

APPENDIX 4.8

Supplemental Traffic Impact Study Analysis

MEMORANDUM

Date: October 5, 2017

To: Paul Stephenson, Impact Sciences

From: David B. Robinson, Fehr & Peers

Subject: *Updates to Town Center Apartments TIS*

RS13-3184.01

Introduction

Fehr & Peers updated the cumulative intersection operations analysis for the El Dorado Hills Town Center Apartments Transportation Impact Analysis (TIA), submitted June 2017, to account for the proposed John Adams Academy and Montano de El Dorado projects.

The John Adams Academy, a TK-12 public charter school, is proposed on Town Center Boulevard west of Latrobe Road. Montano de El Dorado (Montano) is the expansion of the existing commercial development to be located on the east side of Latrobe Road between Golden Foothill Parkway and White Rock Road. Both projects are shown on Figures 1 through 4.

This analysis relies on project travel characteristics documented in the Initial Study / Mitigated Negative Declaration (IS / MND) for the John Adams Academy that was released July 2017 and the Draft Transportation Impact Study for the Montano de El Dorado project dated October 28, 2016. This memorandum documents the changes in intersection level of service for the following intersections:

1. El Dorado Hills Boulevard / Saratoga Way / Park Drive
2. El Dorado Hills Boulevard / Saratoga Way / US 50 WB Ramps
3. Latrobe Road / US 50 EB Ramps
4. Latrobe Road / Town Center Boulevard
5. Latrobe Road / White Rock Road



These intersections were selected for analysis since they will provide primary access to the John Adams Academy and Montano projects and were identified to have the highest delay of the intersections analyzed in the Draft EIR. Consequently, these intersections would most likely be impacted by the addition of trips from the John Adams Academy and Montano projects.

Cumulative (2035) Forecasting Methodology

The original cumulative (2035) condition forecasts for the Town Center Apartments TIA were developed using the El Dorado County travel demand forecasting (TDF) model. These forecasts were revised to account for an inadvertent shift of 230 vehicles in the AM peak hour from the southbound right-turn movement to the southbound through movement at the Latrobe Road/Town Center Boulevard Intersection and to the southbound right-turn movement at the Latrobe Road/White Rock Road intersection. This shift would not affect other intersections. The operations analysis presented below is based on these updated forecasts.

While the El Dorado County TDF model included land use growth on these parcels, it did not explicitly include school land use for the John Adams Academy project area, nor did it include the level of development proposed with the Montano de El Dorado project. Therefore, we updated the Cumulative No Project and Cumulative Plus Project traffic volume forecasts to account for development of these projects using the following steps:

1. Calculated the growth in traffic between the Cumulative No Project and Cumulative Plus Project traffic volume forecasts developed for the John Adams Academy project.
2. Calculated the growth in traffic between the Cumulative No Project and Cumulative Plus Project traffic volume forecasts developed for the Montano de El Dorado project.
3. Added the project-specific growth from Steps 1 and 2 to the Cumulative No Project and Cumulative Plus Project traffic volume forecasts developed for the Town Center Apartments project.

Figures 1 and 2 show the updated cumulative (2035) AM and PM peak hour intersection turning movement forecasts for the Town Center Apartments without trips from the John Adams Academy and Montano de El Dorado project.

