

# Transportation Impact Study for the Valley Ranch 3 Residential Subdivision



Prepared for the City of Williams

Submitted by **W-Trans** 

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## **Executive Summary**

The proposed Valley Ranch 3 Residential Subdivision includes the development of 103 market-rate single-family residences on a vacant approximately 17.3-acre parcel east of I-5 and south of E Street in the City of Williams. The project site would be accessed from an extension of Marguerite Street to the southeast from its current terminus at Alta Lane and a new connection to E Street approximately 350 feet west of Husted Road. The project would be expected to generate an average of 963 trips per day, including 76 trips during the weekday a.m. peak hour and 102 trips during the weekday p.m. peak hour.

Analysis indicates that the study intersections that E Street forms with the I-5 North and South Ramps as well as Marguerite Street all operate acceptably per the applicable City standards under Existing Conditions and would continue to do so with the addition of project traffic. Under Baseline Conditions, with includes near-term traffic from the pending Valley Ranch Unit 4 Commercial Development, the E Street/Marguerite Street intersection is expected to continue operating at acceptable service levels, though both of the I-5 ramp intersections would deteriorate to LOS F operation. With the installation of traffic signals, both intersections would operate acceptably with traffic from the proposed project and the pending commercial project, though because the intersections would operate acceptably in their current configuration and controls without traffic from the commercial project, the proposed residential project's effect on operations would be considered acceptable and no off-site improvements would be the responsibility of this project.

As detailed in *City of Williams General Plan Update – Final Environmental Impact Report* (EIR), all three existing study intersections would need to be signalized in order to support buildout of the City's General Plan. With the planned installation of traffic signals and other geometric improvements, all study intersections would operate acceptably under the anticipated future volumes without and with project-related traffic. To offset the cumulative effects of project traffic and help fund the planned circulation improvements identified in the General Plan, the applicant should pay the required development impact fees to the City.

City staff has expressed interest in modern roundabouts as alternatives to the planned future installation of traffic signals at the study intersections; therefore, it is recommended that Intersection Control Evaluations (ICEs) be performed for the ramp terminals and a feasibility study be prepared for E Street/Vann Street to explore the suitability of roundabouts at these locations.

Since the City of Williams has not yet established thresholds of significance related to VMT nor is there a regional travel demand model that contains VMT information, the project-related VMT impacts were assessed qualitatively based on guidance provided by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018. Under this guidance, residential developments that have a VMT per capita that is 15 percent or more below the existing countywide residential VMT per capita would have a less-than-significant transportation impact. The proposed project site is located within an acceptable walking and biking distance of Downtown and other points of interest and would reasonably be expected to have a less-than-significant transportation impact on VMT with implementation of appropriate TDM measures. It is recommended that the project incorporate the TDM measures identified in this report such as high-speed internet and establishment of a homeowner's association that would allow educational materials to be provided to residents.

Pedestrian facilities are expected to be adequate upon completion of the sidewalks along the project frontage and on the project streets to be constructed as part of the project. Project residents would be able to walk to surrounding areas and a nearby transit stop via the project's sidewalk connections to E Street and Marguerite Street. It is recommended that the E Street/Project Street intersection include a crosswalk with ADA-compliant curb ramps on the southern leg. All new curb ramps within the subdivision should comply with ADA standards.



The project would be accessible by bicycle and access for this mode would be further improved in the future with the planned installation of Class II bike lanes on E Street and Husted Road. It is recommended that the project frontages on E Street and Husted Road be designed to accommodate the planned future installation of Class II bike lanes and adequate right-of-way should be dedicated to the City for these future improvements, if not already available.

The intersections within the project site should be uncontrolled as is typical for neighborhood streets, though the intersection that the new project street would form with E Street should be stop-controlled on the northbound minor street approach. Sight lines were field measured at the location of the project street and determined to be adequate for the posted speed limit. To maintain existing adequate sight lines, any new signage or other structures such as sound walls to be located near the intersection should be placed outside of the vision triangle of a driver waiting on the minor street.



## Introduction

This report presents an analysis of the potential transportation impacts and traffic effects that would be associated with the proposed development of single-family housing on an empty parcel east of I-5 and south of E Street in the City of Williams. The traffic study was completed in accordance with the criteria established by the City of Williams, reflects a scope of work approved by City staff, and is consistent with standard traffic engineering techniques.

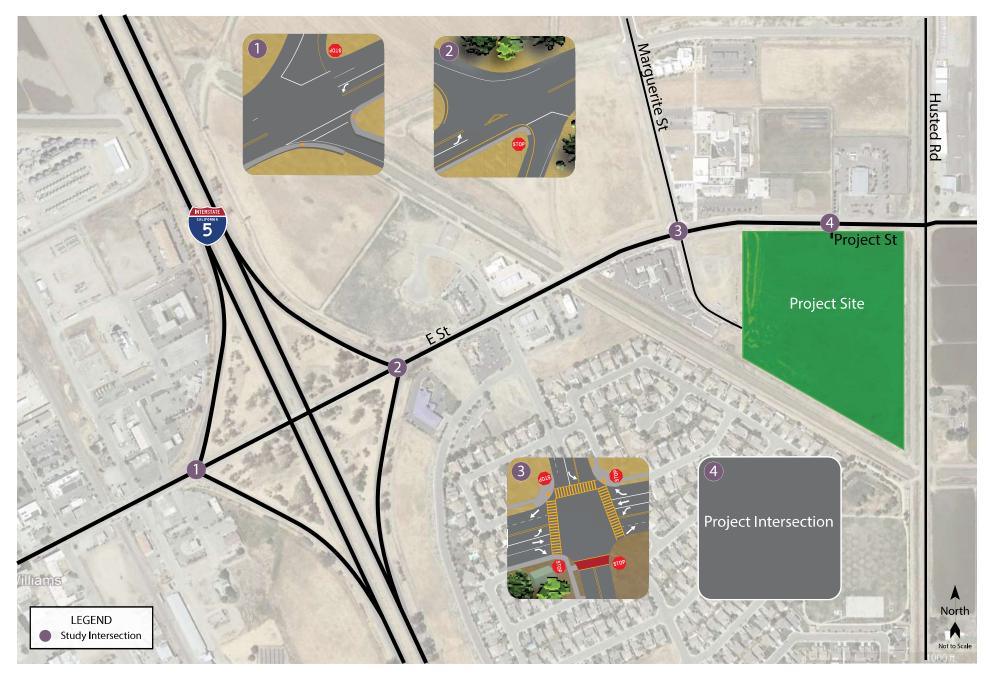
### Prelude

The purpose of a transportation impact study (TIS) is to provide City staff and policy makers with data they can use to make an informed decision regarding the potential transportation impacts and adverse effects of a proposed project, and any associated improvements that would be required to mitigate these impacts to a level of insignificance under CEQA or reduce an adverse effect to an acceptable level under the City's General Plan, or other policies. Impacts relative to access for pedestrians, bicyclists, and to transit are addressed in the context of the CEQA criteria. Consistent with SB 743, the project's transportation impacts were analyzed using VMT. While no longer a part of the CEQA review process, vehicular traffic service levels at key intersections were evaluated for consistency with General Plan policies by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the effect the new traffic would be expected to have on the operation of the study intersections.

