55	0.90	0.93	1.02	0.39	0.39
Avail Cap(c_a), veh/h	167	175	127	970	509	396	160	1861	981	141	1693	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.44	0.44	0.44
Uniform Delay (d), s/veh	63.1	63.5	63.4	48.9	50.6	51.0	61.6	16.2	16.8	64.3	0.2	0.2
Incr Delay (d2), s/veh	52.2	98.2	368.2	0.0	0.2	0.3	277.2	7.8	15.9	54.6	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	11.0	17.6	1.3	3.4	3.0	17.9	18.7	23.3	3.5	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.3	161.7	431.6	48.9	50.8	51.4	338.9	24.0	32.6	118.9	0.5	0.8
LnGrp LOS	F	F	F	D	D	D	F	C	C	F	A	A
Approach Vol, veh/h		573			292			2843			1105	
Approach Delay, s/veh		254.0			50.4			54.3			15.9	
Approach LOS		F			D			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	82.5		18.0	17.0	75.6		29.4				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	5.7	62.9		13.1	12.6	* 56		38.1				
Max Q Clear Time (g_c+I1), s	7.7	61.6		15.1	14.6	2.2		10.2				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	13.1		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			69.0									
HCM 6th LOS			E									

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	830	50	40	816	140	100	136	80	130	38	129
Future Volume (veh/h)	205	830	50	40	816	140	100	136	80	130	38	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.95	1.00		0.93	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	225	912	55	44	897	154	110	149	88	143	42	142
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	2123	128	56	1752	299	77	301	178	134	113	380
Arrive On Green	0.12	0.87	0.87	0.03	0.40	0.40	0.04	0.28	0.28	0.08	0.31	0.31
Sat Flow, veh/h	1781	4902	295	1781	4353	743	1781	1069	631	1781	359	1213
Grp Volume(v), veh/h	225	632	335	44	700	351	110	0	237	143	0	184
Grp Sat Flow(s),veh/h/ln	1781	1702	1792	1781	1702	1692	1781	0	1700	1781	0	1571
Q Serve(g_s), s	6.6	4.2	4.2	2.6	16.4	16.6	4.6	0.0	12.3	8.0	0.0	9.6
Cycle Q Clear(g_c), s	6.6	4.2	4.2	2.6	16.4	16.6	4.6	0.0	12.3	8.0	0.0	9.6
Prop In Lane	1.00		0.16	1.00		0.44	1.00		0.37	1.00		0.77
Lane Grp Cap(c), veh/h	111	1474	776	56	1370	681	77	0	479	134	0	493
V/C Ratio(X)	2.03	0.43	0.43	0.78	0.51	0.52	1.42	0.00	0.50	1.06	0.00	0.37
Avail Cap(c_a), veh/h	111	1474	776	101	1370	681	77	0	603	134	0	608
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	4.3	4.3	51.0	23.8	23.9	50.7	0.0	31.8	49.0	0.0	28.3
Incr Delay (d2), s/veh	485.8	0.7	1.3	8.5	1.4	2.8	250.0	0.0	0.3	95.7	0.0	0.2
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 BackOfQ(50%),veh/ln	17.7	1.2	1.4	1.3	6.7	7.0	7.4	0.0	5.1	7.1	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	532.2	5.0	5.6	59.5	25.2	26.6	300.7	0.0	32.1	144.7	0.0	28.5
LnGrp LOS	F	A	A	E	C	C	F	A	C	F	A	C
Approach Vol, veh/h		1192			1095			347			327	
Approach Delay, s/veh		104.7			27.0			117.2			79.3	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	51.1	9.0	38.1	11.0	47.9	12.4	34.7
Change Period (Y+Rc), s	4.4	5.2	4.4	4.9	4.4	5.2	4.4	4.9
Max Green Setting (Gmax), s	6.3	35.5	4.6	41.0	6.6	34.9	8.0	37.6
Max Q Clear Time (g_c+I1), s	4.6	6.2	6.6	11.6	8.6	18.6	10.0	14.3
Green Ext Time (p_c), s	0.0	12.0	0.0	0.8	0.0	9.4	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	74.6
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	730	220	140	556	206	451	2021	280	178	472	160
Future Volume (veh/h)	330	730	220	140	556	206	451	2021	280	178	472	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	355	785	237	151	598	222	485	2173	301	191	508	172
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	870	369	198	855	362	449	1861	812	114	2178	660
Arrive On Green	0.06	0.24	0.24	0.06	0.24	0.24	0.13	0.52	0.52	0.01	0.14	0.14
Sat Flow, veh/h	3456	3554	1509	3456	3554	1505	3456	3554	1550	3456	5106	1547
Grp Volume(v), veh/h	355	785	237	151	598	222	485	2173	301	191	508	172
Grp Sat Flow(s),veh/h/ln	1728	1777	1509	1728	1777	1505	1728	1777	1550	1728	1702	1547
Q Serve(g_s), s	8.6	30.0	19.7	6.0	21.5	18.4	18.2	73.3	16.1	4.6	12.4	13.9
Cycle Q Clear(g_c), s	8.6	30.0	19.7	6.0	21.5	18.4	18.2	73.3	16.1	4.6	12.4	13.9
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	870	369	198	855	362	449	1861	812	114	2178	660
V/C Ratio(X)	1.67	0.90	0.64	0.76	0.70	0.61	1.08	1.17	0.37	1.68	0.23	0.26
Avail Cap(c_a), veh/h	212	899	381	207	888	376	449	1861	812	114	2178	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
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	65.7	51.2	47.4	65.1	48.5	47.4	60.9	33.3	19.7	69.2	39.8	40.5
Incr Delay (d2), s/veh	322.3	12.3	4.1	13.0	2.4	2.8	65.5	81.7	1.3	342.1	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	14.8	7.9	3.0	9.9	7.2	12.1	51.6	6.1	7.5	5.7	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	388.0	63.6	51.4	78.1	50.9	50.2	126.4	115.0	21.0	411.3	40.1	41.4
LnGrp LOS	F	E	D	E	D	D	F	F	C	F	D	D
Approach Vol, veh/h		1377			971			2959			871	
Approach Delay, s/veh		145.1			55.0			107.3			121.7	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	79.2	12.4	39.4	22.6	65.6	13.0	38.8
Change Period (Y+Rc), s	4.4	* 5.9	4.4	* 5.1	4.4	5.9	4.4	5.1
Max Green Setting (Gmax), s	4.6	* 72	8.4	* 35	18.2	58.4	8.6	35.0
Max Q Clear Time (g_c+I1), s	10.6	75.3	8.0	32.0	20.2	15.9	10.6	23.5
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	6.8	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	109.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	29	198	69	43	37	163	3000	143	19	919	64
Future Volume (veh/h)	43	29	198	69	43	37	163	3000	143	19	919	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.97	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	133	145	74	46	40	175	3226	154	20	988	69
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	307	373	132	81	58	197	2134	101	51	1805	126
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.15	0.82	0.82	0.03	0.54	0.54
Sat Flow, veh/h	326	1259	1533	388	332	240	1781	3446	163	1781	3360	235
Grp Volume(v), veh/h	179	0	145	160	0	0	175	1647	1733	20	522	535
Grp Sat Flow(s),veh/h/ln	1586	0	1533	959	0	0	1781	1777	1832	1781	1777	1818
Q Serve(g_s), s	0.0	0.0	11.1	12.5	0.0	0.0	13.5	86.7	86.7	1.5	27.0	27.0
Cycle Q Clear(g_c), s	13.0	0.0	11.1	25.5	0.0	0.0	13.5	86.7	86.7	1.5	27.0	27.0
Prop In Lane	0.26		1.00	0.46		0.25	1.00		0.09	1.00		0.13
Lane Grp Cap(c), veh/h	419	0	373	271	0	0	197	1100	1135	51	954	976
V/C Ratio(X)	0.43	0.00	0.39	0.59	0.00	0.00	0.89	1.50	1.53	0.39	0.55	0.55
Avail Cap(c_a), veh/h	419	0	373	271	0	0	198	1100	1135	771	954	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	44.2	52.4	0.0	0.0	58.8	12.3	12.3	66.8	21.2	21.2
Incr Delay (d2), s/veh	3.2	0.0	3.0	9.1	0.0	0.0	4.7	223.9	237.9	1.8	2.3	2.2
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 BackOfQ(50%),veh/ln	5.7	0.0	4.6	6.0	0.0	0.0	6.0	81.7	88.7	0.7	11.3	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	0.0	47.3	61.5	0.0	0.0	63.5	236.2	250.3	68.6	23.5	23.4
LnGrp LOS	D	A	D	E	A	A	E	F	F	E	C	C
Approach Vol, veh/h		324			160			3555			1077	
Approach Delay, s/veh		47.6			61.5			234.6			24.3	
Approach LOS		D			E			F			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.9	81.1		39.0	8.4	92.6		39.0
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	15.6	75.1		34.1	60.6	* 30		34.1
Max Q Clear Time (g_c+I1), s	15.5	29.0		27.5	3.5	88.7		15.0
Green Ext Time (p_c), s	0.0	10.6		0.3	0.0	0.0		0.9

Intersection Summary	
HCM 6th Ctrl Delay	173.0
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	785	324	168	270	247	404	94	1977	239	288	731	425
Future Volume (veh/h)	785	324	168	270	247	404	94	1977	239	288	731	425
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	892	368	191	307	281	459	107	2247	272	327	831	483
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1229	499	138	1229	534	71	1322	580	138	1322	585
Arrive On Green	0.04	0.35	0.35	0.04	0.35	0.35	0.04	0.37	0.37	0.04	0.37	0.37
Sat Flow, veh/h	3456	3554	1444	3456	3554	1543	1781	3554	1559	3456	3554	1572
Grp Volume(v), veh/h	892	368	191	307	281	459	107	2247	272	327	831	483
Grp Sat Flow(s),veh/h/ln	1728	1777	1444	1728	1777	1543	1781	1777	1559	1728	1777	1572
Q Serve(g_s), s	4.0	7.6	10.0	4.0	5.6	27.7	4.0	37.2	13.3	4.0	19.2	27.8
Cycle Q Clear(g_c), s	4.0	7.6	10.0	4.0	5.6	27.7	4.0	37.2	13.3	4.0	19.2	27.8
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	1229	499	138	1229	534	71	1322	580	138	1322	585
V/C Ratio(X)	6.45	0.30	0.38	2.22	0.23	0.86	1.50	1.70	0.47	2.37	0.63	0.83
Avail Cap(c_a), veh/h	138	1411	573	138	1386	602	71	1322	580	138	1322	585
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	48.0	23.9	24.7	48.0	23.2	30.5	48.0	31.4	23.9	48.0	25.7	28.5
Incr Delay (d2), s/veh	2469.2	0.3	1.0	572.2	0.2	12.6	285.6	317.9	2.7	636.3	2.3	12.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	49.1	3.2	3.5	12.7	2.4	11.8	7.4	73.0	5.2	13.9	7.9	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2517.2	24.2	25.7	620.2	23.4	43.0	333.6	349.3	26.6	684.3	28.0	41.0
LnGrp LOS	F	C	C	F	C	D	F	F	C	F	C	D
Approach Vol, veh/h		1451			1047			2626			1641	
Approach Delay, s/veh		1557.0			207.0			315.3			162.6	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	42.9	8.4	40.3	8.4	42.9	8.4	40.3
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.7	4.4	* 5.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	32.8	4.0	* 40	4.0	* 33	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	39.2	6.0	12.0	6.0	29.8	6.0	29.7
Green Ext Time (p_c), s	0.0	0.0	0.0	6.5	0.0	3.0	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	527.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	171	0	0	1012	454	1219	0	0	1062	139
Future Vol, veh/h	0	0	171	0	0	1012	454	1219	0	0	1062	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	186	0	0	1100	493	1325	0	0	1154	151

Major/Minor	Minor2					Major1			Major2		
Conflicting Flow All	-	-	577			1154	0	-	-	-	0
Stage 1	-	-	-			-	-	-	-	-	-
Stage 2	-	-	-			-	-	-	-	-	-
Critical Hdwy	-	-	6.94			4.3	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-			-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-			-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32			2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	460			571	-	0	0	-	-
Stage 1	0	0	-			-	-	0	0	-	-
Stage 2	0	0	-			-	-	0	0	-	-
Platoon blocked, %							-			-	-
Mov Cap-1 Maneuver	-	0	460			571	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-			-	-	-	-	-	-
Stage 1	-	0	-			-	-	-	-	-	-
Stage 2	-	0	-			-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18	10.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	571	-	460	-	-
HCM Lane V/C Ratio	0.864	-	0.404	-	-
HCM Control Delay (s)	38.9	-	18	-	-
HCM Lane LOS	E	-	C	-	-
HCM 95th %tile Q(veh)	9.6	-	1.9	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	147	262	1526	808	450	756
Future Volume (veh/h)	147	262	1526	808	450	756
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	160	285	1659	0	489	822
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	366	325	1395		358	2304
Arrive On Green	0.21	0.21	0.39	0.00	0.20	0.65
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	160	285	1659	0	489	822
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	6.8	15.0	33.8	0.0	17.3	9.1
Cycle Q Clear(g_c), s	6.8	15.0	33.8	0.0	17.3	9.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	366	325	1395		358	2304
V/C Ratio(X)	0.44	0.88	1.19		1.37	0.36
Avail Cap(c_a), veh/h	662	589	1395		358	2304
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	33.1	26.1	0.0	34.4	6.9
Incr Delay (d2), s/veh	0.3	3.0	92.4	0.0	181.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	5.9	30.5	0.0	25.0	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.2	36.1	118.6	0.0	216.0	7.4
LnGrp LOS	C	D	F		F	A
Approach Vol, veh/h	445		1659	A		1311
Approach Delay, s/veh	34.0		118.6			85.2
Approach LOS	C		F			F