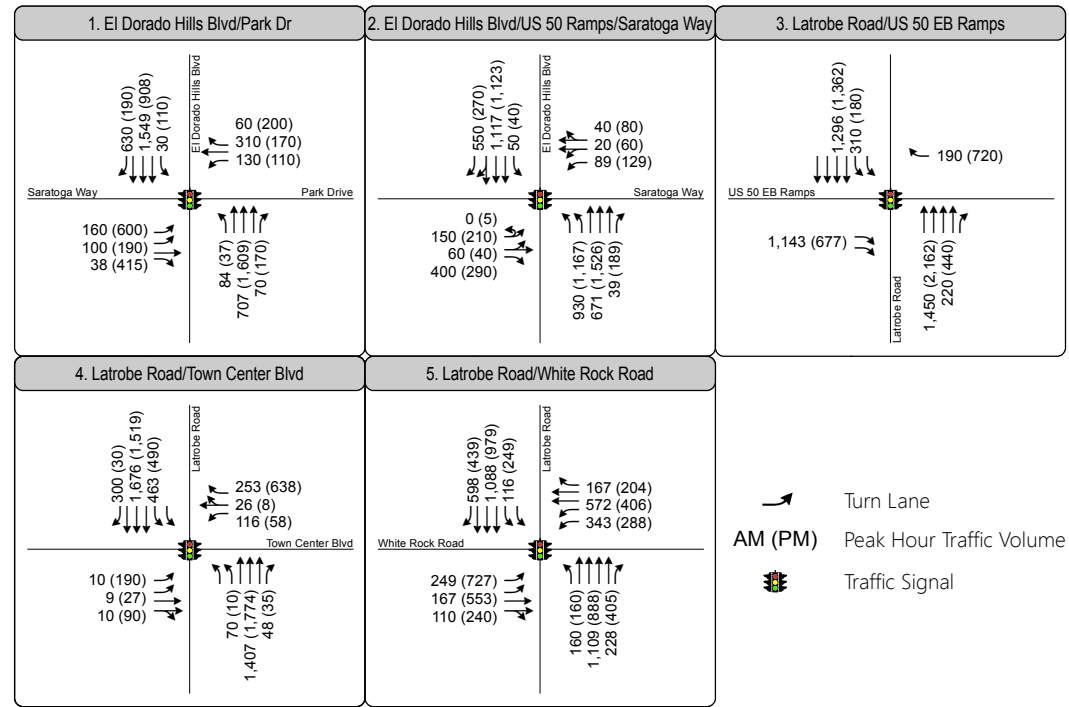
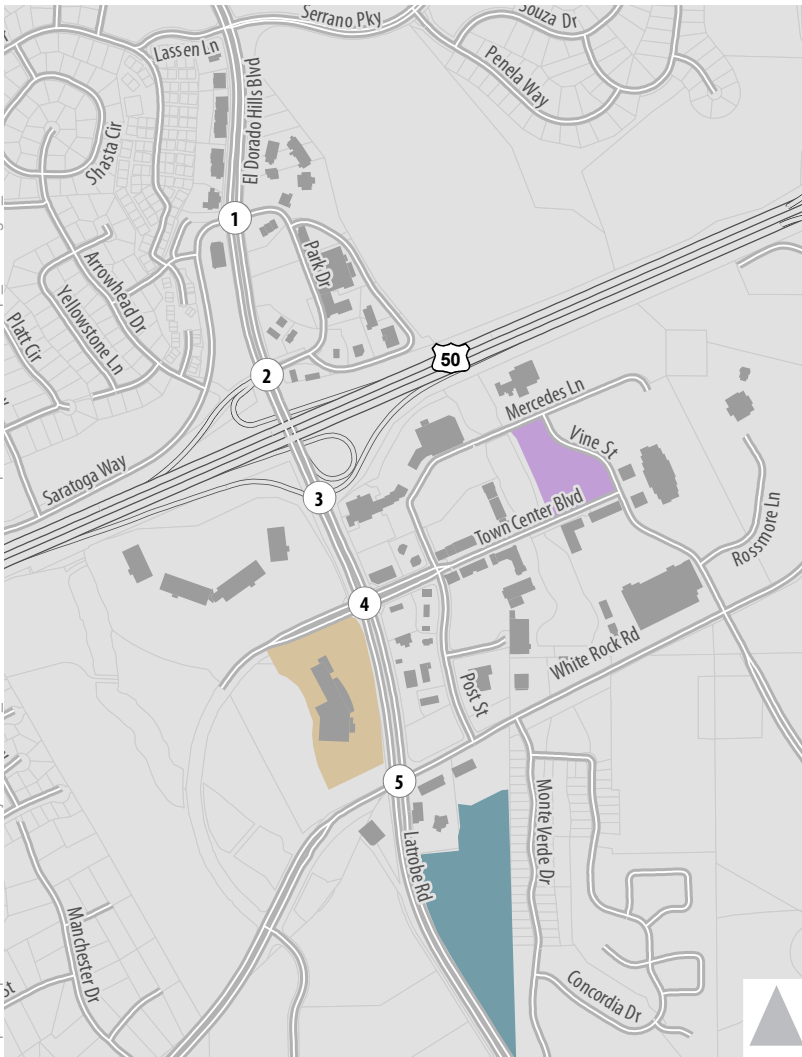
Figures 3 and 4 show the updated cumulative (2035) AM and PM peak hour intersection turning movement forecasts for the Town Center Apartments with trips from the John Adams Academy and Montano de El Dorado project.