### **Project Profile**

The proposed project includes the development of 103 market-rate single-family residences on an approximately 17.3-acre vacant parcel east of I-5 and south of E Street in the City of Williams. The project site would be accessed from an extension of Marguerite Street to the southeast from its current terminus at Alta Lane and a new connection to E Street approximately 350 feet west of Husted Road. The access on E Street would be restricted to right-turn movements only. The study area and location of the project site is shown in Figure 1.





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Traffic Impact Study for the Valley Ranch 3 Residential Subdivision Figure 1 – Study Area and Existing Lane Configurations



## **Transportation Setting**

### **Operational Analysis**

#### **Study Area and Periods**

The study area for the operational analysis consists of the following intersections selected with input from City staff:

- 1. E Street/I-5 South Ramps
- 2. E Street/I-5 North Ramps
- 3. E Street/Marguerite Street
- 4. E Street/Project Street (Project Conditions only)

Operating conditions during the weekday a.m. and p.m. peak periods were evaluated to capture the highest potential volumes for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute.

#### **Study Intersections**

The orientation of the roadways in the study area are skewed from true north-south and east-west so for the purposes of this analysis E Street was considered to run east-west and the cross streets north-south.

**E Street/I-5 South Ramps** is stop-controlled on the southbound off-ramp approach, which is flared and provides additional space for vehicles attempting to make a right turn onto E Street to queue aside left-turning traffic. The south leg is an on-ramp to I-5 South. A crosswalk is marked on the south leg of the intersection.

**E Street/I-5 North Ramps** is stop-controlled on the northbound off-ramp approach, which is flared and provides additional space for vehicles attempting to make a right turn onto E Street to stack beside traffic turning left. The north leg is an on-ramp to I-5 North.

**E Street/Marguerite Street** is an all-way stop-controlled intersection with solar-powered blinking STOP signage on the E Street approaches. Crosswalks are striped on all four legs and curb ramps are present on all four street corners, including directional ramps on the southwest and southeast corners. Class II bike lanes are striped on the north leg.

The locations of the study intersections and the existing lane configurations and controls are shown in Figure 1.

#### **Study Roadway**

E Street runs mostly east-west between SR-20 on the west and Husted Road on the east. Along the project frontage E Street consists of two 12-foot travel lanes and there is a right-turn lane and an acceleration lane serving the Colusa County Office of Education driveway. The roadway has a posted speed limit of 25 miles per hour (mph). Based on traffic data collected on April 13, 2021, the section of E Street between Marguerite Street and Husted Road has an average daily traffic (ADT) volume of 2,260 vehicles.



### **Collision History**

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol (CHP) as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is January 1, 2016 through December 31, 2020.

As presented in Table 1, the calculated collision rates for the study intersections were compared to average collision rates for similar facilities statewide, as indicated in *2016 Collision Data on California State Highways*, California Department of Transportation (Caltrans). These average rates statewide are for intersections in the same environment (urban, suburban, or rural), with the same number of approaches (three or four), and the same controls (all-way stop, one- or two-way stop, or traffic signal). Given that the collision rates for E Street/I-5 South Ramps and E Street/Marguerite Street are less than the statewide averages for similar facilities, these intersections appear to be generally operating safely. The intersection of E Street/I-5 North Ramps had a calculated collision rate above the statewide average so the collisions that occurred at this location were further reviewed, as discussed below. The collision rate calculations are provided in Appendix A.

Table 1 – Collision Rates for the Study Intersections									
Study Intersection	Number of Collisions (2016-2020)	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)						
1. E St/I-5 South Ramps	1	0.06	0.08						
2. E St/I-5 North Ramps	2	0.13	0.08						
3. E St/Marguerite St	0	0.00	0.13						

Note: c/mve = collisions per million vehicles entering

Because it had an above-average collision rate, the intersection of E Street/I-5 North Ramps was evaluated further. The two crashes included a sideswipe and a rear end. With no clear pattern and a rate that is only nominally above the average, the intersection appears to be operating within accepted parameters.

### Alternative Modes

#### **Pedestrian Facilities**

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. A connected sidewalk network is provided on both sides of E Street between Marguerite Street and Vann Street. To the west of Vann Street, there is a sidewalk on the south side of E Street that connects to the Downtown area. The project frontage is currently unimproved, though a sidewalk was recently constructed on the south side of E Street along the Stony Creek Senior Apartments frontage to the west of the project site. Sidewalks are also provided on the north side of E Street between Marguerite Street and the California Highway Patrol (CHP) offices, the east side of Marguerite Street to the north of E Street, and on both sides of Marguerite Street to the south of E Street.

#### **Bicycle Facilities**

The Highway Design Manual, Caltrans, 2017, classifies bikeways into four categories:

• **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.



- **Class II Bike Lane** a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

There are existing Class II bike lanes on Marguerite Street between E Street and SR 20 and plans to provide future Class II bicycle lanes on E Street between 7<sup>th</sup> Street and Husted Road, which encompasses the project frontage, as well as on the section of Husted Road within City Limits, as identified in the City's General Plan.

#### **Transit Facilities**

Transit service in the City of Williams and throughout Colusa County is provided by the Colusa County Transit Agency (CCTA). CCTA is a dial-a-ride system with fixed time routes to eight cities and communities within Colusa County: Colusa, Williams, Arbuckle, Maxwell, Princeton, Grimes, Sites, and Stonyford. Six buses operate on multiple routes from Monday through Sunday. Reservations are required to use the service. Out-of-county medical transportation is also provided on an on-call basis. There is an existing transit stop on Marguerite Street just south of E Street, which is within walking distance of the project site. The transit stop is equipped with a bench and overhead shelter.