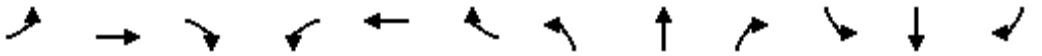
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	41.3		22.8		63.3
Change Period (Y+Rc), s	* 4.7	7.5		5.1		* 7.5
Max Green Setting (Gmax), s	* 17	33.4		32.0		* 56
Max Q Clear Time (g_c+I1), s	19.3	35.8		17.0		11.1
Green Ext Time (p_c), s	0.0	0.0		0.7		3.6

Intersection Summary			
HCM 6th Ctrl Delay		94.7	
HCM 6th LOS		F	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	1460	521	645	1720	220	383	493	345	660	1390	480
Future Volume (veh/h)	225	1460	521	645	1720	220	383	493	345	660	1390	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.92	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	1553	554	686	1830	234	407	524	367	702	1479	511
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	279	2219	661	544	2610	1117	359	899	258	733	1450	427
Arrive On Green	0.16	0.87	0.87	0.05	0.17	0.17	0.03	0.06	0.06	0.21	0.28	0.28
Sat Flow, veh/h	3456	5106	1522	3456	5106	1528	3456	5106	1466	3456	5106	1503
Grp Volume(v), veh/h	239	1553	554	686	1830	234	407	524	367	702	1479	511
Grp Sat Flow(s),veh/h/ln	1728	1702	1522	1728	1702	1528	1728	1702	1466	1728	1702	1503
Q Serve(g_s), s	10.1	15.2	26.2	23.6	50.7	11.4	15.6	15.0	26.4	30.1	42.6	42.6
Cycle Q Clear(g_c), s	10.1	15.2	26.2	23.6	50.7	11.4	15.6	15.0	26.4	30.1	42.6	42.6
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	279	2219	661	544	2610	1117	359	899	258	733	1450	427
V/C Ratio(X)	0.86	0.70	0.84	1.26	0.70	0.21	1.13	0.58	1.42	0.96	1.02	1.20
Avail Cap(c_a), veh/h	290	2219	661	544	2610	1117	359	899	258	733	1450	427
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.74	0.74	0.74	0.44	0.44	0.44
Uniform Delay (d), s/veh	62.0	6.5	7.3	71.1	51.5	12.5	72.4	65.3	70.6	58.4	53.7	53.7
Incr Delay (d2), s/veh	19.8	1.9	12.0	119.2	0.1	0.0	82.5	0.8	206.2	13.4	20.9	98.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	3.0	5.1	20.1	23.4	4.6	11.4	7.0	25.3	14.5	21.0	27.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.8	8.4	19.3	190.3	51.7	12.5	154.9	66.1	276.9	71.8	74.6	152.4
LnGrp LOS	F	A	B	F	D	B	F	E	F	E	F	F
Approach Vol, veh/h		2346			2750			1298			2692	
Approach Delay, s/veh		18.5			82.9			153.5			88.7	
Approach LOS		B			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	71.2	20.0	48.3	16.5	82.7	36.2	32.1
Change Period (Y+Rc), s	4.4	* 5.5	4.4	* 5.7	4.4	5.5	4.4	5.7
Max Green Setting (Gmax), s	23.6	* 49	15.6	* 43	12.6	59.5	31.8	26.1
Max Q Clear Time (g_c+I1), s	25.6	28.2	17.6	44.6	12.1	52.7	32.1	28.4
Green Ext Time (p_c), s	0.0	19.3	0.0	0.0	0.0	6.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	78.1
HCM 6th LOS	E

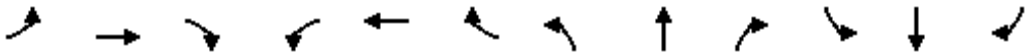
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	277	90	310	214	90	310
Future Volume (Veh/h)	277	90	310	214	90	310
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	295	96	330	228	96	330
Pedestrians	16		10			10
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		1			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			313			
pX, platoon unblocked						
vC, conflicting volume	827	305			574	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	827	305			574	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	86			90	
cM capacity (veh/h)	274	676			982	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	391	220	338	206	220
Volume Left	295	0	0	96	0
Volume Right	96	0	228	0	0
cSH	320	1700	1700	982	1700
Volume to Capacity	1.22	0.13	0.20	0.10	0.13
Queue Length 95th (ft)	433	0	0	8	0
Control Delay (s)	158.7	0.0	0.0	4.7	0.0
Lane LOS	F			A	
Approach Delay (s)	158.7	0.0		2.3	
Approach LOS	F				

Intersection Summary			
Average Delay	45.8		
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	119	248	330	126	260	261	680	330	420	1778	468
Future Volume (veh/h)	320	119	248	330	126	260	261	680	330	420	1778	468
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.87	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	231	273	261	347	239	204	275	716	347	442	1872	493
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	201	124	854	448	330	197	1288	582	484	1638	413
Arrive On Green	0.11	0.11	0.11	0.24	0.24	0.24	0.15	0.50	0.50	0.14	0.41	0.41
Sat Flow, veh/h	1781	1870	1152	3563	1870	1377	1781	3404	1537	3456	4018	1013
Grp Volume(v), veh/h	231	273	261	347	239	204	275	716	347	442	1573	792
Grp Sat Flow(s),veh/h/ln	1781	1870	1152	1781	1870	1377	1781	1702	1537	1728	1702	1627
Q Serve(g_s), s	16.1	16.1	16.1	12.3	16.7	19.8	16.6	21.8	24.0	18.9	61.2	61.2
Cycle Q Clear(g_c), s	16.1	16.1	16.1	12.3	16.7	19.8	16.6	21.8	24.0	18.9	61.2	61.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	191	201	124	854	448	330	197	1288	582	484	1388	664
V/C Ratio(X)	1.21	1.36	2.11	0.41	0.53	0.62	1.40	0.56	0.60	0.91	1.13	1.19
Avail Cap(c_a), veh/h	191	201	124	929	488	359	197	1288	582	498	1388	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	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	0.09	0.09	0.09
Uniform Delay (d), s/veh	66.9	67.0	66.9	48.0	49.7	50.9	64.0	28.6	29.1	63.6	44.4	44.4
Incr Delay (d2), s/veh	132.4	190.7	526.1	0.1	0.4	1.8	205.6	1.7	4.5	2.6	61.1	88.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	18.3	22.8	5.5	7.9	7.1	18.6	8.7	9.1	8.5	37.3	40.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	199.3	257.7	593.1	48.2	50.1	52.7	269.6	30.3	33.6	66.2	105.5	132.9
LnGrp LOS	F	F	F	D	D	D	F	C	C	E	F	F
Approach Vol, veh/h		765			790			1338			2807	
Approach Delay, s/veh		354.5			49.9			80.3			107.0	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.4	62.7		21.0	21.0	67.2		40.8				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	21.6	53.0		16.1	16.6	* 58		39.1				
Max Q Clear Time (g_c+I1), s	20.9	26.0		18.1	18.6	63.2		21.8				
Green Ext Time (p_c), s	0.1	10.7		0.0	0.0	0.0		2.0				

Intersection Summary			
HCM 6th Ctrl Delay		126.1	
HCM 6th LOS		F	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	982	240	220	1450	190	70	74	70	170	163	264
Future Volume (veh/h)	270	982	240	220	1450	190	70	74	70	170	163	264
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87	1.00		0.92	1.00		0.91	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	287	1045	255	234	1543	202	74	79	74	181	173	281
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	1522	371	252	1585	207	93	198	186	203	181	294
Arrive On Green	0.06	0.13	0.13	0.28	0.70	0.70	0.05	0.23	0.23	0.11	0.30	0.30
Sat Flow, veh/h	1781	3966	966	1781	4521	590	1781	845	791	1781	610	990
Grp Volume(v), veh/h	287	897	403	234	1161	584	74	0	153	181	0	454
Grp Sat Flow(s),veh/h/ln	1781	1702	1527	1781	1702	1707	1781	0	1636	1781	0	1600
Q Serve(g_s), s	24.1	37.8	37.9	19.2	48.1	48.6	6.2	0.0	11.8	15.0	0.0	41.8
Cycle Q Clear(g_c), s	24.1	37.8	37.9	19.2	48.1	48.6	6.2	0.0	11.8	15.0	0.0	41.8
Prop In Lane	1.00		0.63	1.00		0.35	1.00		0.48	1.00		0.62
Lane Grp Cap(c), veh/h	311	1306	586	252	1194	599	93	0	384	203	0	475
V/C Ratio(X)	0.92	0.69	0.69	0.93	0.97	0.98	0.80	0.00	0.40	0.89	0.00	0.96
Avail Cap(c_a), veh/h	340	1306	586	268	1194	599	126	0	405	245	0	502
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.34	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.7	56.9	56.9	53.0	21.7	21.8	70.3	0.0	48.4	65.5	0.0	51.8
Incr Delay (d2), s/veh	12.4	1.0	2.3	34.3	20.2	31.3	15.9	0.0	0.2	25.0	0.0	28.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	17.6	16.0	10.0	15.5	17.5	3.2	0.0	4.9	8.3	0.0	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.1	57.9	59.2	87.4	42.0	53.1	86.2	0.0	48.7	90.5	0.0	79.9
LnGrp LOS	F	E	E	F	D	D	F	A	D	F	A	E
Approach Vol, veh/h		1587			1979			227			635	
Approach Delay, s/veh		62.6			50.6			60.9			82.9	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.6	62.8	12.2	49.4	30.6	57.8	21.5	40.1
Change Period (Y+Rc), s	4.4	5.2	4.4	4.9	4.4	5.2	4.4	4.9
Max Green Setting (Gmax), s	22.6	50.8	10.6	47.1	28.6	44.8	20.6	37.1
Max Q Clear Time (g_c+I1), s	21.2	39.9	8.2	43.8	26.1	50.6	17.0	13.8
Green Ext Time (p_c), s	0.1	8.2	0.0	0.7	0.1	0.0	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	60.1
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	680	280	560	1191	155	404	664	150	339	1854	308
Future Volume (veh/h)	332	680	280	560	1191	155	404	664	150	339	1854	308
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	339	694	286	571	1215	158	412	678	153	346	1892	314
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	874	373	567	1111	478	452	1538	667	244	1903	573
Arrive On Green	0.03	0.08	0.08	0.16	0.31	0.31	0.13	0.43	0.43	0.14	0.75	0.75
Sat Flow, veh/h	3456	3554	1518	3456	3554	1528	3456	3554	1542	3456	5106	1538
Grp Volume(v), veh/h	339	694	286	571	1215	158	412	678	153	346	1892	314
Grp Sat Flow(s),veh/h/ln	1728	1777	1518	1728	1777	1528	1728	1777	1542	1728	1702	1538
Q Serve(g_s), s	14.6	28.8	27.7	24.6	46.9	11.9	17.7	20.1	9.4	10.6	54.7	13.2
Cycle Q Clear(g_c), s	14.6	28.8	27.7	24.6	46.9	11.9	17.7	20.1	9.4	10.6	54.7	13.2
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	336	874	373	567	1111	478	452	1538	667	244	1903	573
V/C Ratio(X)	1.01	0.79	0.77	1.01	1.09	0.33	0.91	0.44	0.23	1.42	0.99	0.55
Avail Cap(c_a), veh/h	336	879	375	567	1111	478	452	1538	667	244	1903	573
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
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	72.6	65.2	64.7	62.7	51.5	39.5	64.4	29.8	26.8	64.4	18.9	13.7
Incr Delay (d2), s/veh	51.1	5.3	9.7	39.7	56.2	0.4	22.3	0.9	0.8	210.0	19.3	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	14.5	12.4	13.9	29.5	4.6	9.2	8.9	3.7	11.4	15.2	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.7	70.5	74.4	102.4	107.8	39.9	86.6	30.8	27.6	274.4	38.3	17.4
LnGrp LOS	F	E	E	F	F	D	F	C	C	F	D	B
Approach Vol, veh/h		1319			1944			1243			2552	
Approach Delay, s/veh		85.0			100.7			48.9			67.7	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	71.0	29.0	42.0	24.0	62.0	19.0	52.0
Change Period (Y+Rc), s	4.4	* 5.9	4.4	* 5.1	4.4	5.9	4.4	5.1
Max Green Setting (Gmax), s	10.6	* 58	24.6	* 37	19.6	49.1	14.6	46.9
Max Q Clear Time (g_c+I1), s	12.6	22.1	26.6	30.8	19.7	56.7	16.6	48.9
Green Ext Time (p_c), s	0.0	9.7	0.0	3.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	76.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	32	227	256	38	34	192	1270	44	27	3257	81
Future Volume (veh/h)	43	32	227	256	38	34	192	1270	44	27	3257	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	151	156	264	39	35	198	1309	45	28	3358	84
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	514	555	300	38	34	162	1784	61	51	1585	39
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.18	1.00	1.00	0.03	0.45	0.45
Sat Flow, veh/h	347	1427	1542	715	106	95	1781	3500	120	1781	3538	88
Grp Volume(v), veh/h	195	0	156	338	0	0	198	664	690	28	1677	1765
Grp Sat Flow(s),veh/h/ln	1773	0	1542	916	0	0	1781	1777	1843	1781	1777	1850
Q Serve(g_s), s	0.0	0.0	10.8	42.5	0.0	0.0	13.6	0.0	0.0	2.3	67.2	67.2
Cycle Q Clear(g_c), s	11.5	0.0	10.8	54.0	0.0	0.0	13.6	0.0	0.0	2.3	67.2	67.2
Prop In Lane	0.23		1.00	0.78		0.10	1.00		0.07	1.00		0.05
Lane Grp Cap(c), veh/h	668	0	555	372	0	0	162	906	940	51	796	829
V/C Ratio(X)	0.29	0.00	0.28	0.91	0.00	0.00	1.23	0.73	0.73	0.54	2.11	2.13
Avail Cap(c_a), veh/h	668	0	555	372	0	0	162	906	940	68	796	829
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	34.2	54.3	0.0	0.0	61.4	0.0	0.0	71.9	41.4	41.4
Incr Delay (d2), s/veh	1.1	0.0	1.3	28.2	0.0	0.0	137.8	4.3	4.1	3.3	502.2	512.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	4.3	15.8	0.0	0.0	11.6	1.1	1.1	1.1	139.1	147.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	0.0	35.4	82.5	0.0	0.0	199.2	4.3	4.1	75.2	543.6	554.0
LnGrp LOS	D	A	D	F	A	A	F	A	A	E	F	F
Approach Vol, veh/h		351			338			1552			3470	
Approach Delay, s/veh		35.4			82.5			29.1			545.1	
Approach LOS		D			F			C			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	73.1		58.9	8.7	82.4		58.9
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	13.6	67.2		54.0	5.7	* 75		54.0
Max Q Clear Time (g_c+I1), s	15.5	69.2		56.0	4.3	2.0		13.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	23.0		1.0