Cumulative (2035) Operations Analysis Results

The forecasts shown on Figures 1 through 4 were analyzed using the micro-simulation software SimTraffic 9. The results are shown in Table 1. These results show that the intersections studied along El Dorado Hills Boulevard and Latrobe Road will operate acceptably at LOS E or better during the AM and PM peak hour under cumulative conditions with the addition of project trips from the John Adams Academy and Montano de El Dorado projects.

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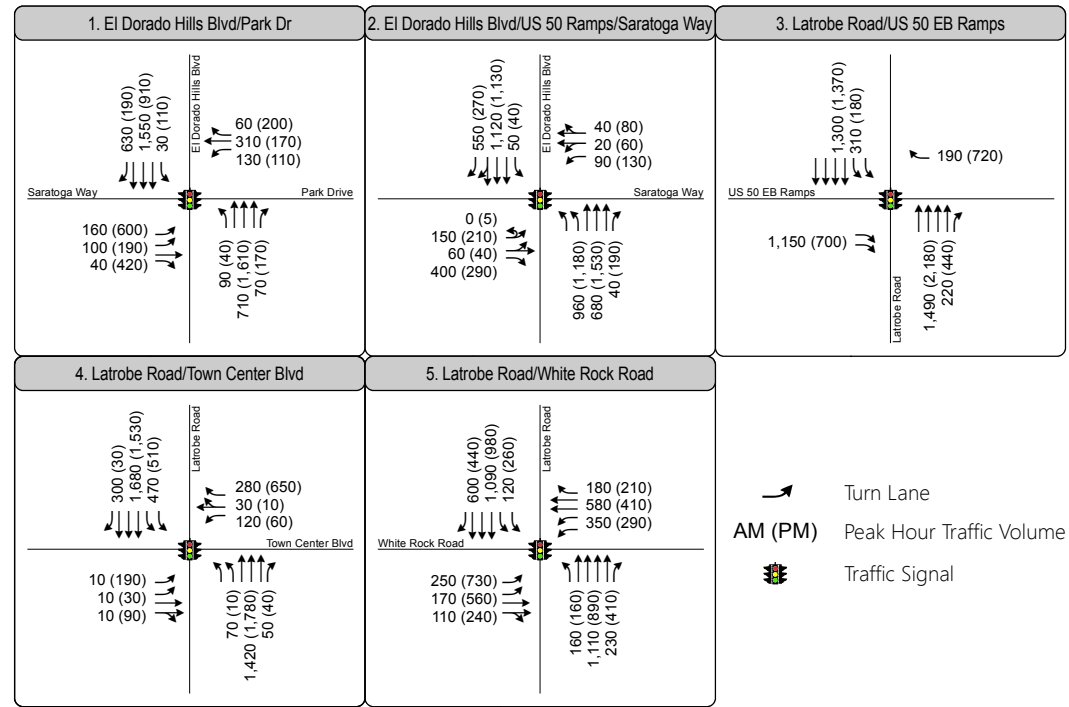
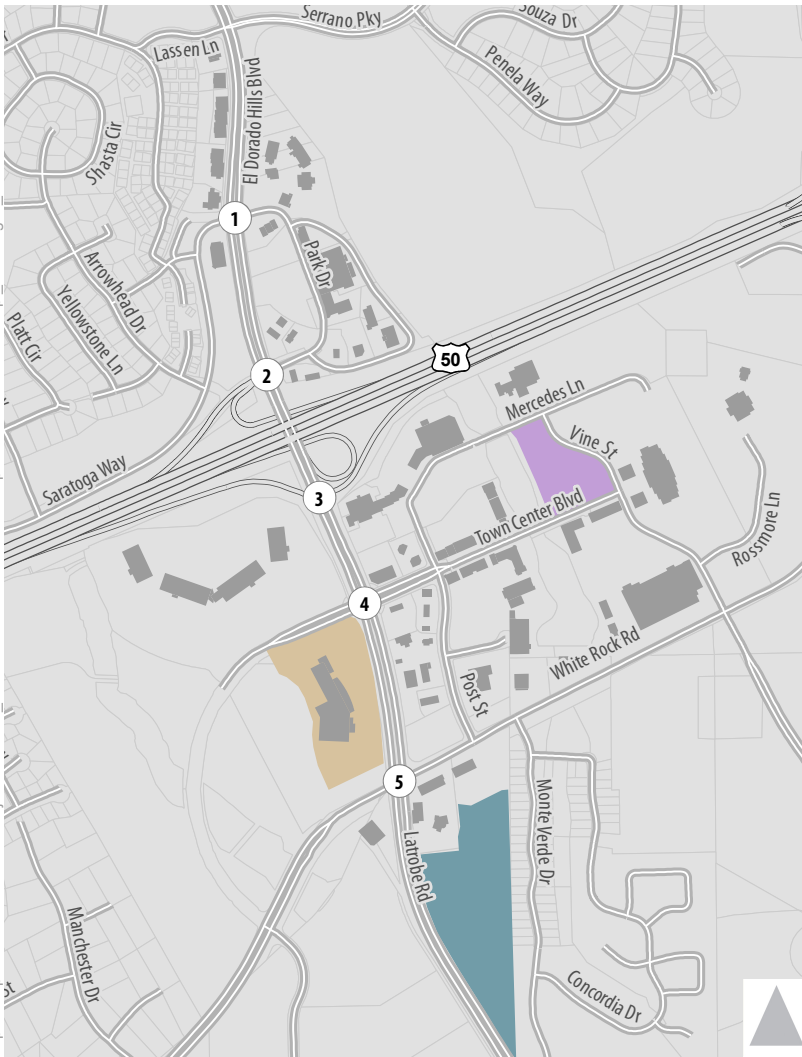
Turn Lane
 AM (PM) Peak Hour Traffic Volume
 Traffic Signal