### **Intersection Level of Service Methodologies**

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2018. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The Levels of Service for the intersections with side street stop controls, or those which are unsignalized and have one approach stop controlled, were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the HCM. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection.

The study intersections with stop signs on all approaches were analyzed using the "All-Way Stop-Controlled" Intersection methodology from the HCM. This methodology evaluates delay for each approach based on turning movements, opposing and conflicting traffic volumes, and the number of lanes. Average vehicle delay is computed for the intersection as a whole and is then related to a Level of Service.

Three of the study intersections are planned to be controlled by a traffic signal, as identified in the City's General Plan, so were evaluated using the signalized methodology from the HCM under Future Conditions. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated or not, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology. For purposes of this study, delays were calculated using optimized signal timing.

The ranges of delay associated with the various levels of service are indicated in Table 2.



Table	e 2 – Intersection Level of Service C	riteria	
LOS	Two-Way Stop-Controlled	All-Way Stop-Controlled	Signalized
A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
В	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
С	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach and wait for vehicle to clear from one or more approaches prior to entering the intersection.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.	Delay of more than 50 seconds. Drivers enter long queues on all approaches.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Reference: Highway Capacity Manual, 6th Edition, Transportation Research Board, 2018

### **Traffic Operation Standards**

#### **City of Williams**

As stated in Policy 8.p of the *City of Williams 2010 General Plan*, the City strives to maintain LOS D or better operation for all roadways and intersections, except within the Downtown area where LOS E is considered acceptable. Exceptions to the LOS standards may be considered by the City Council where a lower LOS would result in clear public benefit. Such circumstances include, but are not limited to, if improvements necessary to achieve the LOS standard result in an impact to a unique historic resource or a highly sensitive environmental area; require infeasible right-of-way acquisition; some other unusual physical constraint exists; or if there are overriding economic or social circumstances.

As clarified in the *City of Williams General Plan Update – Final Environmental Impact Report* (EIR), the City's LOS standard is applied to the overall operation of all-way stop-controlled and signalized intersections and to the



worst-case movement on the stop-controlled approach(es) at two-way stop-controlled intersections. A project would have an adverse effect on the surrounding transportation system if it would cause any study intersection to exceed the acceptable threshold for the facility.

#### Caltrans

Caltrans does not have a standard of significance relative to operation as this is no longer a CEQA issue. The new *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG), published in May 2020, replaced the *Guide for the Preparation of Traffic Impact Studies*, 2002. As indicated in the TISG, the Department is transitioning away from requesting LOS or other vehicle operations analyses of land use projects and will instead focus on Vehicle Miles Traveled (VMT). The City's standard of LOS D for the worst-case movement was therefore applied to the intersections of E Street with the I-5 North and South Ramps since Caltrans no longer has a standard of significance for traffic operations.

### **Existing Conditions**

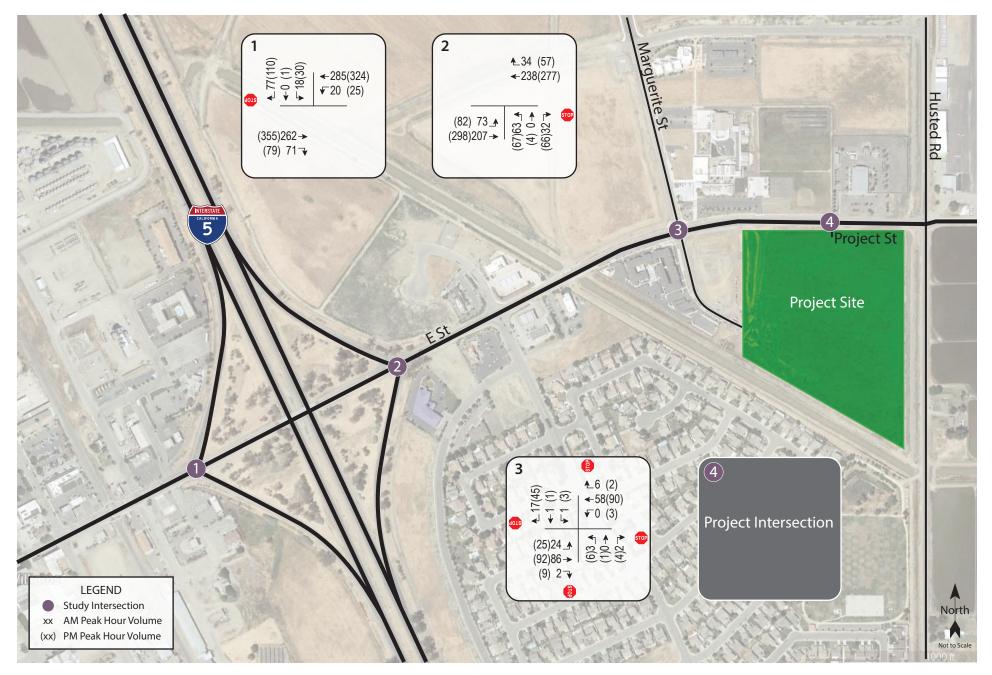
The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the weekday a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes. Volume data was collected in April 2021 during a typical weekday. It should be noted that although the COVID-19 public health pandemic was ongoing in the state of California, there were no stay-at-home orders active in Colusa County when the counts were collected and City staff indicated that they believed that traffic volumes in the study area were at or near pre-pandemic levels. Peak hour factors (PHFs) were calculated based on the counts obtained and used in the analysis.

Under Existing Conditions, all three study intersections operate acceptably based on the City standard applied. The existing traffic volumes are shown in Figure 2. A summary of the intersection Level of Service calculations is contained in Table 3 and copies of the Level of Service calculations for all scenarios are provided in Appendix B.