Intersection Summary		
HCM 6th Ctrl Delay	346.2	
HCM 6th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	346	305	122	339	382	184	193	764	268	588	2032	792
Future Volume (veh/h)	346	305	122	339	382	184	193	764	268	588	2032	792
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	368	324	130	361	406	196	205	813	285	626	2162	843
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	523	221	355	570	243	184	1281	567	955	1921	852
Arrive On Green	0.09	0.15	0.15	0.10	0.16	0.16	0.10	0.36	0.36	0.28	0.54	0.54
Sat Flow, veh/h	3456	3554	1499	3456	3554	1516	1781	3554	1572	3456	3554	1576
Grp Volume(v), veh/h	368	324	130	361	406	196	205	813	285	626	2162	843
Grp Sat Flow(s),veh/h/ln	1728	1777	1499	1728	1777	1516	1781	1777	1572	1728	1777	1576
Q Serve(g_s), s	17.6	16.3	12.6	19.5	20.6	14.3	19.6	36.0	26.9	30.4	102.7	100.4
Cycle Q Clear(g_c), s	17.6	16.3	12.6	19.5	20.6	14.3	19.6	36.0	26.9	30.4	102.7	100.4
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	320	523	221	355	570	243	184	1281	567	955	1921	852
V/C Ratio(X)	1.15	0.62	0.59	1.02	0.71	0.81	1.12	0.63	0.50	0.66	1.13	0.99
Avail Cap(c_a), veh/h	320	733	309	355	729	311	184	1281	567	955	1921	852
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	86.2	76.0	51.0	85.2	75.6	28.0	85.2	50.4	47.5	60.7	43.6	43.1
Incr Delay (d2), s/veh	97.2	2.5	5.3	52.2	3.7	15.0	100.8	2.4	3.2	1.3	63.9	28.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	7.7	5.2	11.4	9.8	6.4	14.1	16.3	11.2	13.4	60.3	45.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	183.4	78.6	56.2	137.5	79.3	43.0	186.0	52.8	50.6	62.1	107.5	71.5
LnGrp LOS	F	E	E	F	E	D	F	D	D	E	F	E
Approach Vol, veh/h		822			963			1303			3631	
Approach Delay, s/veh		122.0			93.7			73.3			91.3	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	57.6	74.2	25.2	33.0	24.0	107.8	22.0	36.2
Change Period (Y+Rc), s	5.1	* 5.7	5.7	* 5	4.4	5.1	4.4	5.7
Max Green Setting (Gmax), s	44.7	* 69	18.1	* 39	19.6	94.2	17.6	39.0
Max Q Clear Time (g_c+I1), s	32.4	38.0	21.5	18.3	21.6	104.7	19.6	22.6
Green Ext Time (p_c), s	1.0	12.8	0.0	4.7	0.0	0.0	0.0	5.3

Intersection Summary	
HCM 6th Ctrl Delay	91.9
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	106.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	460	0	0	431	337	574	0	0	1998	396
Future Vol, veh/h	0	0	460	0	0	431	337	574	0	0	1998	396
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	500	0	0	468	366	624	0	0	2172	430

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	1086	2172	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 212	~ 242	-	0	0	-	-
Stage 1	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	-	0	~ 212	~ 242	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 661.5	106.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 242	-	212	-	-
HCM Lane V/C Ratio	1.514	-	2.358	-	-
HCM Control Delay (s)	288.7	-	$ 661.5	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	21.8	-	40.6	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	380	288	725	338	866	1601
Future Volume (veh/h)	380	288	725	338	866	1601
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	413	313	788	0	941	1740
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	475	423	1244		351	2124
Arrive On Green	0.27	0.27	0.35	0.00	0.20	0.60
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	413	313	788	0	941	1740
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	20.6	16.8	17.2	0.0	18.3	35.9
Cycle Q Clear(g_c), s	20.6	16.8	17.2	0.0	18.3	35.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	475	423	1244		351	2124
V/C Ratio(X)	0.87	0.74	0.63		2.68	0.82
Avail Cap(c_a), veh/h	708	630	1244		351	2124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	31.1	25.2	0.0	37.3	14.7
Incr Delay (d2), s/veh	7.7	2.6	2.5	0.0	764.5	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	6.5	7.1	0.0	82.0	12.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.2	33.7	27.7	0.0	801.8	18.4
LnGrp LOS	D	C	C		F	B
Approach Vol, veh/h	726		788	A		2681
Approach Delay, s/veh	37.4		27.7			293.4
Approach LOS	D		C			F

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.0	40.0		29.9		63.0
Change Period (Y+Rc), s	* 4.7	7.5		5.1		7.5
Max Green Setting (Gmax), s	* 18	32.5		36.9		55.5
Max Q Clear Time (g_c+I1), s	20.3	19.2		22.6		37.9
Green Ext Time (p_c), s	0.0	4.1		2.2		11.5

Intersection Summary		
HCM 6th Ctrl Delay		199.2
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive NB – Ex + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	10690	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2204
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.05
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive SB – Ex + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4306	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	897
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	15.5
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive NB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	11230	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2315
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.10
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive SB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4526	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	943
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.3
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 EB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4564	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2480
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.08
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Information

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Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 WB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3797	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2020
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	56.9
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.5
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Project Information

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Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive NB – LT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	14860	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	3064
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.46
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Information

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Jurisdiction	I-805 from Governor Drive to Nobel Drive SB – LT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5987	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1247
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	21.5
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Information

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Jurisdiction	SR52 from Genesee Avenue to I-805 EB – LT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5120	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2782
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.21
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 WB – LT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4865	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2588
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.12
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-5 from Gilman Drive to Nobel Drive NB – Ex + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7649	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1951
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2292
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.85
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.3
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	34.0
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	59.2		

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Project Information

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Agency		Analysis Year	2019
Jurisdiction	I-5 from Gilman Drive to Nobel Drive SB – Ex + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	0.280
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6571	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1825
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	16.7		

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Project Information

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Jurisdiction	SR52 from Genesee Avenue to I-805 EB – Ex + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4706	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2558
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.11
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Information

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3194	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1646
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	27.4
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Project Information

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7879	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2010
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2292
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	56.5
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.6
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	59.2		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	0.280
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6991	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1942
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	16.7		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5294	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2877
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.25
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 WB – NT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3577	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1844
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	31.2
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-5 from Gilman Drive to Nobel Drive NB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9628	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2456
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2292
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.07
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	59.2		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-5 from Gilman Drive to Nobel Drive SB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	0.280
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7768	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	2158
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.98
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	16.7		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 EB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6119	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	3326
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.44
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 WB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3949	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2036
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	56.7
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.9
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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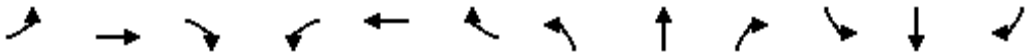
ATTACHMENT C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	13	51	51	36	82	164	1431	136	90	290	175
Future Volume (veh/h)	124	13	51	51	36	82	164	1431	136	90	290	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.76	1.00		0.91	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	14	56	56	78	65	180	1573	149	99	319	192
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	13	52	586	307	238	116	1965	184	71	1224	716
Arrive On Green	0.05	0.05	0.05	0.16	0.16	0.16	0.09	0.80	0.80	0.08	1.00	1.00
Sat Flow, veh/h	3456	258	1033	3563	1870	1448	1781	3272	306	1781	2126	1244
Grp Volume(v), veh/h	136	0	70	56	78	65	180	846	876	99	265	246
Grp Sat Flow(s),veh/h/ln	1728	0	1292	1781	1870	1448	1781	1777	1801	1781	1777	1593
Q Serve(g_s), s	5.4	0.0	7.1	1.9	5.1	5.5	9.1	36.5	38.8	5.6	0.0	0.0
Cycle Q Clear(g_c), s	5.4	0.0	7.1	1.9	5.1	5.5	9.1	36.5	38.8	5.6	0.0	0.0
Prop In Lane	1.00		0.80	1.00		1.00	1.00		0.17	1.00		0.78
Lane Grp Cap(c), veh/h	175	0	66	586	307	238	116	1067	1082	71	1023	917
V/C Ratio(X)	0.78	0.00	1.07	0.10	0.25	0.27	1.55	0.79	0.81	1.39	0.26	0.27
Avail Cap(c_a), veh/h	175	0	66	967	508	393	116	1067	1082	71	1023	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	65.7	0.0	66.5	49.7	51.0	51.2	63.9	9.3	9.5	64.4	0.0	0.0
Incr Delay (d2), s/veh	17.8	0.0	131.4	0.0	0.2	0.2	287.4	6.0	6.6	229.6	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	4.7	0.8	2.4	2.0	13.3	11.0	11.9	7.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.4	0.0	197.9	49.7	51.2	51.4	351.4	15.3	16.1	294.0	0.5	0.6
LnGrp LOS	F	A	F	D	D	D	F	B	B	F	A	A
Approach Vol, veh/h		206			199			1902			610	
Approach Delay, s/veh		122.3			50.8			47.5			48.2	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	90.1		12.0	13.5	86.6		27.9				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	5.6	69.1		7.1	9.1	* 66		38.0				
Max Q Clear Time (g_c+I1), s	7.6	40.8		9.1	11.1	2.0		7.5				
Green Ext Time (p_c), s	0.0	19.8		0.0	0.0	5.7		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		53.1	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	466	306	142	247	236	256	71	1412	223	183	512	258
Future Volume (veh/h)	466	306	142	247	236	256	71	1412	223	183	512	258
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	530	348	161	281	268	291	81	1605	253	208	582	293
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1143	462	138	1143	496	71	1408	619	138	1408	623
Arrive On Green	0.04	0.32	0.32	0.04	0.32	0.32	0.04	0.40	0.40	0.04	0.40	0.40
Sat Flow, veh/h	3456	3554	1435	3456	3554	1541	1781	3554	1561	3456	3554	1573
Grp Volume(v), veh/h	530	348	161	281	268	291	81	1605	253	208	582	293
Grp Sat Flow(s),veh/h/ln	1728	1777	1435	1728	1777	1541	1781	1777	1561	1728	1777	1573
Q Serve(g_s), s	4.0	7.4	8.6	4.0	5.5	15.8	4.0	39.6	11.7	4.0	11.8	13.8
Cycle Q Clear(g_c), s	4.0	7.4	8.6	4.0	5.5	15.8	4.0	39.6	11.7	4.0	11.8	13.8
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	1143	462	138	1143	496	71	1408	619	138	1408	623
V/C Ratio(X)	3.83	0.30	0.35	2.03	0.23	0.59	1.14	1.14	0.41	1.50	0.41	0.47
Avail Cap(c_a), veh/h	138	1411	570	138	1386	601	71	1408	619	138	1408	623
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	48.0	25.5	25.9	48.0	24.9	28.4	48.0	30.2	21.8	48.0	21.8	22.4
Incr Delay (d2), s/veh	1292.8	0.3	1.0	489.1	0.2	2.1	148.6	72.0	2.0	260.9	0.9	2.5
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 BackOfQ(50%),veh/ln	26.5	3.1	3.0	11.1	2.3	6.0	4.7	29.5	4.5	6.7	4.8	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1340.8	25.8	26.9	537.1	25.1	30.5	196.6	102.2	23.8	308.9	22.7	24.9
LnGrp LOS	F	C	C	F	C	C	F	F	C	F	C	C
Approach Vol, veh/h		1039			840			1939			1083	
Approach Delay, s/veh		696.8			198.3			95.9			78.3	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	45.3	8.4	37.9	8.4	45.3	8.4	37.9
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.7	4.4	* 5.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	32.8	4.0	* 40	4.0	* 33	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	41.6	6.0	10.6	6.0	15.8	6.0	17.8
Green Ext Time (p_c), s	0.0	0.0	0.0	6.0	0.0	8.2	0.0	5.1

Intersection Summary		
HCM 6th Ctrl Delay		236.9
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	131	0	0	893	420	964	0	0	899	115
Future Vol, veh/h	0	0	131	0	0	893	420	964	0	0	899	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	142	0	0	971	457	1048	0	0	977	125

Major/Minor	Minor2					Major1			Major2		
Conflicting Flow All	-	-	489			977	0	-	-	-	0
Stage 1	-	-	-			-	-	-	-	-	-
Stage 2	-	-	-			-	-	-	-	-	-
Critical Hdwy	-	-	6.94			4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-			-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-			-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32			2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	525			702	-	0	0	-	-
Stage 1	0	0	-			-	-	0	0	-	-
Stage 2	0	0	-			-	-	0	0	-	-
Platoon blocked, %							-			-	-
Mov Cap-1 Maneuver	-	0	525			702	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-			-	-	-	-	-	-
Stage 1	-	0	-			-	-	-	-	-	-
Stage 2	-	0	-			-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	5.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	702	-	525	-	-
HCM Lane V/C Ratio	0.65	-	0.271	-	-
HCM Control Delay (s)	19.1	-	14.4	-	-
HCM Lane LOS	C	-	B	-	-
HCM 95th %tile Q(veh)	4.8	-	1.1	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	132	177	1207	721	440	589
Future Volume (veh/h)	132	177	1207	721	440	589
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	143	192	1312	0	478	640
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	265	235	1495		384	2468
Arrive On Green	0.15	0.15	0.42	0.00	0.22	0.69
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	143	192	1312	0	478	640
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	6.0	9.4	27.2	0.0	17.3	5.4
Cycle Q Clear(g_c), s	6.0	9.4	27.2	0.0	17.3	5.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	265	235	1495		384	2468
V/C Ratio(X)	0.54	0.82	0.88		1.25	0.26
Avail Cap(c_a), veh/h	710	631	1495		384	2468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	33.1	21.4	0.0	31.5	4.6
Incr Delay (d2), s/veh	0.6	2.6	7.6	0.0	130.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.7	11.3	0.0	20.8	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.3	35.8	28.9	0.0	162.4	4.8
LnGrp LOS	C	D	C		F	A
Approach Vol, veh/h	335		1312	A		1118
Approach Delay, s/veh	34.3		28.9			72.2
Approach LOS	C		C			E