- 1 Study Intersection
- John Adams Academy
- Planned Roadway
- Montano de El Dorado
- Project Location



Figure 1
 Peak Hour Traffic Volumes
 and Lane Configurations -
 Cumulative No Project Conditions

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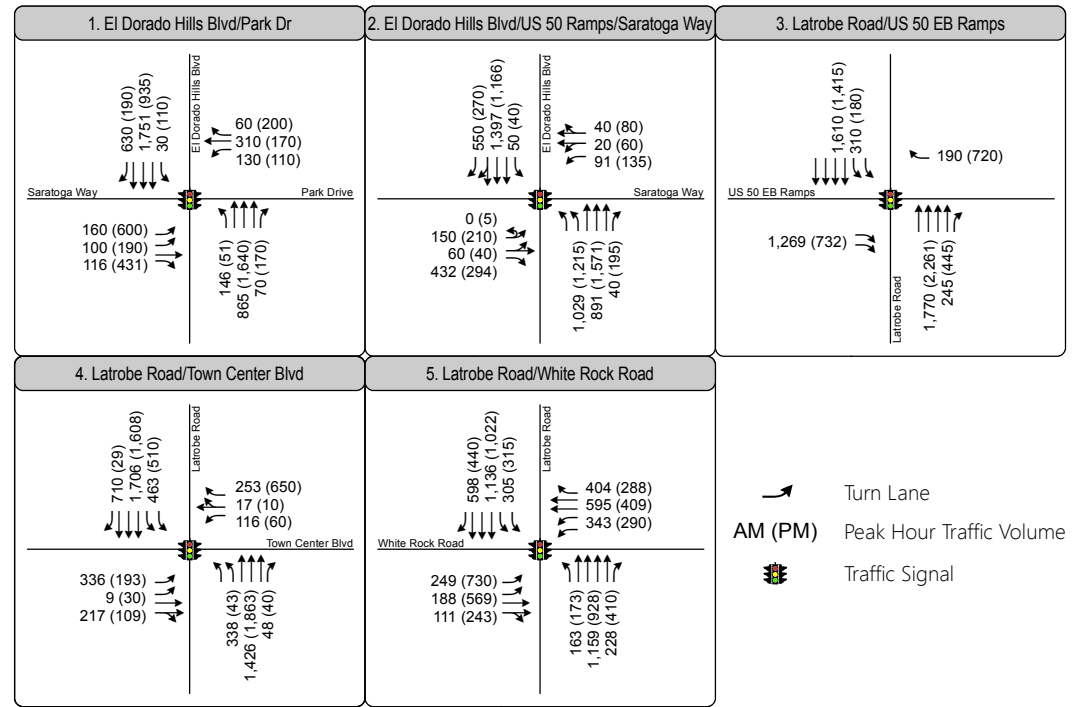
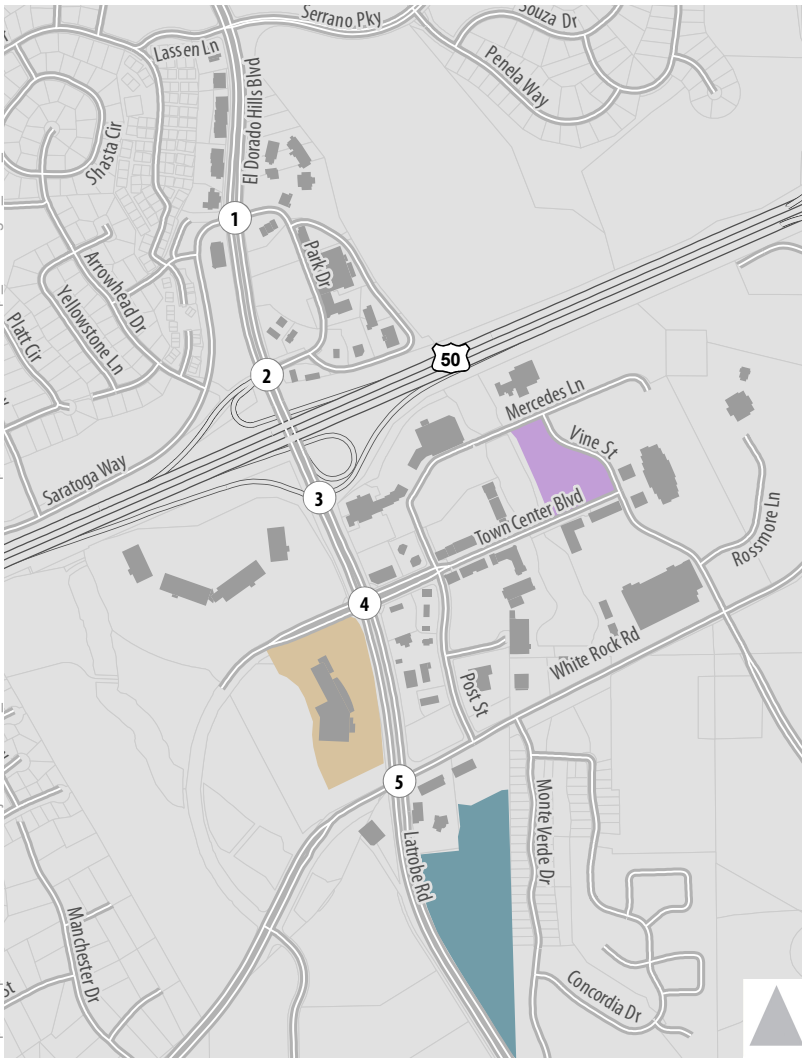
Turn Lane
 AM (PM) Peak Hour Traffic Volume
 Traffic Signal