Stı	udy Intersection	AM F	Peak	PM Peak		
	Worst-Case Movement for Approach	Delay	LOS	Delay	LOS	
1.	E St/I-5 South Ramps	1.7	А	2.2	А	
	Southbound (I-5 South off-ramp) Left Turn	15.4	С	19.4	С	
2.	E St/I-5 North Ramps	3.1	А	3.6	А	
	Northbound (I-5 North off-ramp) Left Turn	17.2	С	21.3	С	
3.	E St/Marguerite St	8.0	А	8.3	А	

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movements on minor approaches to two-way stop-controlled intersections are indicated in *italics* 





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Traffic Impact Study for the Valley Ranch 3 Residential Subdivision Figure 2 – Existing Traffic Volumes



### **Baseline Conditions**

Baseline operating conditions were assessed to determine conditions that could be expected in the next two to five years upon completion of pending projects in the study area added to the Existing volumes. As directed by staff, traffic from the pending Valley Ranch 4 Commercial Development was included in the evaluation of Baseline Conditions. This project includes development of 12 commercial lots that would be accessed from an extension of Vann Street on the north side of E Street and is envisioned to include 169,030 square feet of various commercial and retail uses. As documented in the *Transportation Impact Study for the Valley Ranch 4 Commercial Development*, W-Trans, 2021, the project is expected to generate an average of 11,142 new trips on local streets per day most of which would be diverted from I-5, including 1,052 trips during the a.m. peak hour and 724 trips during the p.m. peak hour.

Upon adding trips from the commercial development to Existing volumes, the E Street/Marguerite Street intersection is expected to continue operating at acceptable service levels. The southbound approach at E Street/I-5 South Ramps and northbound approach at E Street/I-5 North Ramps would experience increased delays and deteriorate to LOS F operation during both peak hours. The minor street delays at E Street/I-5 South Ramps would exceed the theoretical upper limit of the HCM methodology. These results are summarized in Table 4 and Baseline volumes are shown in Figure 3.

Stu	ıdy Intersection	AM F	Peak	PM Peak		
	Worst-case Movement for Approach	Delay	LOS	Delay	LOS	
1.	E St/I-5 South Ramps	**	F	98.7	F	
	Southbound (I-5 South off-ramp) Left Turn	**	F	**	F	
	With Traffic Signal	12.3	В	11.2	В	
2.	E St/I-5 North Ramps	7.5	А	7.3	А	
	Northbound (I-5 North off-ramp) Left Turn	55.4	F	53.8	F	
	With Traffic Signal	13.1	В	10.4	В	
3.	E St/Marguerite St	8.5	А	8.7	А	

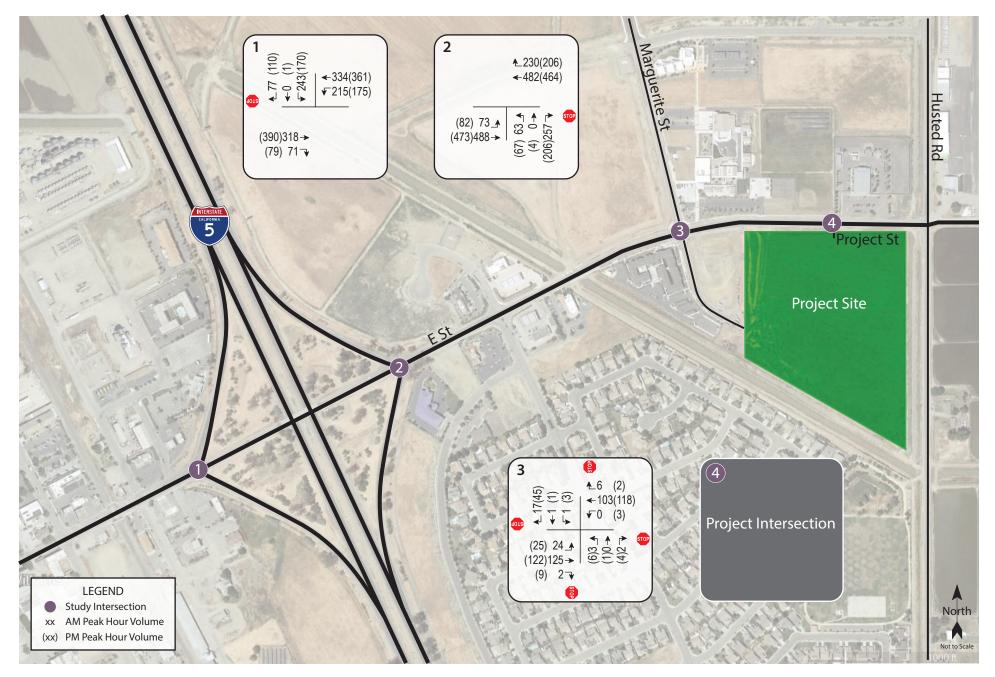
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movements on minor approaches to two-way stop-controlled intersections are indicated in *italics;* \*\* = delay greater than 120 seconds; **Bold** text = deficient operation; **Shaded cells** = conditions with planned improvements per the General Plan

With the planned signalization of the I-5 North and South Ramps, as further discussed for Future Conditions, the intersections would operate acceptably.

### Future Conditions (Without Project)

Future a.m. and p.m. peak hour volume projections were taken from the General Plan Buildout analysis contained in the *City of Williams General Plan Update – Final Environmental Impact Report* (EIR); this scenario represents cumulative traffic conditions that would be expected upon buildout of the land uses identified in the General Plan. Because the proposed project is consistent with the General Plan zoning for the project site, in order to avoid double counting project volumes, trips from the proposed project were subtracted from the anticipated buildout volumes in order to determine volumes and resulting operating conditions that would be expected without development of the proposed project. As identified in the General Plan EIR analysis, the following improvements would be needed to support the anticipated buildout volumes:





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Traffic Impact Study for the Valley Ranch 3 Residential Subdivision Figure 3 – Baseline Traffic Volumes



#### E Street/I-5 South Ramps

- Signalize the intersection
- Widen E Street to provide two lanes in each direction plus a westbound left-turn lane

#### E Street/I-5 North Ramps

- Signalize the intersection
- Widen E Street to provide two lanes in each direction pus an eastbound left-turn lane

#### E Street/Marguerite Street

- Signalize the intersection
- Northbound Approach: One left and one shared through-right lane
- Southbound Approach: One left and one shared through-right lane
- Eastbound Approach: One left turn lane, one through lane, and one shared through-right lane
- Westbound Approach: One left turn lane, one through lane, and one shared through-right lane

With these planned improvements, all three study intersections would be expected to operate acceptably at LOS B during both peak hours. Future volumes are shown in Figure 4 and operating conditions with the planned intersection improvements are summarized in Table 5.