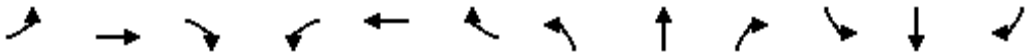
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	41.3		17.0		63.3
Change Period (Y+Rc), s	* 4.7	7.5		5.1		* 7.5
Max Green Setting (Gmax), s	* 17	33.4		32.0		* 56
Max Q Clear Time (g_c+I1), s	19.3	29.2		11.4		7.4
Green Ext Time (p_c), s	0.0	2.3		0.5		2.7

Intersection Summary			
HCM 6th Ctrl Delay		47.1	
HCM 6th LOS		D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	64	140	249	66	169	138	354	215	300	1055	317
Future Volume (veh/h)	222	64	140	249	66	169	138	354	215	300	1055	317
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.86	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	67	147	262	151	124	145	373	226	316	1111	334
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	44	97	823	432	316	168	804	477	257	1156	342
Arrive On Green	0.11	0.11	0.11	0.23	0.23	0.23	0.06	0.26	0.26	0.14	0.43	0.43
Sat Flow, veh/h	3456	410	900	3563	1870	1370	1781	2099	1246	1781	2670	790
Grp Volume(v), veh/h	234	0	214	262	151	124	145	315	284	316	734	711
Grp Sat Flow(s),veh/h/ln	1728	0	1309	1781	1870	1370	1781	1777	1569	1781	1777	1683
Q Serve(g_s), s	9.7	0.0	16.1	9.2	10.1	11.5	12.1	22.4	23.0	21.6	59.8	62.3
Cycle Q Clear(g_c), s	9.7	0.0	16.1	9.2	10.1	11.5	12.1	22.4	23.0	21.6	59.8	62.3
Prop In Lane	1.00		0.69	1.00		1.00	1.00		0.79	1.00		0.47
Lane Grp Cap(c), veh/h	371	0	141	823	432	316	168	681	601	257	769	729
V/C Ratio(X)	0.63	0.00	1.52	0.32	0.35	0.39	0.87	0.46	0.47	1.23	0.95	0.98
Avail Cap(c_a), veh/h	371	0	141	929	488	357	197	681	601	257	769	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.34	0.34	0.34
Uniform Delay (d), s/veh	64.1	0.0	67.0	47.9	48.3	48.8	69.3	42.7	43.0	64.2	41.1	41.8
Incr Delay (d2), s/veh	2.6	0.0	267.9	0.1	0.2	0.3	25.1	2.3	2.7	115.8	10.8	14.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	15.9	4.1	4.8	4.0	6.9	10.8	9.8	18.1	28.2	28.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	0.0	334.9	48.0	48.4	49.1	94.4	45.0	45.6	180.0	51.8	56.4
LnGrp LOS	E	A	F	D	D	D	F	D	D	F	D	E
Approach Vol, veh/h		448			537			744			1761	
Approach Delay, s/veh		194.8			48.3			54.9			76.7	
Approach LOS		F			D			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.0	63.5		21.0	18.5	70.9		39.5				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	21.6	53.0		16.1	16.6	* 58		39.1				
Max Q Clear Time (g_c+I1), s	23.6	25.0		18.1	14.1	64.3		13.5				
Green Ext Time (p_c), s	0.0	5.4		0.0	0.0	0.0		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		82.8	
HCM 6th LOS		F	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	279	118	314	334	117	189	532	250	408	1431	474
Future Volume (veh/h)	199	279	118	314	334	117	189	532	250	408	1431	474
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	297	126	334	355	124	201	566	266	434	1522	504
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	502	211	369	637	273	218	1403	621	843	1859	824
Arrive On Green	0.07	0.14	0.14	0.11	0.18	0.18	0.12	0.39	0.39	0.24	0.52	0.52
Sat Flow, veh/h	3456	3554	1496	3456	3554	1521	1781	3554	1573	3456	3554	1576
Grp Volume(v), veh/h	212	297	126	334	355	124	201	566	266	434	1522	504
Grp Sat Flow(s),veh/h/ln	1728	1777	1496	1728	1777	1521	1781	1777	1573	1728	1777	1576
Q Serve(g_s), s	11.5	14.9	12.0	18.2	17.3	8.8	21.2	21.8	23.4	20.6	67.9	42.6
Cycle Q Clear(g_c), s	11.5	14.9	12.0	18.2	17.3	8.8	21.2	21.8	23.4	20.6	67.9	42.6
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	249	502	211	369	637	273	218	1403	621	843	1859	824
V/C Ratio(X)	0.85	0.59	0.60	0.91	0.56	0.45	0.92	0.40	0.43	0.51	0.82	0.61
Avail Cap(c_a), veh/h	327	729	307	393	784	335	240	1403	621	843	1859	824
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	87.2	76.4	48.9	83.9	71.1	28.0	82.5	41.4	41.9	62.1	37.8	31.8
Incr Delay (d2), s/veh	12.3	2.4	5.6	22.3	1.5	2.3	34.4	0.9	2.2	0.2	4.2	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	7.0	4.9	9.3	8.1	3.5	11.8	9.7	9.7	9.1	29.8	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.5	78.8	54.6	106.2	72.6	30.3	116.8	42.3	44.0	62.3	41.9	35.1
LnGrp LOS	F	E	D	F	E	C	F	D	D	E	D	D
Approach Vol, veh/h		635			813			1033			2460	
Approach Delay, s/veh		80.9			79.9			57.2			44.1	
Approach LOS		F			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	80.7	26.0	31.9	27.7	104.5	18.1	39.7
Change Period (Y+Rc), s	5.1	* 5.7	5.7	* 5	4.4	5.1	4.4	5.7
Max Green Setting (Gmax), s	34.9	* 75	21.6	* 39	25.6	84.9	18.0	41.9
Max Q Clear Time (g_c+I1), s	22.6	25.4	20.2	16.9	23.2	69.9	13.5	19.3
Green Ext Time (p_c), s	0.7	10.0	0.1	4.4	0.1	13.7	0.2	4.9

Intersection Summary	
HCM 6th Ctrl Delay	57.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	49.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	422	0	0	365	331	463	0	0	1606	344
Future Vol, veh/h	0	0	422	0	0	365	331	463	0	0	1606	344
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	459	0	0	397	360	503	0	0	1746	374

Major/Minor	Minor2				Major1			Major2		
Conflicting Flow All	-	-	873		1746	0	-	-	-	0
Stage 1	-	-	-		-	-	-	-	-	-
Stage 2	-	-	-		-	-	-	-	-	-
Critical Hdwy	-	-	6.94		4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-		-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-		-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32		2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 293		~ 356	-	0	0	-	-
Stage 1	0	0	-		-	-	0	0	-	-
Stage 2	0	0	-		-	-	0	0	-	-
Platoon blocked, %						-			-	-
Mov Cap-1 Maneuver	-	0	~ 293		~ 356	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-		-	-	-	-	-	-
Stage 1	-	0	-		-	-	-	-	-	-
Stage 2	-	0	-		-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 302.2	35.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 356	-	293	-	-
HCM Lane V/C Ratio	1.011	-	1.566	-	-
HCM Control Delay (s)	85.4	-	$ 302.2	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	11.9	-	27.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	352	228	566	300	795	1233
Future Volume (veh/h)	352	228	566	300	795	1233
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	383	248	615	0	864	1340
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	445	396	1212		384	2165
Arrive On Green	0.25	0.25	0.34	0.00	0.22	0.61
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	383	248	615	0	864	1340
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	18.4	12.4	12.3	0.0	19.3	21.2
Cycle Q Clear(g_c), s	18.4	12.4	12.3	0.0	19.3	21.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	445	396	1212		384	2165
V/C Ratio(X)	0.86	0.63	0.51		2.25	0.62
Avail Cap(c_a), veh/h	755	672	1212		384	2165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	29.8	23.5	0.0	35.1	11.0
Incr Delay (d2), s/veh	5.2	1.6	1.5	0.0	570.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	4.8	5.0	0.0	68.6	7.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.3	31.5	25.0	0.0	605.1	12.3
LnGrp LOS	D	C	C		F	B
Approach Vol, veh/h	631		615	A		2204
Approach Delay, s/veh	35.0		25.0			244.7
Approach LOS	D		C			F

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.0	38.0		27.5		62.0
Change Period (Y+Rc), s	* 4.7	7.5		5.1		7.5
Max Green Setting (Gmax), s	* 19	30.5		37.9		54.5
Max Q Clear Time (g_c+I1), s	21.3	14.3		20.4		23.2
Green Ext Time (p_c), s	0.0	3.4		2.0		11.3

Intersection Summary		
HCM 6th Ctrl Delay		167.2
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	48	172	54	45	86	192	1840	145	99	412	202
Future Volume (veh/h)	211	48	172	54	45	86	192	1840	145	99	412	202
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		0.91	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	270	0	189	59	84	72	211	2022	159	109	453	222
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	0	127	594	312	242	160	2674	209	141	1721	772
Arrive On Green	0.09	0.00	0.09	0.17	0.17	0.17	0.18	1.00	1.00	0.08	1.00	1.00
Sat Flow, veh/h	3563	0	1361	3563	1870	1449	1781	4820	376	3456	3404	1526
Grp Volume(v), veh/h	270	0	189	59	84	72	211	1424	757	109	453	222
Grp Sat Flow(s),veh/h/ln	1781	0	1361	1781	1870	1449	1781	1702	1792	1728	1702	1526
Q Serve(g_s), s	10.4	0.0	13.1	2.0	5.5	6.1	12.6	0.0	0.0	4.3	0.0	0.0
Cycle Q Clear(g_c), s	10.4	0.0	13.1	2.0	5.5	6.1	12.6	0.0	0.0	4.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	333	0	127	594	312	242	160	1889	994	141	1721	772
V/C Ratio(X)	0.81	0.00	1.48	0.10	0.27	0.30	1.32	0.75	0.76	0.77	0.26	0.29
Avail Cap(c_a), veh/h	333	0	127	970	509	394	160	1889	994	141	1721	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	62.2	0.0	63.4	49.4	50.9	51.2	57.4	0.0	0.0	63.7	0.0	0.0
Incr Delay (d2), s/veh	13.0	0.0	254.8	0.0	0.2	0.3	179.3	2.8	5.5	18.5	0.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	13.6	0.9	2.6	2.3	13.1	0.7	1.5	2.2	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.2	0.0	318.3	49.5	51.1	51.4	236.7	2.8	5.5	82.2	0.3	0.8
LnGrp LOS	E	A	F	D	D	D	F	A	A	F	A	A
Approach Vol, veh/h		459			215			2392			784	
Approach Delay, s/veh		175.3			50.7			24.3			11.8	
Approach LOS		F			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	83.7		18.0	17.0	76.8		28.2				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	5.7	62.9		13.1	12.6	* 56		38.1				
Max Q Clear Time (g_c+I1), s	6.3	2.0		15.1	14.6	2.0		8.1				
Green Ext Time (p_c), s	0.0	41.0		0.0	0.0	8.2		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		41.3	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	29	187	63	35	30	157	2390	133	14	740	54
Future Volume (veh/h)	35	29	187	63	35	30	157	2390	133	14	740	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	130	135	68	38	32	169	2570	143	15	796	58
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	262	293	107	58	38	191	2346	129	22	1984	144
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.21	1.00	1.00	0.01	0.59	0.59
Sat Flow, veh/h	270	1365	1524	358	304	200	1781	3416	188	1781	3349	244
Grp Volume(v), veh/h	168	0	135	138	0	0	169	1322	1391	15	422	432
Grp Sat Flow(s),veh/h/ln	1635	0	1524	862	0	0	1781	1777	1827	1781	1777	1816
Q Serve(g_s), s	0.0	0.0	11.0	11.3	0.0	0.0	12.9	96.1	95.9	1.2	17.8	17.8
Cycle Q Clear(g_c), s	12.3	0.0	11.0	23.7	0.0	0.0	12.9	96.1	95.9	1.2	17.8	17.8
Prop In Lane	0.23		1.00	0.49		0.23	1.00		0.10	1.00		0.13
Lane Grp Cap(c), veh/h	346	0	293	204	0	0	191	1220	1254	22	1052	1076
V/C Ratio(X)	0.49	0.00	0.46	0.68	0.00	0.00	0.89	1.08	1.11	0.67	0.40	0.40
Avail Cap(c_a), veh/h	384	0	327	234	0	0	298	1220	1254	51	1052	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	0.0	50.1	58.1	0.0	0.0	54.2	0.0	0.0	68.8	15.3	15.3
Incr Delay (d2), s/veh	0.4	0.0	0.4	4.4	0.0	0.0	1.3	39.1	50.4	11.9	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	4.3	5.1	0.0	0.0	5.1	13.3	17.6	0.6	7.1	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	0.0	50.6	62.5	0.0	0.0	55.5	39.1	50.4	80.7	16.4	16.4
LnGrp LOS	D	A	D	E	A	A	E	F	F	F	B	B
Approach Vol, veh/h		303			138			2882			869	
Approach Delay, s/veh		50.7			62.5			45.5			17.5	
Approach LOS		D			E			D			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.4	88.8		31.8	6.2	102.0		31.8
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	23.4	71.4		30.0	4.0	* 91		30.0
Max Q Clear Time (g_c+I1), s	14.9	19.8		25.7	3.2	98.1		14.3
Green Ext Time (p_c), s	0.1	7.8		0.2	0.0	0.0		0.8