- 1 Study Intersection
- John Adams Academy
- Planned Roadway
- Montano de El Dorado
- Project Location



Figure 2
 Peak Hour Traffic Volumes
 and Lane Configurations -
 Cumulative Plus Project Conditions

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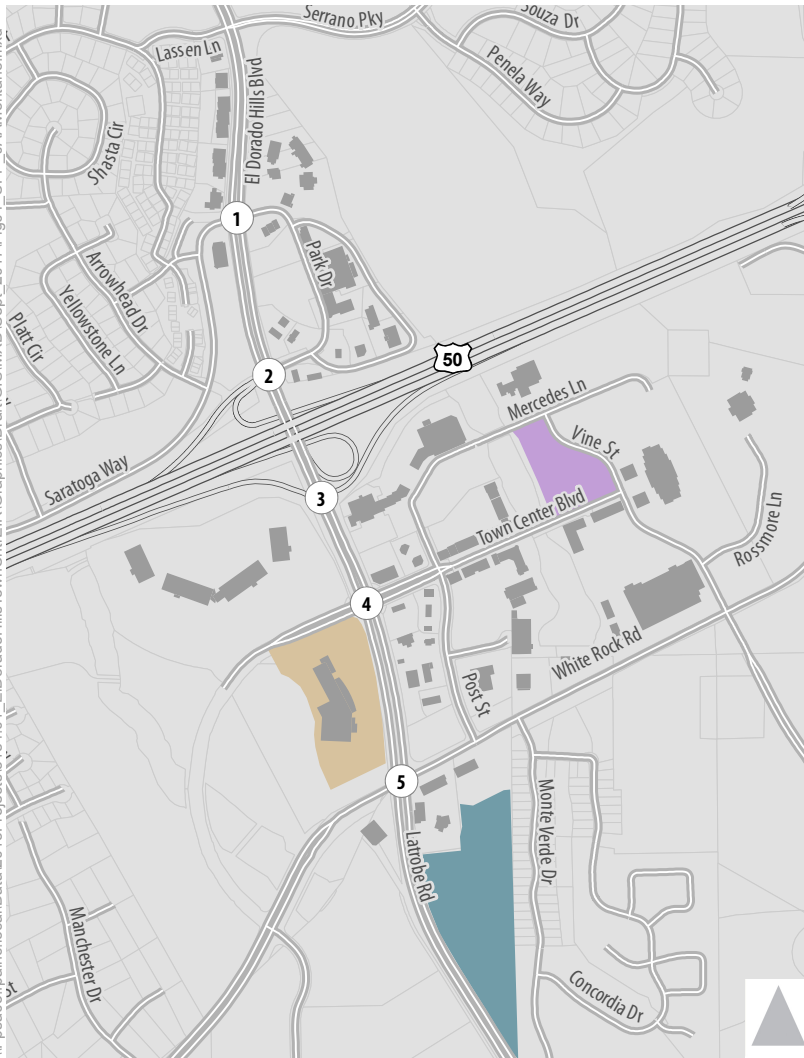
Turn Lane
 AM (PM) Peak Hour Traffic Volume
 Traffic Signal

- Study Intersection
- Planned Roadway
- Project Location
- John Adams Academy
- Montano de El Dorado