Table 5 – Future Peak Hour Intersection Levels of Service									
Study	Intersection	AM F	Peak	PM F	Peak				
_		Delay	LOS	Delay	LOS				
1. E S	t/I-5 South Ramps	15.6	В	15.3	В				
2. E S	t/I-5 North Ramps	13.9	В	10.2	В				
3. E S	t/Marguerite St	15.1	В	15.6	В				

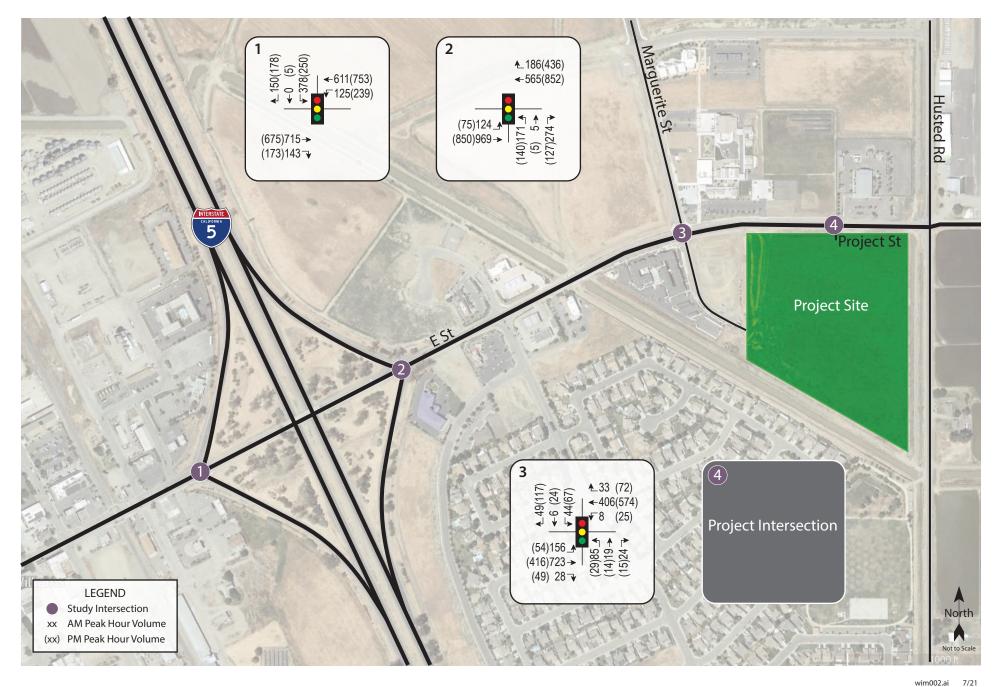
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

#### **Roundabout Consideration**

It should be noted that while the City's General Plan has identified traffic signals for the intersections of E Street with the I-5 North and South Ramps, the General Plan was completed prior to the implementation of Caltrans' Traffic Operations Policy Directive 13-02, Intersection Control Evaluation (ICE) in 2013. This policy mandates that before controls can be changed for an intersection located on a State facility, an ICE must be performed to explore and evaluate various controls types, such as modern roundabouts, in additional to traffic signals. Therefore, before traffic signals could be installed at the ramp terminals, an ICE would need to be prepared.

City staff has also indicated interest in using a modern roundabout at the E Street/Marguerite Street intersection rather than a traffic signal. Single-lane modern roundabouts can outperform traffic signals in terms of the average delay per vehicle when installed at locations with a daily volume entering of up to about 20,000 vehicles and also provide the added benefit of reducing vehicle speeds and greenhouse gas emissions and improving safety. Drawbacks to roundabouts include being generally much more expensive to construct than a traffic signal and occupying more physical space, typically requiring some amount of right-of-way acquisition in urban settings. However, the cost differential between roundabouts and traffic signals does begin to narrow once construction is finished as traffic signals cost more money to maintain annually when considering the costs of materials, electricity, and labor for maintenance technicians.





Traffic Impact Study for the Valley Ranch 3 Residential Subdivision **Figure 4 – Future Traffic Volumes** 





There are no existing traffic signals in the City of Williams so there are no signal technicians on staff or budget for signal maintenance; therefore, staff would prefer to implement roundabouts wherever feasible. Based on a review of the cumulative volumes anticipated at each of the intersections slated for traffic signals, it is likely that roundabouts would also be able to provide acceptable traffic operations, though an ICE would need to be prepared for the I-5 Ramp intersections and a feasibility study should be prepared for E Street/Marguerite Street. To be consistent with the City's General Plan and the development impact fee program, traffic signals were assumed to be the future control types at the study intersections for the purposes of this analysis, though it is recommended that modern roundabouts also be considered before initiating the design of traffic signals.

### **Project Description**

The proposed project includes the development of 103 market-rate single-family residences on a vacant approximately 17.3-acre parcel east of I-5 and south of E Street in the City of Williams. The project site would be accessed from an extension of Marguerite Street to the southeast from its current terminus at Alta Lane and a new connection to E Street approximately 350 feet west of Husted Road. The proposed project site plan is shown in Figure 5.

### **Trip Generation**

The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 10<sup>th</sup> Edition, 2017 for "Single-Family Detached Housing" (Land Use #210). Based on application of these rates, the project would be expected to generate an average of 963 trips per day, including 76 trips during the weekday a.m. peak hour and 102 trips during the weekday p.m. peak hour. These results are summarized in Table 6.