Intersection Summary	
HCM 6th Ctrl Delay	40.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	642	316	156	260	242	337	84	1659	232	242	623	351
Future Volume (veh/h)	642	316	156	260	242	337	84	1659	232	242	623	351
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	730	359	177	295	275	383	95	1885	264	275	708	399
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1156	467	138	1156	501	71	1395	613	138	1395	618
Arrive On Green	0.04	0.33	0.33	0.04	0.33	0.33	0.04	0.39	0.39	0.04	0.39	0.39
Sat Flow, veh/h	3456	3554	1436	3456	3554	1541	1781	3554	1561	3456	3554	1573
Grp Volume(v), veh/h	730	359	177	295	275	383	95	1885	264	275	708	399
Grp Sat Flow(s),veh/h/ln	1728	1777	1436	1728	1777	1541	1781	1777	1561	1728	1777	1573
Q Serve(g_s), s	4.0	7.6	9.5	4.0	5.7	22.3	4.0	39.3	12.4	4.0	15.1	20.6
Cycle Q Clear(g_c), s	4.0	7.6	9.5	4.0	5.7	22.3	4.0	39.3	12.4	4.0	15.1	20.6
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	1156	467	138	1156	501	71	1395	613	138	1395	618
V/C Ratio(X)	5.28	0.31	0.38	2.13	0.24	0.76	1.33	1.35	0.43	1.99	0.51	0.65
Avail Cap(c_a), veh/h	138	1411	570	138	1386	601	71	1395	613	138	1395	618
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	48.0	25.3	26.0	48.0	24.7	30.3	48.0	30.4	22.2	48.0	23.0	24.7
Incr Delay (d2), s/veh	1942.4	0.3	1.1	533.8	0.2	6.4	219.1	162.7	2.2	470.1	1.3	5.2
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 BackOfQ(50%),veh/ln	39.0	3.2	3.3	12.0	2.4	9.0	6.1	46.8	4.8	10.7	6.1	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1990.4	25.6	27.0	581.8	24.9	36.6	267.1	193.1	24.4	518.1	24.4	29.9
LnGrp LOS	F	C	C	F	C	D	F	F	C	F	C	C
Approach Vol, veh/h		1266			953			2244			1382	
Approach Delay, s/veh		1158.8			202.0			176.4			124.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	45.0	8.4	38.2	8.4	45.0	8.4	38.2
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.7	4.4	* 5.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	32.8	4.0	* 40	4.0	* 33	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	41.3	6.0	11.5	6.0	22.6	6.0	24.3
Green Ext Time (p_c), s	0.0	0.0	0.0	6.3	0.0	7.1	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	381.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	153	0	0	932	439	1066	0	0	983	124
Future Vol, veh/h	0	0	153	0	0	932	439	1066	0	0	983	124
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	166	0	0	1013	477	1159	0	0	1068	135

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	534	1068	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	4.3	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	491	618	-	0	0	-	-
Stage 1	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	-	0	491	618	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16	8.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	618	-	491	-	-
HCM Lane V/C Ratio	0.772	-	0.339	-	-
HCM Control Delay (s)	27.8	-	16	-	-
HCM Lane LOS	D	-	C	-	-
HCM 95th %tile Q(veh)	7.2	-	1.5	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	140	201	1367	769	442	678
Future Volume (veh/h)	140	201	1367	769	442	678
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	218	1486	0	480	737
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	293	261	1467		376	2422
Arrive On Green	0.16	0.16	0.41	0.00	0.21	0.68
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	152	218	1486	0	480	737
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	6.4	10.9	33.8	0.0	17.3	6.8
Cycle Q Clear(g_c), s	6.4	10.9	33.8	0.0	17.3	6.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	293	261	1467		376	2422
V/C Ratio(X)	0.52	0.84	1.01		1.28	0.30
Avail Cap(c_a), veh/h	696	620	1467		376	2422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	33.1	24.0	0.0	32.3	5.2
Incr Delay (d2), s/veh	0.5	2.7	26.7	0.0	143.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.3	17.7	0.0	21.8	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.8	35.8	50.8	0.0	175.3	5.6
LnGrp LOS	C	D	F		F	A
Approach Vol, veh/h	370		1486	A		1217
Approach Delay, s/veh	34.2		50.8			72.5
Approach LOS	C		D			E

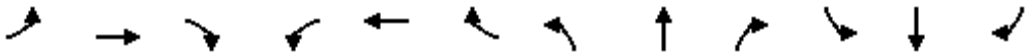
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	41.3		18.6		63.3
Change Period (Y+Rc), s	* 4.7	7.5		5.1		* 7.5
Max Green Setting (Gmax), s	* 17	33.4		32.0		* 56
Max Q Clear Time (g_c+I1), s	19.3	35.8		12.9		8.8
Green Ext Time (p_c), s	0.0	0.0		0.6		3.2

Intersection Summary	
HCM 6th Ctrl Delay	57.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	259	83	191	275	104	196	249	591	241	327	1545	424
Future Volume (veh/h)	259	83	191	275	104	196	249	591	241	327	1545	424
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.87	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	180	217	201	289	182	158	262	622	254	344	1626	446
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	201	124	835	439	322	197	1455	580	394	1634	439
Arrive On Green	0.11	0.11	0.11	0.23	0.23	0.23	0.22	0.82	0.82	0.08	0.28	0.28
Sat Flow, veh/h	1781	1870	1152	3563	1870	1373	1781	3555	1415	3456	3957	1063
Grp Volume(v), veh/h	180	217	201	289	182	158	262	595	281	344	1394	678
Grp Sat Flow(s),veh/h/ln	1781	1870	1152	1781	1870	1373	1781	1702	1566	1728	1702	1616
Q Serve(g_s), s	15.1	16.1	16.1	10.1	12.4	14.9	16.6	7.3	7.6	14.8	61.2	61.9
Cycle Q Clear(g_c), s	15.1	16.1	16.1	10.1	12.4	14.9	16.6	7.3	7.6	14.8	61.2	61.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.90	1.00		0.66
Lane Grp Cap(c), veh/h	191	201	124	835	439	322	197	1394	641	394	1405	667
V/C Ratio(X)	0.94	1.08	1.63	0.35	0.41	0.49	1.33	0.43	0.44	0.87	0.99	1.02
Avail Cap(c_a), veh/h	191	201	124	929	488	358	197	1394	641	498	1405	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.45	0.45	0.45
Uniform Delay (d), s/veh	66.5	67.0	66.9	47.8	48.7	49.7	58.4	8.7	8.7	68.2	54.0	54.3
Incr Delay (d2), s/veh	47.9	86.7	315.3	0.1	0.2	0.4	178.7	1.0	2.2	5.6	14.3	27.5
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 BackOfQ(50%),veh/ln	9.4	12.5	15.6	4.6	5.9	5.2	16.5	2.3	2.4	7.0	29.9	31.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.4	153.7	382.2	47.9	48.9	50.1	237.1	9.6	10.9	73.8	68.3	81.8
LnGrp LOS	F	F	F	D	D	D	F	A	B	E	E	F
Approach Vol, veh/h		598			629			1138			2416	
Approach Delay, s/veh		218.7			48.8			62.3			72.9	
Approach LOS		F			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.5	67.4		21.0	21.0	67.9		40.1				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	21.6	53.0		16.1	16.6	* 58		39.1				
Max Q Clear Time (g_c+I1), s	16.8	9.6		18.1	18.6	63.9		16.9				
Green Ext Time (p_c), s	0.3	9.6		0.0	0.0	0.0		1.6				

Intersection Summary		
HCM 6th Ctrl Delay		85.4
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	29	219	251	38	26	186	1027	37	22	2592	67
Future Volume (veh/h)	33	29	219	251	38	26	186	1027	37	22	2592	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	152	145	259	39	27	192	1059	38	23	2672	69
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	634	649	374	50	34	162	1579	57	48	1371	35
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.18	0.90	0.90	0.03	0.39	0.39
Sat Flow, veh/h	278	1509	1545	788	119	82	1781	3493	125	1781	3535	91
Grp Volume(v), veh/h	186	0	145	325	0	0	192	539	558	23	1335	1406
Grp Sat Flow(s),veh/h/ln	1788	0	1545	989	0	0	1781	1777	1842	1781	1777	1849
Q Serve(g_s), s	0.0	0.0	9.0	37.3	0.0	0.0	13.6	11.1	11.1	1.9	58.2	58.2
Cycle Q Clear(g_c), s	9.6	0.0	9.0	46.9	0.0	0.0	13.6	11.1	11.1	1.9	58.2	58.2
Prop In Lane	0.18		1.00	0.80		0.08	1.00		0.07	1.00		0.05
Lane Grp Cap(c), veh/h	779	0	649	458	0	0	162	803	832	48	689	717
V/C Ratio(X)	0.24	0.00	0.22	0.71	0.00	0.00	1.19	0.67	0.67	0.48	1.94	1.96
Avail Cap(c_a), veh/h	779	0	649	458	0	0	162	803	832	68	689	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	0.0	27.8	43.1	0.0	0.0	61.4	4.5	4.5	72.0	45.9	45.9
Incr Delay (d2), s/veh	0.7	0.0	0.8	9.0	0.0	0.0	126.8	4.0	3.8	2.8	427.0	437.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	3.5	11.9	0.0	0.0	11.1	2.8	2.9	0.9	106.4	112.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	28.6	52.1	0.0	0.0	188.2	8.4	8.3	74.8	472.9	482.9
LnGrp LOS	C	A	C	D	A	A	F	A	A	E	F	F
Approach Vol, veh/h		331			325			1289			2764	
Approach Delay, s/veh		28.7			52.1			35.2			474.6	
Approach LOS		C			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	64.1		67.9	8.4	73.7		67.9
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	13.6	58.2		63.0	5.7	* 66		63.0
Max Q Clear Time (g_c+I1), s	15.6	60.2		48.9	3.9	13.1		11.6
Green Ext Time (p_c), s	0.0	0.0		1.4	0.0	14.7		1.0

Intersection Summary		
HCM 6th Ctrl Delay	293.8	
HCM 6th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	293	120	328	361	155	191	645	260	507	1695	650
Future Volume (veh/h)	282	293	120	328	361	155	191	645	260	507	1695	650
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	300	312	128	349	384	165	203	686	277	539	1803	691
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	514	217	344	550	234	184	1281	567	975	1941	861
Arrive On Green	0.09	0.14	0.14	0.10	0.15	0.15	0.10	0.36	0.36	0.28	0.55	0.55
Sat Flow, veh/h	3456	3554	1498	3456	3554	1514	1781	3554	1572	3456	3554	1576
Grp Volume(v), veh/h	300	312	128	349	384	165	203	686	277	539	1803	691
Grp Sat Flow(s),veh/h/ln	1728	1777	1498	1728	1777	1514	1781	1777	1572	1728	1777	1576
Q Serve(g_s), s	16.4	15.6	12.5	18.9	19.5	11.8	19.6	29.1	26.0	25.2	88.8	67.3
Cycle Q Clear(g_c), s	16.4	15.6	12.5	18.9	19.5	11.8	19.6	29.1	26.0	25.2	88.8	67.3
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	320	514	217	344	550	234	184	1281	567	975	1941	861
V/C Ratio(X)	0.94	0.61	0.59	1.01	0.70	0.70	1.10	0.54	0.49	0.55	0.93	0.80
Avail Cap(c_a), veh/h	320	733	309	344	729	311	184	1281	567	975	1941	861
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	85.7	76.2	51.3	85.5	76.1	27.3	85.2	48.1	47.2	58.0	39.7	34.8
Incr Delay (d2), s/veh	33.8	2.5	5.4	51.9	3.3	7.9	97.2	1.6	3.0	0.4	9.4	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	7.4	5.1	11.0	9.2	4.9	13.9	13.1	10.8	11.0	39.9	27.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.4	78.7	56.7	137.5	79.4	35.2	182.4	49.7	50.2	58.4	49.1	42.6
LnGrp LOS	F	E	E	F	E	D	F	D	D	E	D	D
Approach Vol, veh/h		740			898			1166			3033	
Approach Delay, s/veh		91.4			93.9			72.9			49.3	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	58.7	74.2	24.6	32.5	24.0	108.9	22.0	35.1
Change Period (Y+Rc), s	5.1	* 5.7	5.7	* 5	4.4	5.1	4.4	5.7
Max Green Setting (Gmax), s	44.7	* 69	18.1	* 39	19.6	94.2	17.6	39.0
Max Q Clear Time (g_c+I1), s	27.2	31.1	20.9	17.6	21.6	90.8	18.4	21.5
Green Ext Time (p_c), s	0.9	11.6	0.0	4.6	0.0	3.4	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay	66.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	73.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	443	0	0	398	334	514	0	0	1778	348
Future Vol, veh/h	0	0	443	0	0	398	334	514	0	0	1778	348
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	482	0	0	433	363	559	0	0	1933	378

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	967	1933	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 254	~ 301	-	0	0	-	-
Stage 1	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	-	0	~ 254	~ 301	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 450.3	61.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 301	-	254	-	-
HCM Lane V/C Ratio	1.206	-	1.896	-	-
HCM Control Delay (s)	156.3	-	$ 450.3	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	16.2	-	33.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	368	255	650	321	806	1420
Future Volume (veh/h)	368	255	650	321	806	1420
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	400	277	707	0	876	1543
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	461	410	1223		373	2148
Arrive On Green	0.26	0.26	0.34	0.00	0.21	0.60
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	400	277	707	0	876	1543
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	19.8	14.5	15.0	0.0	19.3	28.0
Cycle Q Clear(g_c), s	19.8	14.5	15.0	0.0	19.3	28.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	461	410	1223		373	2148
V/C Ratio(X)	0.87	0.68	0.58		2.35	0.72
Avail Cap(c_a), veh/h	709	631	1223		373	2148
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	30.7	24.7	0.0	36.4	12.7
Incr Delay (d2), s/veh	7.2	1.9	2.0	0.0	614.8	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	5.6	6.2	0.0	71.6	9.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.9	32.6	26.7	0.0	651.2	14.8
LnGrp LOS	D	C	C		F	B
Approach Vol, veh/h	677		707	A		2419
Approach Delay, s/veh	36.9		26.7			245.3
Approach LOS	D		C			F