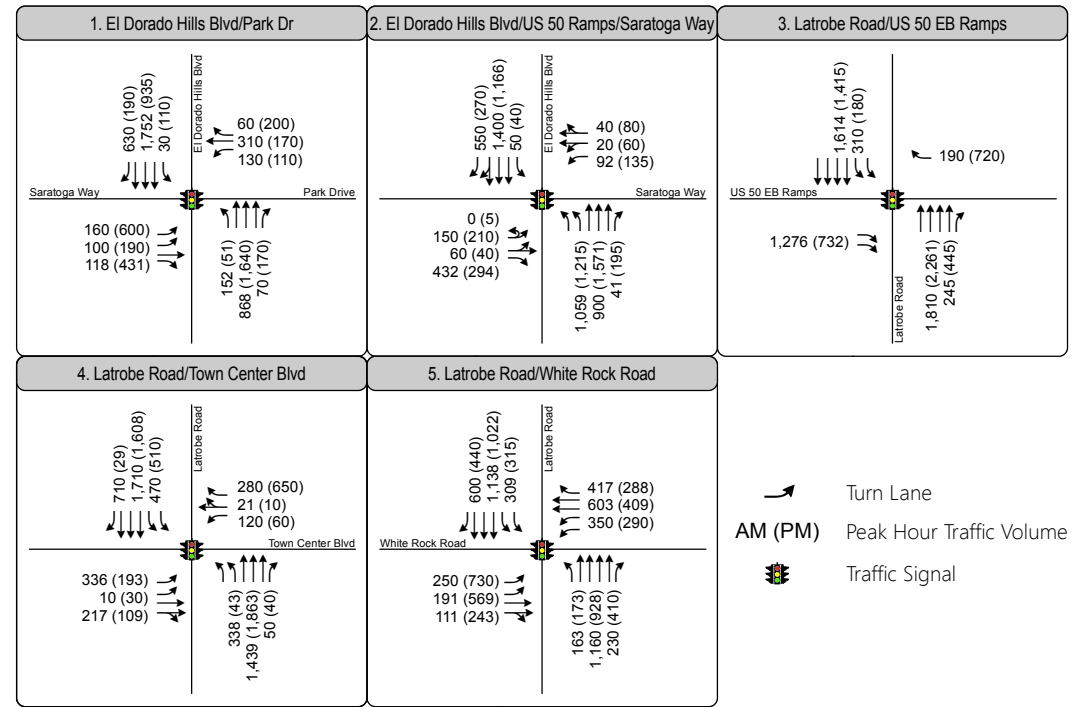


Figure 3
 Peak Hour Traffic Volumes and Lane Configurations -
 Cumulative No Project Plus John Adams Academy
 and Montano de El Dorado Conditions

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- ① Study Intersection
- Planned Roadway
- John Adams Academy
- Montano de El Dorado
- Project Location



Turn Lane
 AM (PM) Peak Hour Traffic Volume
 Traffic Signal

Figure 4
 Peak Hour Traffic Volumes and Lane Configurations - Cumulative Plus Project Plus John Adams Academy and Montano de El Dorado Conditions





Intersection	Cumulative (2035) No Project		Cumulative (2035) Plus Project		Cumulative (2035) No Project Plus John Adams Academy & Montano		Cumulative (2035) Plus Project Plus John Adams Academy & Montano	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1. El Dorado Hills Blvd / Saratoga Way / Park Dr	38 / D	52 / D	45 / D	51 / D	55 / D	59 / E	60 / E	72 / E
2. El Dorado Hills Blvd/ Saratoga Way / US 50 WB Ramps	33 / C	43 / D	47 / D	40 / D	34 / C	69 / E	39 / D	80 / E
3. Latrobe Rd / US 50 EB Ramps	14 / B	23 / C	26 / C	22 / C	16 / B	57 / E	18 / B	57 / E
4. Latrobe Rd / Town Center Blvd	22 / C	59 / E	25 / C	62 / E	43 / D	78 / E	41 / D	77 / E
5. Latrobe Rd / White Rock Rd	41 / D	47 / D	45 / D	63 / E	50 / E	59 / E	60 / E	57 / E

Notes:

Values reported are Average Intersection Delay (seconds) / LOS. The average delay is measured in seconds per vehicle and are calculated based on the procedures and methodology contained in the *Highway Capacity Manual* (Transportation Research Board, 2010). Intersections are signalized and analyzed in SimTraffic.

Source: Fehr & Peers (2017).



References

Fehr & Peers (June 2017). *El Dorado Hills Town Center Apartments Transportation Impact Analysis Revised Draft*.

HELIX Environmental Planning, Inc. (July 2017). *John Adams Academy – El Dorado Hills Campus Draft Initial Study and Environmental Evaluation*.

Transportation Research Board (2010). *Highway Capacity Manual*.