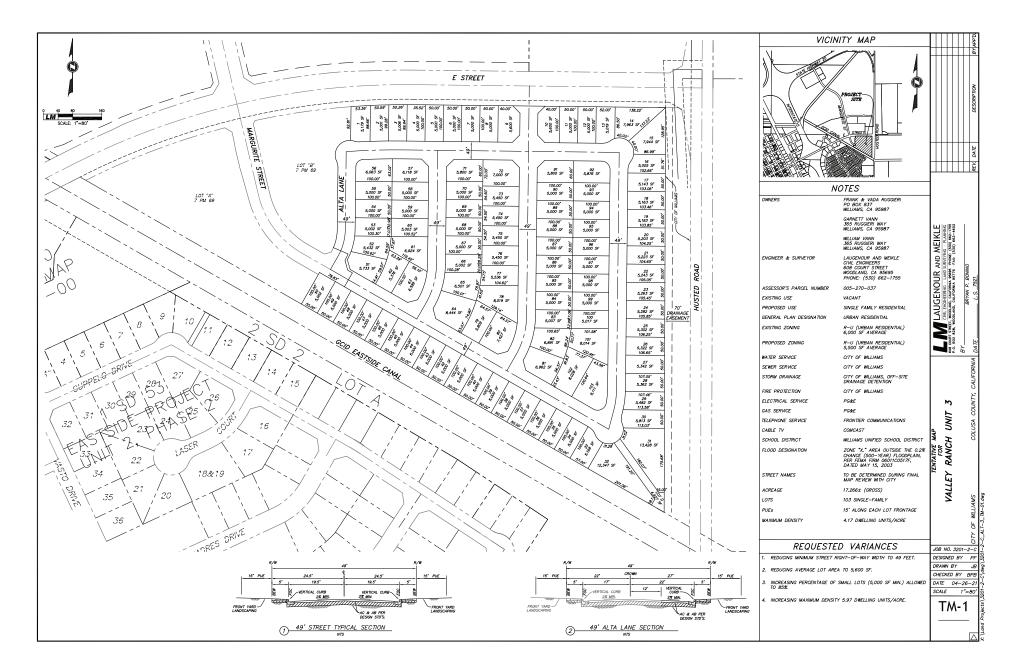
Table 6 – Trip Generation Summary											
Land Use	Daily			AM Peak Hour			PM Peak Hour				
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Single-Family Housing	103 du	9.44	972	0.74	76	19	57	0.99	102	64	38

Note: du = dwelling unit

### **Trip Distribution**

The pattern used to allocate new project trips to the surrounding street network was determined based on familiarity with travel patterns in the area and likely origins and destinations for residents of the project. It is likely that many residents would work in Williams, Willows, Colusa, Yuba City, Woodland, and the surrounding agriculture lands. The applied trip distribution assumptions are shown in Table 7. Based on the proposed restriction of the access point on E Street to right turns only, all trips to the west and from the east were assumed to occur at the Marguerite Street intersection.





Source: Laugenour and Meikle 11/8

Traffic Impact Study for the Valley Ranch 3 Residential Subdivision Figure 5 – Site Plan wim002.ai 7/21



Table 7 – Trip Distribution Assumptions						
Route	Percent					
To/from I-5 North of E St	15					
To/from I-5 South of E St	40					
To/from E St West of I-5	25					
To/from E St East of Project	20					
TOTAL	100%					

### **Intersection Operation**

#### **Existing plus Project Conditions**

Upon the addition of project-related traffic to the Existing volumes, the study intersections are expected to continue operating acceptably at the same service levels during both peak hours as under Existing Conditions. These results are summarized in Table 8 and Project traffic volumes are shown in Figure 6.

Ta	Table 8 – Existing and Existing plus Project Peak Hour Intersection Levels of Service									
Stu	udy Intersection	E	kisting (	Conditior	IS	Existing plus Project				
	Worst-case Movement for	AM F	Peak	PM Peak		AM Peak		PM Peak		
	Approach	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1.	E St/I-5 South Ramps	1.7	А	2.2	А	2.0	А	2.5	А	
	SB (I-5 off-ramp) Left Turn	15.4	С	19.4	С	16.8	С	21.0	С	
2.	E St/I-5 North Ramps	3.1	А	3.6	А	3.1	А	3.8	А	
	NB (I-5 off-ramp) Left Turn	17.2	С	21.3	С	18.4	С	22.8	С	
3.	E St/Marguerite St	8.0	А	8.3	А	8.4	А	8.6	А	
4.	E St/Project St	-	-	-	-	0.3	А	0.2	А	
	NB (Project St) Right Turn	-	-	-	-	8.8	Α	8.9	Α	

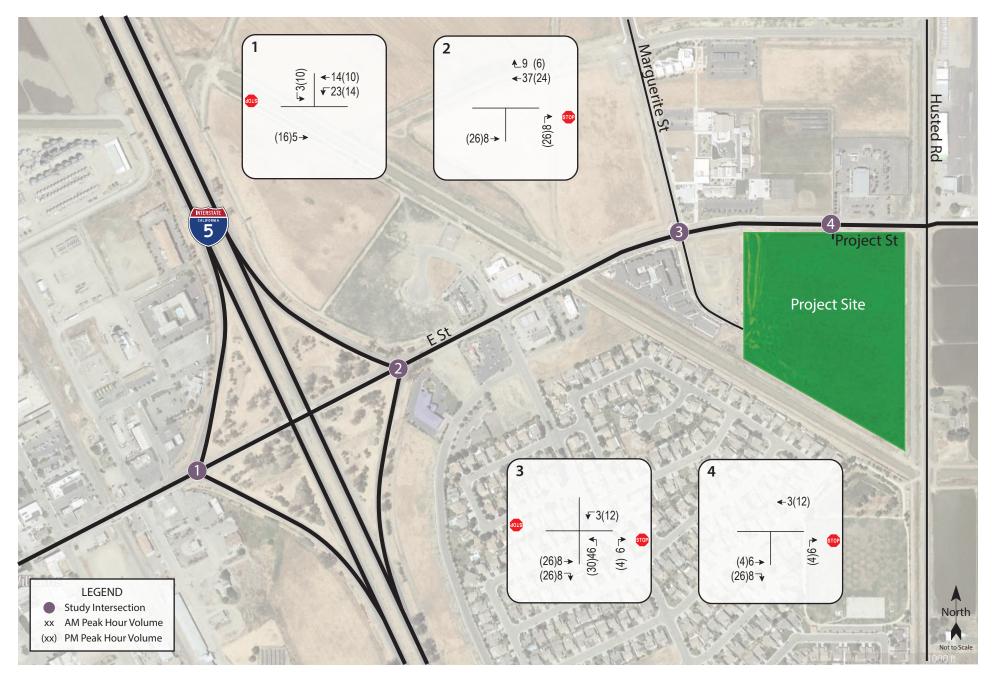
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movements on minor approaches to two-way stop-controlled intersections are indicated in *italics*; NB = Northbound; SB = Southbound

**Finding** – Upon the addition of project-generated trips the Existing volumes, the study intersections are expected to continue operating acceptably at the same Levels of Service as without project trips; the project's effect on operation of the surrounding roadway network is therefore considered acceptable.