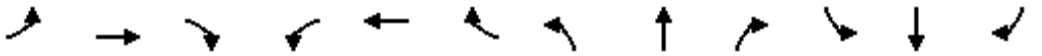
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.0	39.2		28.9		63.2
Change Period (Y+Rc), s	* 4.7	7.5		5.1		7.5
Max Green Setting (Gmax), s	* 19	31.7		36.7		55.7
Max Q Clear Time (g_c+I1), s	21.3	17.0		21.8		30.0
Green Ext Time (p_c), s	0.0	3.8		2.1		12.7

Intersection Summary		
HCM 6th Ctrl Delay		167.6
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	550	1920	159	311	1900	560	339	1687	418	330	478	100
Future Volume (veh/h)	550	1920	159	311	1900	560	339	1687	418	330	478	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	647	2259	187	366	2235	659	399	1985	492	388	562	118
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	459	2294	695	217	1937	730	380	1543	465	316	1448	436
Arrive On Green	0.27	0.90	0.90	0.04	0.25	0.25	0.15	0.40	0.40	0.09	0.28	0.28
Sat Flow, veh/h	3456	5106	1547	3456	5106	1543	3456	5106	1539	3456	5106	1537
Grp Volume(v), veh/h	647	2259	187	366	2235	659	399	1985	492	388	562	118
Grp Sat Flow(s),veh/h/ln	1728	1702	1547	1728	1702	1543	1728	1702	1539	1728	1702	1537
Q Serve(g_s), s	18.6	54.5	2.3	8.8	53.1	53.1	15.4	42.3	42.3	12.8	12.4	8.3
Cycle Q Clear(g_c), s	18.6	54.5	2.3	8.8	53.1	53.1	15.4	42.3	42.3	12.8	12.4	8.3
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	459	2294	695	217	1937	730	380	1543	465	316	1448	436
V/C Ratio(X)	1.41	0.98	0.27	1.68	1.15	0.90	1.05	1.29	1.06	1.23	0.39	0.27
Avail Cap(c_a), veh/h	459	2294	695	217	1937	730	380	1543	465	316	1459	439
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.19	0.19	0.19	0.63	0.63	0.63
Uniform Delay (d), s/veh	51.4	6.7	4.0	67.1	52.2	40.5	59.8	41.9	41.9	63.6	40.4	38.9
Incr Delay (d2), s/veh	196.8	15.5	1.0	310.1	69.9	2.0	34.6	130.0	35.9	119.2	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.7	6.1	0.8	13.3	36.0	21.4	8.4	35.3	19.7	10.9	5.3	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	248.2	22.2	5.0	377.1	122.2	42.5	94.4	171.9	77.7	182.8	40.5	39.2
LnGrp LOS	F	C	A	F	F	D	F	F	F	F	D	D
Approach Vol, veh/h		3093			3260			2876			1068	
Approach Delay, s/veh		68.4			134.7			145.0			92.1	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	68.6	19.8	45.4	23.0	58.8	17.2	48.0
Change Period (Y+Rc), s	4.4	* 5.5	4.4	* 5.7	4.4	5.5	4.4	5.7
Max Green Setting (Gmax), s	8.8	* 56	15.4	* 40	18.6	46.3	12.8	42.3
Max Q Clear Time (g_c+I1), s	10.8	56.5	17.4	14.4	20.6	55.1	14.8	44.3
Green Ext Time (p_c), s	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	113.2
HCM 6th LOS	F

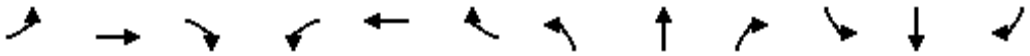
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	129	100	250	171	50	160
Future Volume (Veh/h)	129	100	250	171	50	160
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	148	115	287	197	57	184
Pedestrians	10		12			10
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		1			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			313			
pX, platoon unblocked						
vC, conflicting volume	614	262			494	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	614	262			494	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	62	84			95	
cM capacity (veh/h)	394	724			1057	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	263	191	293	118	123
Volume Left	148	0	0	57	0
Volume Right	115	0	197	0	0
cSH	492	1700	1700	1057	1700
Volume to Capacity	0.53	0.11	0.17	0.05	0.07
Queue Length 95th (ft)	78	0	0	4	0
Control Delay (s)	20.4	0.0	0.0	4.4	0.0
Lane LOS	C			A	
Approach Delay (s)	20.4	0.0		2.2	
Approach LOS	C				

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	62	207	80	59	110	197	2190	170	130	625	222
Future Volume (veh/h)	234	62	207	80	59	110	197	2190	170	130	625	222
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.86	1.00		0.92	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	200	227	88	107	93	216	2407	187	143	687	244
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	175	127	619	325	253	160	2645	202	141	1842	642
Arrive On Green	0.09	0.09	0.09	0.17	0.17	0.17	0.12	0.73	0.73	0.08	1.00	1.00
Sat Flow, veh/h	1781	1870	1361	3563	1870	1454	1781	4829	369	3456	3696	1288
Grp Volume(v), veh/h	162	200	227	88	107	93	216	1684	910	143	632	299
Grp Sat Flow(s),veh/h/ln	1781	1870	1361	1781	1870	1454	1781	1702	1794	1728	1702	1580
Q Serve(g_s), s	12.7	13.1	13.1	2.9	7.0	7.9	12.6	55.0	59.3	5.7	0.1	0.1
Cycle Q Clear(g_c), s	12.7	13.1	13.1	2.9	7.0	7.9	12.6	55.0	59.3	5.7	0.1	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.82
Lane Grp Cap(c), veh/h	167	175	127	619	325	253	160	1864	982	141	1697	787
V/C Ratio(X)	0.97	1.14	1.78	0.14	0.33	0.37	1.35	0.90	0.93	1.02	0.37	0.38
Avail Cap(c_a), veh/h	167	175	127	970	509	396	160	1864	982	141	1697	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.50	0.50	0.50
Uniform Delay (d), s/veh	63.3	63.5	63.4	49.0	50.7	51.1	61.6	16.1	16.6	64.3	0.1	0.1
Incr Delay (d2), s/veh	60.9	111.6	381.7	0.0	0.2	0.3	191.8	7.7	15.6	57.9	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	11.7	18.1	1.3	3.3	2.9	14.1	18.5	23.1	3.5	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	124.2	175.1	445.2	49.0	50.9	51.4	253.4	23.7	32.3	122.2	0.4	0.8
LnGrp LOS	F	F	F	D	D	D	F	C	C	F	A	A
Approach Vol, veh/h		589			288			2810			1074	
Approach Delay, s/veh		265.2			50.5			44.2			16.7	
Approach LOS		F			D			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	82.7		18.0	17.0	75.8		29.2				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	5.7	62.9		13.1	12.6	* 56		38.1				
Max Q Clear Time (g_c+I1), s	7.7	61.3		15.1	14.6	2.1		9.9				
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	12.5		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		65.7	
HCM 6th LOS		E	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	814	50	40	821	140	100	134	80	130	39	131
Future Volume (veh/h)	196	814	50	40	821	140	100	134	80	130	39	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.95	1.00		0.93	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	215	895	55	44	902	154	110	147	88	143	43	144
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	2122	130	56	1755	298	77	299	179	134	113	379
Arrive On Green	0.12	0.87	0.87	0.03	0.40	0.40	0.04	0.28	0.28	0.08	0.31	0.31
Sat Flow, veh/h	1781	4895	300	1781	4358	740	1781	1062	636	1781	361	1210
Grp Volume(v), veh/h	215	621	329	44	704	352	110	0	235	143	0	187
Grp Sat Flow(s),veh/h/ln	1781	1702	1791	1781	1702	1693	1781	0	1698	1781	0	1572
Q Serve(g_s), s	6.6	4.1	4.1	2.6	16.5	16.6	4.6	0.0	12.2	8.0	0.0	9.8
Cycle Q Clear(g_c), s	6.6	4.1	4.1	2.6	16.5	16.6	4.6	0.0	12.2	8.0	0.0	9.8
Prop In Lane	1.00		0.17	1.00		0.44	1.00		0.37	1.00		0.77
Lane Grp Cap(c), veh/h	111	1475	776	56	1371	682	77	0	478	134	0	493
V/C Ratio(X)	1.94	0.42	0.42	0.78	0.51	0.52	1.42	0.00	0.49	1.06	0.00	0.38
Avail Cap(c_a), veh/h	111	1475	776	101	1371	682	77	0	602	134	0	608
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	4.3	4.3	51.0	23.8	23.9	50.7	0.0	31.8	49.0	0.0	28.4
Incr Delay (d2), s/veh	446.1	0.7	1.3	8.5	1.4	2.8	250.0	0.0	0.3	95.7	0.0	0.2
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 BackOfQ(50%),veh/ln	16.5	1.2	1.4	1.3	6.8	7.1	7.4	0.0	5.0	7.1	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	492.5	4.9	5.5	59.5	25.2	26.7	300.7	0.0	32.1	144.7	0.0	28.5
LnGrp LOS	F	A	A	E	C	C	F	A	C	F	A	C
Approach Vol, veh/h		1165			1100			345			330	
Approach Delay, s/veh		95.1			27.0			117.7			78.9	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	51.1	9.0	38.1	11.0	47.9	12.4	34.7
Change Period (Y+Rc), s	4.4	5.2	4.4	4.9	4.4	5.2	4.4	4.9
Max Green Setting (Gmax), s	6.3	35.5	4.6	41.0	6.6	34.9	8.0	37.6
Max Q Clear Time (g_c+I1), s	4.6	6.1	6.6	11.8	8.6	18.6	10.0	14.2
Green Ext Time (p_c), s	0.0	11.8	0.0	0.8	0.0	9.4	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	70.5
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	730	220	140	550	202	441	2011	280	180	478	162
Future Volume (veh/h)	314	730	220	140	550	202	441	2011	280	180	478	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	338	785	237	151	591	217	474	2162	301	194	514	174
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	870	369	198	855	362	449	1861	812	114	2178	660
Arrive On Green	0.06	0.24	0.24	0.06	0.24	0.24	0.13	0.52	0.52	0.01	0.14	0.14
Sat Flow, veh/h	3456	3554	1509	3456	3554	1505	3456	3554	1550	3456	5106	1547
Grp Volume(v), veh/h	338	785	237	151	591	217	474	2162	301	194	514	174
Grp Sat Flow(s),veh/h/ln	1728	1777	1509	1728	1777	1505	1728	1777	1550	1728	1702	1547
Q Serve(g_s), s	8.6	30.0	19.7	6.0	21.2	17.9	18.2	73.3	16.1	4.6	12.5	14.1
Cycle Q Clear(g_c), s	8.6	30.0	19.7	6.0	21.2	17.9	18.2	73.3	16.1	4.6	12.5	14.1
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	212	870	369	198	855	362	449	1861	812	114	2178	660
V/C Ratio(X)	1.59	0.90	0.64	0.76	0.69	0.60	1.06	1.16	0.37	1.71	0.24	0.26
Avail Cap(c_a), veh/h	212	899	381	207	888	376	449	1861	812	114	2178	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
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	65.7	51.2	47.4	65.1	48.4	47.2	60.9	33.3	19.7	69.2	39.9	40.5
Incr Delay (d2), s/veh	287.6	12.3	4.1	13.0	2.2	2.5	57.7	79.2	1.3	353.4	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	14.8	7.9	3.0	9.7	7.0	11.6	51.0	6.1	7.7	5.8	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	353.3	63.6	51.4	78.1	50.7	49.7	118.6	112.5	21.0	422.6	40.1	41.5
LnGrp LOS	F	E	D	E	D	D	F	F	C	F	D	D
Approach Vol, veh/h		1360			959			2937			882	
Approach Delay, s/veh		133.5			54.8			104.1			124.5	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	79.2	12.4	39.4	22.6	65.6	13.0	38.8
Change Period (Y+Rc), s	4.4	* 5.9	4.4	* 5.1	4.4	5.9	4.4	5.1
Max Green Setting (Gmax), s	4.6	* 72	8.4	* 35	18.2	58.4	8.6	35.0
Max Q Clear Time (g_c+I1), s	10.6	75.3	8.0	32.0	20.2	16.1	10.6	23.2
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	6.9	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	105.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	29	198	69	43	37	163	2980	143	19	925	64
Future Volume (veh/h)	43	29	198	69	43	37	163	2980	143	19	925	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.97	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	133	145	74	46	40	175	3204	154	20	995	69
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	307	373	132	81	58	197	2133	101	51	1806	125
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.15	0.82	0.82	0.03	0.54	0.54
Sat Flow, veh/h	326	1259	1533	388	332	240	1781	3445	164	1781	3362	233
Grp Volume(v), veh/h	179	0	145	160	0	0	175	1636	1722	20	526	538
Grp Sat Flow(s),veh/h/ln	1586	0	1533	959	0	0	1781	1777	1832	1781	1777	1818
Q Serve(g_s), s	0.0	0.0	11.1	12.5	0.0	0.0	13.5	86.7	86.7	1.5	27.2	27.2
Cycle Q Clear(g_c), s	13.0	0.0	11.1	25.5	0.0	0.0	13.5	86.7	86.7	1.5	27.2	27.2
Prop In Lane	0.26		1.00	0.46		0.25	1.00		0.09	1.00		0.13
Lane Grp Cap(c), veh/h	419	0	373	271	0	0	197	1100	1134	51	954	977
V/C Ratio(X)	0.43	0.00	0.39	0.59	0.00	0.00	0.89	1.49	1.52	0.39	0.55	0.55
Avail Cap(c_a), veh/h	419	0	373	271	0	0	198	1100	1134	771	954	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	44.2	52.4	0.0	0.0	58.8	12.3	12.3	66.8	21.3	21.3
Incr Delay (d2), s/veh	3.2	0.0	3.0	9.1	0.0	0.0	4.7	219.5	233.5	1.8	2.3	2.2
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 BackOfQ(50%),veh/ln	5.7	0.0	4.6	6.0	0.0	0.0	6.0	80.4	87.3	0.7	11.4	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	0.0	47.3	61.5	0.0	0.0	63.5	231.8	245.9	68.6	23.6	23.5
LnGrp LOS	D	A	D	E	A	A	E	F	F	E	C	C
Approach Vol, veh/h		324			160			3533			1084	
Approach Delay, s/veh		47.6			61.5			230.3			24.4	
Approach LOS		D			E			F			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.9	81.1		39.0	8.4	92.6		39.0
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	15.6	75.1		34.1	60.6	* 30		34.1
Max Q Clear Time (g_c+I1), s	15.5	29.2		27.5	3.5	88.7		15.0
Green Ext Time (p_c), s	0.0	10.7		0.3	0.0	0.0		0.9