#### **Baseline plus Project Conditions**

With project-related traffic added to Baseline volumes, the study intersections are expected to continue operating at the same Levels of Service as without project traffic; both of the I-5 intersections would continue to operate unacceptably, and the Marguerite Street intersection would continue to operate acceptably. With the planned improvements outlined in the General Plan, including signalization and geometric modifications, both of the I-5 intersections would operate acceptably at LOS B during both peak hours. Because these intersections would operate acceptably with project traffic but without traffic from the pending commercial development, as





Traffic Impact Study for the Valley Ranch 3 Residential Subdivision Figure 6 – Project Traffic Volumes wim002.ai 7/21



shown under Existing plus Project Conditions, the project's effect on operation of the surrounding roadway network would be considered acceptable. The need for improvements at the I-5 intersections is due to the addition of traffic from the commercial development, not the proposed residential subdivision. These results are summarized in Table 9.

Tal	Table 9 – Baseline and Baseline plus Project Peak Hour Intersection Levels of Service								
Study Intersection		<b>Baseline Conditions</b>				Baseline plus Project			
	Worse-case Movement for Approach	AM Peak		PM Peak		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1.	E St/I-5 South Ramps	**	F	98.7	F	**	F	**	F
	Southbound (I-5 off-ramp) Left Turn	**	F	**	F	**	F	**	F
	With Traffic Signal	12.3	В	11.2	В	12.5	В	11.5	В
2.	E St/I-5 North Ramps	7.5	А	7.3	А	8.9	А	9.0	А
	Northbound (I-5 off-ramp) Left Turn	55.4	F	53.8	F	65.9	F	63.8	F
	With Traffic Signal	13.1	В	10.4	В	14.0	В	11.1	В
3.	E St/Marguerite St	8.5	А	8.7	А	8.9	А	9.0	А
4.	E St/Project St	-	-	-	-	0.2	Α	0.1	А
	Northbound (Project St) Right Turn	-	-	-	-	9.0	Α	9.0	Α

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movements on minor approaches to two-way stop-controlled intersections are indicated in *italics;* \*\* = delay greater than 120 seconds; **Bold** text = deficient operation; Shaded cells = conditions with General Plan improvements

**Finding** – The study intersections are expected to continue operating at the same Levels of Service upon the addition of project-generated traffic to Baseline volumes as without it. As identified in the General Plan, both of the I-5 intersections with E Street would need to be signalized, though because the intersections would operate acceptably without traffic from the pending Valley Ranch Unit 4 commercial project, the proposed project's effect on operation of the surrounding roadway network would be considered acceptable.

### Future plus Project (Buildout) Conditions

Under volumes anticipated upon buildout of the City's General Plan which includes project traffic volumes, and with the planned intersection improvements including signalization, the study intersections are expected to operate acceptably. The Future plus Project operating conditions are summarized in Table 10.



Study Intersection		Futu	Future (Without Project)				Future plus Project (Buildout)			
	Worst-case Movement for Approach	AM Peak		PM Peak		AM Peak		PM Peak		
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1.	E St/I-5 South Ramps	15.6	В	15.3	В	16.1	В	16.5	В	
2.	E St/I-5 North Ramps	13.9	В	10.2	В	14.2	В	11.3	В	
3.	E St/Marguerite St	15.1	В	15.6	В	15.1	В	15.6	В	
4.	E St/Project St	-	-	-	-	0.1	А	0.1	А	
	Northbound (Project St) Right Turn	-	-	-	-	14.5	В	11.5	В	

Table 10 – Future and Future plus Project Peak Hour Intersection Levels of Service

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for worst-case movement on minor approaches to two-way stop-controlled intersections are indicated in *italics* 

**Finding** – Under the anticipated buildout volumes, and with the planned circulation improvements identified in the General Plan, the study intersections are expected to operate acceptably and the project's long-term effect on operation of the surrounding roadway network would be considered acceptable.

**Recommendation** – To offset the cumulative effects of project traffic and help fund the planned circulation improvements identified in the General Plan, the applicant should pay the required development impact fees. Before traffic signals can be installed at the I-5 ramp terminals, an ICE needs to be performed, as required by Caltrans, to confirm the appropriate control type. Additionally, a feasibility study should be performed if staff wants to pursue a roundabout at E Street/Marguerite Street.



## **Alternative Modes**

### **Pedestrian Facilities**

As shown on the site plan, sidewalks would be provided on all project streets within the site and along the project frontage on E Street, which would effectively link the project site to the surrounding pedestrian network. Residents would be able to walk between the site and transit access, the surrounding commercial uses to the west, the Downtown area, the nearby Colusa County Office of Education, and other residential neighborhoods. To facilitate access along the project frontage, it is recommended that a marked crosswalk be provided on the southern leg of the new intersection created by the project street at E Street. Additionally, all new curb ramps should comply with current Americans with Disability Act (ADA) design standards.

Finding – As proposed, access for pedestrians would be adequate.

**Recommendation** – The E Street/Project Street intersection should include a crosswalk with ADA-compliant curb ramps on the southern leg. All new curb ramps within the subdivision should comply with ADA standards.

### **Bicycle Facilities**

Existing and planned bicycle facilities together with shared use of minor streets provide adequate access for bicyclists. The project frontages on E Street and Husted Road should be designed to accommodate the planned future installation of Class II bike lanes on these roadways and adequate right-of-way should be dedicated to the City for these improvements, if not already available. No dedicated bicycle parking would need to be provided for the project since each residence would have a private garage.

**Finding** – Bicycle facilities serving the project site are adequate and would be further improved upon completion of planned bicycle improvements in the vicinity.

**Recommendation** – The project frontages on E Street and Husted Road should be designed to accommodate the planned future installation of Class II bike lanes and adequate right-of-way should be dedicated to the City for these improvements, if not already available.

### Transit

Existing transit facilities are adequate considering the existing transit stop near the Marguerite Street/E Street intersection is within walking distance of the project site, though the project is not anticipated to generate many transit trips given the vehicle-centric travel patterns of Colusa County.

Finding – Access to transit is adequate.