Intersection Summary	
HCM 6th Ctrl Delay	169.7
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	782	324	168	270	247	402	94	1961	239	289	735	425
Future Volume (veh/h)	782	324	168	270	247	402	94	1961	239	289	735	425
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	889	368	191	307	281	457	107	2228	272	328	835	483
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	1226	498	138	1226	532	71	1325	582	138	1325	586
Arrive On Green	0.04	0.35	0.35	0.04	0.35	0.35	0.04	0.37	0.37	0.04	0.37	0.37
Sat Flow, veh/h	3456	3554	1444	3456	3554	1542	1781	3554	1560	3456	3554	1572
Grp Volume(v), veh/h	889	368	191	307	281	457	107	2228	272	328	835	483
Grp Sat Flow(s),veh/h/ln	1728	1777	1444	1728	1777	1542	1781	1777	1560	1728	1777	1572
Q Serve(g_s), s	4.0	7.6	10.0	4.0	5.6	27.6	4.0	37.3	13.2	4.0	19.3	27.8
Cycle Q Clear(g_c), s	4.0	7.6	10.0	4.0	5.6	27.6	4.0	37.3	13.2	4.0	19.3	27.8
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	1226	498	138	1226	532	71	1325	582	138	1325	586
V/C Ratio(X)	6.43	0.30	0.38	2.22	0.23	0.86	1.50	1.68	0.47	2.37	0.63	0.82
Avail Cap(c_a), veh/h	138	1411	573	138	1386	602	71	1325	582	138	1325	586
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	48.0	23.9	24.7	48.0	23.3	30.5	48.0	31.4	23.8	48.0	25.7	28.4
Incr Delay (d2), s/veh	2459.4	0.3	1.0	572.2	0.2	12.4	285.6	309.7	2.7	639.5	2.3	12.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	48.9	3.2	3.5	12.7	2.4	11.8	7.4	71.7	5.2	13.9	8.0	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2507.4	24.2	25.8	620.2	23.5	42.9	333.6	341.1	26.5	687.5	28.0	40.8
LnGrp LOS	F	C	C	F	C	D	F	F	C	F	C	D
Approach Vol, veh/h		1448			1045			2607			1646	
Approach Delay, s/veh		1549.0			207.3			308.0			163.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	43.0	8.4	40.2	8.4	43.0	8.4	40.2
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.7	4.4	* 5.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	32.8	4.0	* 40	4.0	* 33	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	39.3	6.0	12.0	6.0	29.8	6.0	29.6
Green Ext Time (p_c), s	0.0	0.0	0.0	6.5	0.0	3.0	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	523.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	171	0	0	1002	454	1213	0	0	1066	140
Future Vol, veh/h	0	0	171	0	0	1002	454	1213	0	0	1066	140
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	186	0	0	1089	493	1318	0	0	1159	152

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	580	1159	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	4.3	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	458	568	-	0	0	-	-
Stage 1	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	-	0	458	568	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	10.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	568	-	458	-	-
HCM Lane V/C Ratio	0.869	-	0.406	-	-
HCM Control Delay (s)	39.7	-	18.1	-	-
HCM Lane LOS	E	-	C	-	-
HCM 95th %tile Q(veh)	9.7	-	1.9	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	147	260	1522	808	452	757
Future Volume (veh/h)	147	260	1522	808	452	757
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	160	283	1654	0	491	823
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	364	324	1398		359	2307
Arrive On Green	0.20	0.20	0.39	0.00	0.20	0.65
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	160	283	1654	0	491	823
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	6.8	14.9	33.8	0.0	17.3	9.1
Cycle Q Clear(g_c), s	6.8	14.9	33.8	0.0	17.3	9.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	364	324	1398		359	2307
V/C Ratio(X)	0.44	0.87	1.18		1.37	0.36
Avail Cap(c_a), veh/h	663	590	1398		359	2307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	33.1	26.1	0.0	34.3	6.9
Incr Delay (d2), s/veh	0.3	3.0	90.2	0.0	183.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	5.8	30.1	0.0	25.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.2	36.1	116.2	0.0	217.4	7.3
LnGrp LOS	C	D	F		F	A
Approach Vol, veh/h	443		1654	A		1314
Approach Delay, s/veh	34.0		116.2			85.8
Approach LOS	C		F			F

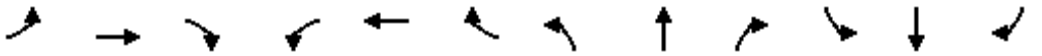
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	41.3		22.6		63.3
Change Period (Y+Rc), s	* 4.7	7.5		5.1		* 7.5
Max Green Setting (Gmax), s	* 17	33.4		32.0		* 56
Max Q Clear Time (g_c+I1), s	19.3	35.8		16.9		11.1
Green Ext Time (p_c), s	0.0	0.0		0.7		3.7

Intersection Summary	
HCM 6th Ctrl Delay	93.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	1460	524	656	1720	220	379	484	333	660	1398	480
Future Volume (veh/h)	223	1460	524	656	1720	220	379	484	333	660	1398	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.92	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	237	1553	557	698	1830	234	403	515	354	702	1487	511
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	2219	661	544	2613	1118	359	899	258	733	1450	427
Arrive On Green	0.16	0.87	0.87	0.05	0.17	0.17	0.03	0.06	0.06	0.21	0.28	0.28
Sat Flow, veh/h	3456	5106	1522	3456	5106	1528	3456	5106	1466	3456	5106	1503
Grp Volume(v), veh/h	237	1553	557	698	1830	234	403	515	354	702	1487	511
Grp Sat Flow(s),veh/h/ln	1728	1702	1522	1728	1702	1528	1728	1702	1466	1728	1702	1503
Q Serve(g_s), s	10.0	15.2	26.8	23.6	50.7	11.4	15.6	14.7	26.4	30.1	42.6	42.6
Cycle Q Clear(g_c), s	10.0	15.2	26.8	23.6	50.7	11.4	15.6	14.7	26.4	30.1	42.6	42.6
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	277	2219	661	544	2613	1118	359	899	258	733	1450	427
V/C Ratio(X)	0.85	0.70	0.84	1.28	0.70	0.21	1.12	0.57	1.37	0.96	1.03	1.20
Avail Cap(c_a), veh/h	290	2219	661	544	2613	1118	359	899	258	733	1450	427
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.77	0.77	0.77	0.44	0.44	0.44
Uniform Delay (d), s/veh	62.1	6.5	7.3	71.1	51.5	12.4	72.4	65.2	70.6	58.4	53.7	53.7
Incr Delay (d2), s/veh	19.5	1.9	12.4	129.0	0.1	0.0	79.2	0.8	185.4	13.4	22.6	98.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	3.0	5.2	20.8	23.3	4.6	11.3	6.9	23.8	14.5	21.2	27.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	8.4	19.6	200.1	51.6	12.5	151.6	65.9	256.1	71.8	76.3	152.4
LnGrp LOS	F	A	B	F	D	B	F	E	F	E	F	F
Approach Vol, veh/h		2347			2762			1272			2700	
Approach Delay, s/veh		18.5			85.8			146.0			89.5	
Approach LOS		B			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	71.2	20.0	48.3	16.4	82.8	36.2	32.1
Change Period (Y+Rc), s	4.4	* 5.5	4.4	* 5.7	4.4	5.5	4.4	5.7
Max Green Setting (Gmax), s	23.6	* 49	15.6	* 43	12.6	59.5	31.8	26.1
Max Q Clear Time (g_c+I1), s	25.6	28.8	17.6	44.6	12.0	52.7	32.1	28.4
Green Ext Time (p_c), s	0.0	18.9	0.0	0.0	0.0	6.6	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		77.9
HCM 6th LOS		E

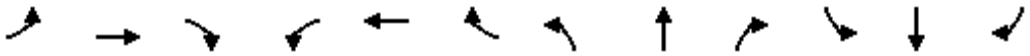
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	268	90	310	222	90	310
Future Volume (Veh/h)	268	90	310	222	90	310
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	285	96	330	236	96	330
Pedestrians	16		10			10
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		1			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			313			
pX, platoon unblocked						
vC, conflicting volume	831	309			582	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	831	309			582	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	86			90	
cM capacity (veh/h)	272	672			975	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	381	220	346	206	220
Volume Left	285	0	0	96	0
Volume Right	96	0	236	0	0
cSH	320	1700	1700	975	1700
Volume to Capacity	1.19	0.13	0.20	0.10	0.13
Queue Length 95th (ft)	410	0	0	8	0
Control Delay (s)	148.3	0.0	0.0	4.7	0.0
Lane LOS	F			A	
Approach Delay (s)	148.3	0.0		2.3	
Approach LOS	F				

Intersection Summary			
Average Delay	41.9		
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	297	114	235	330	131	260	284	680	330	420	1783	485
Future Volume (veh/h)	297	114	235	330	131	260	284	680	330	420	1783	485
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.87	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	216	255	247	347	240	206	299	716	347	442	1877	511
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	201	124	854	449	330	197	1287	581	484	1626	422
Arrive On Green	0.11	0.11	0.11	0.24	0.24	0.24	0.15	0.50	0.50	0.14	0.41	0.41
Sat Flow, veh/h	1781	1870	1152	3563	1870	1377	1781	3404	1537	3456	3990	1036
Grp Volume(v), veh/h	216	255	247	347	240	206	299	716	347	442	1588	800
Grp Sat Flow(s),veh/h/ln	1781	1870	1152	1781	1870	1377	1781	1702	1537	1728	1702	1622
Q Serve(g_s), s	16.1	16.1	16.1	12.3	16.8	20.1	16.6	21.8	24.1	18.9	61.1	61.1
Cycle Q Clear(g_c), s	16.1	16.1	16.1	12.3	16.8	20.1	16.6	21.8	24.1	18.9	61.1	61.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	191	201	124	854	449	330	197	1287	581	484	1387	661
V/C Ratio(X)	1.13	1.27	2.00	0.41	0.53	0.62	1.52	0.56	0.60	0.91	1.15	1.21
Avail Cap(c_a), veh/h	191	201	124	929	488	359	197	1287	581	498	1387	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	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	0.09	0.09	0.09
Uniform Delay (d), s/veh	66.9	67.0	66.9	48.0	49.7	51.0	64.0	28.6	29.2	63.6	44.4	44.4
Incr Delay (d2), s/veh	104.3	154.7	476.4	0.1	0.4	1.9	256.8	1.7	4.5	2.6	66.2	95.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	16.3	21.1	5.5	8.0	7.1	21.4	8.7	9.1	8.5	38.3	41.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	171.2	221.7	543.3	48.1	50.1	52.9	320.8	30.3	33.6	66.2	110.6	140.4
LnGrp LOS	F	F	F	D	D	D	F	C	C	E	F	F
Approach Vol, veh/h		718			793			1362			2830	
Approach Delay, s/veh		317.1			50.0			94.9			112.1	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.4	62.7		21.0	21.0	67.1		40.9				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	* 6		4.9				
Max Green Setting (Gmax), s	21.6	53.0		16.1	16.6	* 58		39.1				
Max Q Clear Time (g_c+I1), s	20.9	26.1		18.1	18.6	63.1		22.1				
Green Ext Time (p_c), s	0.1	10.7		0.0	0.0	0.0		2.0				

Intersection Summary		
HCM 6th Ctrl Delay		125.2
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	995	240	220	1436	190	70	76	70	170	161	257
Future Volume (veh/h)	276	995	240	220	1436	190	70	76	70	170	161	257
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87	1.00		0.92	1.00		0.91	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	294	1059	255	234	1528	202	74	81	74	181	171	273
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	1537	370	252	1577	208	93	199	182	203	181	290
Arrive On Green	0.06	0.13	0.13	0.28	0.70	0.70	0.05	0.23	0.23	0.11	0.29	0.29
Sat Flow, veh/h	1781	3979	957	1781	4514	595	1781	856	782	1781	616	984
Grp Volume(v), veh/h	294	906	408	234	1151	579	74	0	155	181	0	444
Grp Sat Flow(s),veh/h/ln	1781	1702	1532	1781	1702	1706	1781	0	1638	1781	0	1601
Q Serve(g_s), s	24.6	38.2	38.3	19.2	47.2	47.7	6.2	0.0	12.0	15.0	0.0	40.6
Cycle Q Clear(g_c), s	24.6	38.2	38.3	19.2	47.2	47.7	6.2	0.0	12.0	15.0	0.0	40.6
Prop In Lane	1.00		0.62	1.00		0.35	1.00		0.48	1.00		0.61
Lane Grp Cap(c), veh/h	318	1315	592	252	1189	596	93	0	380	203	0	471
V/C Ratio(X)	0.93	0.69	0.69	0.93	0.97	0.97	0.80	0.00	0.41	0.89	0.00	0.94
Avail Cap(c_a), veh/h	340	1315	592	268	1189	596	126	0	405	245	0	503
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.34	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.6	56.8	56.9	53.0	21.8	21.9	70.3	0.0	48.8	65.5	0.0	51.7
Incr Delay (d2), s/veh	13.0	1.0	2.3	34.3	19.5	30.4	15.9	0.0	0.3	25.0	0.0	25.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	17.8	16.2	10.0	15.2	17.2	3.2	0.0	5.0	8.3	0.0	19.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.6	57.8	59.1	87.4	41.3	52.3	86.2	0.0	49.1	90.5	0.0	76.7
LnGrp LOS	F	E	E	F	D	D	F	A	D	F	A	E
Approach Vol, veh/h		1608			1964			229			625	
Approach Delay, s/veh		62.7			50.0			61.1			80.7	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.6	63.1	12.2	49.0	31.1	57.6	21.5	39.7
Change Period (Y+Rc), s	4.4	5.2	4.4	4.9	4.4	5.2	4.4	4.9
Max Green Setting (Gmax), s	22.6	50.8	10.6	47.1	28.6	44.8	20.6	37.1
Max Q Clear Time (g_c+I1), s	21.2	40.3	8.2	42.6	26.6	49.7	17.0	14.0
Green Ext Time (p_c), s	0.1	8.0	0.0	0.9	0.1	0.0	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	59.5
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	345	680	280	560	1196	158	412	672	150	330	1837	301
Future Volume (veh/h)	345	680	280	560	1196	158	412	672	150	330	1837	301
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	352	694	286	571	1220	161	420	686	153	337	1874	307
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	874	373	567	1111	478	452	1538	667	244	1903	573
Arrive On Green	0.03	0.08	0.08	0.16	0.31	0.31	0.13	0.43	0.43	0.14	0.75	0.75
Sat Flow, veh/h	3456	3554	1518	3456	3554	1528	3456	3554	1542	3456	5106	1538
Grp Volume(v), veh/h	352	694	286	571	1220	161	420	686	153	337	1874	307
Grp Sat Flow(s),veh/h/ln	1728	1777	1518	1728	1777	1528	1728	1777	1542	1728	1702	1538
Q Serve(g_s), s	14.6	28.8	27.7	24.6	46.9	12.1	18.0	20.4	9.4	10.6	52.7	12.7
Cycle Q Clear(g_c), s	14.6	28.8	27.7	24.6	46.9	12.1	18.0	20.4	9.4	10.6	52.7	12.7
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	336	874	373	567	1111	478	452	1538	667	244	1903	573
V/C Ratio(X)	1.05	0.79	0.77	1.01	1.10	0.34	0.93	0.45	0.23	1.38	0.98	0.54
Avail Cap(c_a), veh/h	336	879	375	567	1111	478	452	1538	667	244	1903	573
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
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	72.6	65.2	64.7	62.7	51.5	39.6	64.5	29.9	26.8	64.4	18.7	13.6
Incr Delay (d2), s/veh	61.7	5.3	9.7	39.7	57.9	0.4	25.5	0.9	0.8	194.5	17.3	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	14.5	12.4	13.9	29.7	4.7	9.6	9.0	3.7	10.9	14.4	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	134.3	70.5	74.4	102.4	109.5	40.0	90.0	30.9	27.6	258.9	36.0	17.2
LnGrp LOS	F	E	E	F	F	D	F	C	C	F	D	B
Approach Vol, veh/h		1332			1952			1259			2518	
Approach Delay, s/veh		88.2			101.7			50.2			63.6	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	71.0	29.0	42.0	24.0	62.0	19.0	52.0
Change Period (Y+Rc), s	4.4	* 5.9	4.4	* 5.1	4.4	5.9	4.4	5.1
Max Green Setting (Gmax), s	10.6	* 58	24.6	* 37	19.6	49.1	14.6	46.9
Max Q Clear Time (g_c+I1), s	12.6	22.4	26.6	30.8	20.0	54.7	16.6	48.9
Green Ext Time (p_c), s	0.0	9.8	0.0	3.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	76.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	32	227	256	38	34	192	1286	44	27	3240	81
Future Volume (veh/h)	43	32	227	256	38	34	192	1286	44	27	3240	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	151	156	264	39	35	198	1326	45	28	3340	84
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	514	555	300	38	34	162	1785	61	51	1585	40
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.18	1.00	1.00	0.03	0.45	0.45
Sat Flow, veh/h	347	1427	1542	715	106	95	1781	3502	119	1781	3538	88
Grp Volume(v), veh/h	195	0	156	338	0	0	198	672	699	28	1668	1756
Grp Sat Flow(s),veh/h/ln	1773	0	1542	916	0	0	1781	1777	1844	1781	1777	1850
Q Serve(g_s), s	0.0	0.0	10.8	42.5	0.0	0.0	13.6	0.0	0.0	2.3	67.2	67.2
Cycle Q Clear(g_c), s	11.5	0.0	10.8	54.0	0.0	0.0	13.6	0.0	0.0	2.3	67.2	67.2
Prop In Lane	0.23		1.00	0.78		0.10	1.00		0.06	1.00		0.05
Lane Grp Cap(c), veh/h	668	0	555	372	0	0	162	906	940	51	796	829
V/C Ratio(X)	0.29	0.00	0.28	0.91	0.00	0.00	1.23	0.74	0.74	0.54	2.10	2.12
Avail Cap(c_a), veh/h	668	0	555	372	0	0	162	906	940	68	796	829
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	34.2	54.3	0.0	0.0	61.4	0.0	0.0	71.9	41.4	41.4
Incr Delay (d2), s/veh	1.1	0.0	1.3	28.2	0.0	0.0	137.8	4.5	4.3	3.3	497.3	507.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	4.3	15.8	0.0	0.0	11.6	1.1	1.1	1.1	138.0	146.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	0.0	35.4	82.5	0.0	0.0	199.2	4.5	4.3	75.2	538.7	549.1
LnGrp LOS	D	A	D	F	A	A	F	A	A	E	F	F
Approach Vol, veh/h		351			338			1569			3452	
Approach Delay, s/veh		35.4			82.5			29.0			540.2	
Approach LOS		D			F			C			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	73.1		58.9	8.7	82.4		58.9
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		4.9
Max Green Setting (Gmax), s	13.6	67.2		54.0	5.7	* 75		54.0
Max Q Clear Time (g_c+I1), s	15.5	69.2		56.0	4.3	2.0		13.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	23.6		1.0

Intersection Summary	
HCM 6th Ctrl Delay	341.6
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	305	122	339	382	186	193	775	268	586	2019	790
Future Volume (veh/h)	348	305	122	339	382	186	193	775	268	586	2019	790
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	370	324	130	361	406	198	205	824	285	623	2148	840
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	523	221	355	570	243	184	1281	567	955	1921	852
Arrive On Green	0.09	0.15	0.15	0.10	0.16	0.16	0.10	0.36	0.36	0.28	0.54	0.54
Sat Flow, veh/h	3456	3554	1499	3456	3554	1516	1781	3554	1572	3456	3554	1576
Grp Volume(v), veh/h	370	324	130	361	406	198	205	824	285	623	2148	840
Grp Sat Flow(s),veh/h/ln	1728	1777	1499	1728	1777	1516	1781	1777	1572	1728	1777	1576
Q Serve(g_s), s	17.6	16.3	12.6	19.5	20.6	14.5	19.6	36.7	26.9	30.2	102.7	99.6
Cycle Q Clear(g_c), s	17.6	16.3	12.6	19.5	20.6	14.5	19.6	36.7	26.9	30.2	102.7	99.6
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	320	523	221	355	570	243	184	1281	567	955	1921	852
V/C Ratio(X)	1.16	0.62	0.59	1.02	0.71	0.81	1.12	0.64	0.50	0.65	1.12	0.99
Avail Cap(c_a), veh/h	320	733	309	355	729	311	184	1281	567	955	1921	852
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	86.2	76.0	51.0	85.2	75.6	28.0	85.2	50.6	47.5	60.7	43.6	42.9
Incr Delay (d2), s/veh	99.5	2.5	5.3	52.1	3.7	15.8	100.8	2.5	3.2	1.3	60.9	27.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	7.7	5.2	11.4	9.8	6.5	14.1	16.6	11.2	13.3	59.5	44.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	185.7	78.6	56.2	137.3	79.3	43.8	186.0	53.1	50.6	62.0	104.6	70.5
LnGrp LOS	F	E	E	F	E	D	F	D	D	E	F	E
Approach Vol, veh/h		824			965			1314			3611	
Approach Delay, s/veh		123.2			93.7			73.3			89.3	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	57.6	74.2	25.2	33.0	24.0	107.8	22.0	36.2
Change Period (Y+Rc), s	5.1	* 5.7	5.7	* 5	4.4	5.1	4.4	5.7
Max Green Setting (Gmax), s	44.7	* 69	18.1	* 39	19.6	94.2	17.6	39.0
Max Q Clear Time (g_c+I1), s	32.2	38.7	21.5	18.3	21.6	104.7	19.6	22.6
Green Ext Time (p_c), s	1.0	12.9	0.0	4.7	0.0	0.0	0.0	5.3

Intersection Summary	
HCM 6th Ctrl Delay	91.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	104.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	460	0	0	439	337	579	0	0	1986	394
Future Vol, veh/h	0	0	460	0	0	439	337	579	0	0	1986	394
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Free	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	270	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	16974	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	500	0	0	477	366	629	0	0	2159	428

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	1080	2159	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	~ 214	~ 245	-	0	0	-	-
Stage 1	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	-	0	~ 214	~ 245	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 651.3	103.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 245	-	214	-	-
HCM Lane V/C Ratio	1.495	-	2.336	-	-
HCM Control Delay (s)	280.4	-	$ 651.3	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	21.5	-	40.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	380	260	728	338	857	1598
Future Volume (veh/h)	380	260	728	338	857	1598
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	413	283	791	0	932	1737
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	474	421	1245		351	2126
Arrive On Green	0.27	0.27	0.35	0.00	0.20	0.60
Sat Flow, veh/h	1781	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	413	283	791	0	932	1737
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	20.6	14.8	17.3	0.0	18.3	35.6
Cycle Q Clear(g_c), s	20.6	14.8	17.3	0.0	18.3	35.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	474	421	1245		351	2126
V/C Ratio(X)	0.87	0.67	0.64		2.65	0.82
Avail Cap(c_a), veh/h	709	631	1245		351	2126
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	30.4	25.2	0.0	37.2	14.6
Incr Delay (d2), s/veh	7.9	1.9	2.5	0.0	751.6	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	5.7	7.1	0.0	80.9	12.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.4	32.3	27.7	0.0	788.8	18.3
LnGrp LOS	D	C	C		F	B
Approach Vol, veh/h	696		791	A		2669
Approach Delay, s/veh	37.1		27.7			287.3
Approach LOS	D		C			F

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.0	40.0		29.8		63.0
Change Period (Y+Rc), s	* 4.7	7.5		5.1		7.5
Max Green Setting (Gmax), s	* 18	32.5		36.9		55.5
Max Q Clear Time (g_c+I1), s	20.3	19.3		22.6		37.6
Green Ext Time (p_c), s	0.0	4.1		2.1		11.6

Intersection Summary		
HCM 6th Ctrl Delay		196.0
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCS7 Basic Freeway Report

Project Information

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Agency		Analysis Year	2019
Jurisdiction	I-805 from Governor Drive to Nobel Drive NB – Ex + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	10681	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2202
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.05
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Information

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Jurisdiction	I-805 from Governor Drive to Nobel Drive SB – Ex + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4308	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	898
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	15.5
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Information

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Jurisdiction	I-805 from Governor Drive to Nobel Drive NB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	11221	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2314
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.10
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Jurisdiction	I-805 from Governor Drive to Nobel Drive SB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4528	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	943
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	16.3
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Information

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Jurisdiction	SR52 from Genesee Avenue to I-805 EB – NT + P AM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4566	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2482
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.08
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3787	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2014
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.3
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	14851	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	3062
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.46
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	5	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	58.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.920
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5989	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.96	Flow Rate (V_p), pc/h/ln	1248
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2280
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2098
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	58.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	21.5
Total Ramp Density Adjustment	7.0	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	58.0		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5122	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2784
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.21
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4855	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	2582
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.12
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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Jurisdiction	I-5 from Gilman Drive to Nobel Drive NB – Ex + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7655	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	1953
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2292
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.85
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	57.2
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	34.1
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	59.2		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	0.280
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6564	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1823
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	16.7		

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Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4697	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2552
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.11
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	SR52 from Genesee Avenue to I-805 WB – Ex + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3202	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1650
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	60.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	27.5
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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HCS7 Basic Freeway Report

Project Information

Analyst		Date	2/22/2019
Agency		Analysis Year	2019
Jurisdiction	I-5 from Gilman Drive to Nobel Drive NB – NT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7885	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2012
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2292
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	56.5
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	35.6
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	59.2		

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Project Information

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Jurisdiction	I-5 from Gilman Drive to Nobel Drive SB – NT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	0.280
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6984	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1940
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	16.7		

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Project Information

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Jurisdiction	SR52 from Genesee Avenue to I-805 EB – NT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5285	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	2872
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.25
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Information

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Jurisdiction	SR52 from Genesee Avenue to I-805 WB – NT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3585	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	1848
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	59.0
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	31.3
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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HCS7 Basic Freeway Report

Project Information

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Jurisdiction	I-5 from Gilman Drive to Nobel Drive NB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	9634	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.98	Flow Rate (V_p), pc/h/ln	2458
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2292
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.07
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	59.2		

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Project Information

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Jurisdiction	I-5 from Gilman Drive to Nobel Drive SB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.83
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	59.6
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	0.280
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7761	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	2156
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2200
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2200
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.98
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.4	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	16.7		

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HCS7 Basic Freeway Report

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Jurisdiction	SR52 from Genesee Avenue to I-805 EB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.40
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.7
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6110	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.92	Flow Rate (V_p), pc/h/ln	3320
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2307
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2307
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.44
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.3	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.7		

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Project Information

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Jurisdiction	SR52 from Genesee Avenue to I-805 WB – LT + P PM	Time Period Analyzed	
Project Description	Costa Verde	Unit	United States Customary

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	65.0	Total Ramp Density (TRD), ramps/mi	1.60
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	60.2
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3957	Heavy Vehicle Adjustment Factor (f_{HV})	1.000
Peak Hour Factor	0.97	Flow Rate (V_p), pc/h/ln	2040
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2302
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.89
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	56.6
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	36.0
Total Ramp Density Adjustment	4.8	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	60.2		

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