### **Background and Threshold of Significance**

Senate Bill (SB) 743 established a change in the metric to be applied for determining transportation impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service analysis, the increase in Vehicle Miles Traveled (VMT) as a result of a project is now the basis for determining California Environmental Quality Act (CEQA) impacts with respect to transportation and traffic. As of the date of this analysis, the City of Williams has not yet established thresholds of significance related to VMT nor is there a regional travel demand model that contains VMT information. As a result, the project-related VMT impacts were assessed qualitatively based on guidance provided by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018. Under this guidance, residential developments that have a VMT per capita that is 15 percent or more below the existing countywide residential VMT per capita would have a less-than-significant transportation impact.

### **Project Assessment**

The project site is within a walkable distance to surrounding commercial, residential, retail, and school land uses, being less than one-quarter of a mile from fast food restaurants and grocery stores and approximately one-half mile from the Downtown core. Further, there is a bus stop near the intersection of E Street/ Marguerite Street which is within one-quarter of a mile of the project site and there are plans to construct Class II bike lanes on E Street and Husted Road, which would link the project site to the surrounding bicycle network. Given the general rural nature of the land use pattern throughout Colusa County, it is reasonable to expect the project to have a VMT that is below the countywide average per capita based on the proximity of the project site to other land uses and employment opportunities, access for bicyclists, and connectivity to public transit.

To minimize the potential for the project to have an impact on VMT, transportation demand management (TDM) measures can be implemented to further reduce the need for vehicle travel by residents of the proposed project. The VMT associated with a development project is influenced by numerous factors, including proximity to other land uses. The publication *Quantifying Greenhouse Gas Mitigation Measures*, California Air Pollution Control Officers Association (CAPCOA), 2010 includes a review of TDM strategies that can be expected to reduce VMT in comparison with typical development practices in the area. The TDM measures described below are potential measures that would be expected to reduce VMT and are recommended for the proposed project.

### **Transportation Demand Management (TDM) Measures**

The following section describes the recommended resident TDM program. It should be noted that although the great majority of VMT reduction can be achieved by focusing on residents alone, some TDM measures can be used by guests or visitors and can contribute in reducing impacts.

#### High Speed Internet to Support Remote Work

There are various terms used to describe non-standard working hours, but they all involve decreasing the number of vehicle trips to and from work. Telework (i.e. working from home) and compressed schedules (i.e. working more than eight hours each day and shortening the work week) are two of the most commonly employed. They are both effective at reducing vehicle trips to work and particularly so during peak commute hours, but it is uncertain whether they decrease the overall number of vehicle trips. In order to support telework opportunities for residents, it is recommended that the project provide infrastructure that supports high-speed internet access.



#### Homeowners' Association to Conduct Education, Outreach, and Marketing

#### Homeowners' Association

The establishment of a homeowners' association (HOA) would enable the project to include a program to provide information to encourage the use of alternative modes of transportation such as bicycling, walking, carpooling, remote work, and other strategies that would reduce vehicle trips. The HOA could setup a website where this information is posted and shared.

#### Welcome Packet for New Residents

New homeowners should be provided with a welcome packet containing relevant transportation information. The packet could include maps and information from Colusa County Transit Agency as well as points of interest in the vicinity that could be walked or biked to.

#### Monitor Performance

It is important to continually monitor the performance of a TDM program and adjust measures as necessary to ensure its success. The resident management organization should conduct mode split and vehicle miles traveled (VMT) surveys every other year to determine if adjustments are needed and to use as marketing material. Resident satisfaction surveys are also an effective way of ensuring a quality TDM program.

**Finding** – The proposed project site is located within an acceptable walking and biking distance of Downtown and other points of interest and would reasonably be expected to have a less-than-significant transportation impact on VMT with implementation of appropriate TDM measures.

**Recommendation** – The project should incorporate TDM measures identified in this report such as high-speed internet, a homeowner's association, and educational materials.



### **Site Access**

The project would be accessed from an extension of Marguerite Street to the southeast from its current terminus at Alta Lane and a new connection to E Street approximately 350 feet west of Husted Road. The connection to E Street would be restricted to right-turn movements only both entering and exiting, which means that outbound trips to the west and inbound trips from the east would have to occur at the Marguerite Street intersection. Residents would be expected to use the access point closest to their home for inbound trips from the west and outbound trips to the east. The new project streets are proposed to have a typical width of 34 feet with on-street parking and five-foot sidewalks on both sides. It is recommended that the new project street approach to E Street be stop-controlled; the other intersections within the site could be uncontrolled as is typical for intersections of neighborhood streets with low speeds and volumes.

**Recommendation** – The intersections within the project site should be uncontrolled as is typical for neighborhood streets, though the intersection that the new project street would form with E Street should be stop-controlled on the northbound minor street approach.

### **Sight Distance**

At unsignalized intersections a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time should be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed. Sight distances along E Street at the proposed location of the project street were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distance at intersections of public streets is based on corner sight distances, with approach travel speed used as the basis for determining the recommended sight distance. For the posted speed limit of 25 mph on E Street, the minimum corner sight distance needed is 275 feet. Based on a review of field conditions, sight lines extend more than 275 feet to both the west and east, which is adequate for the posted speed limit, though it should be noted that only sight distance looking west is applicable since left turns would be prohibited. Additionally, as E Street is straight and flat adjacent to the site, sight lines are adequate for a following driver to notice and react to a preceding motorist slowing to turn right into the project site. Any new signage installed as part of the project should be placed outside of the vision triangles, which are denoted graphically in Plate 1. The Intersection Sight Distance (ISD) length should be a minimum of 275 feet.

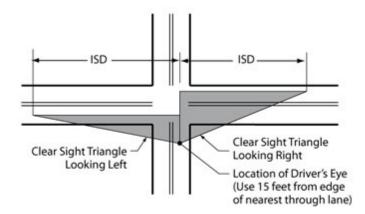


Plate 1 Vision Triangle Graphic



**Finding** – Sight lines on E Street at the project street are adequate to accommodate all turns into and out of the project site.

**Recommendation** – To maintain existing adequate sight lines, any new signage to be located near the intersection should be placed outside of the vision triangle of a driver waiting on the minor street.

#### **Emergency Access**

Emergency response vehicles would be able to access the site via either of the access points at the E Street/Marguerite Street intersection or the E Street/Project Street intersection so should one location be compromised in an emergency situation, responders could use the other location to access the property. All internal project streets are anticipated to be designed in accordance with City design standards; therefore, emergency access is expected to function acceptably.

**Finding** – Emergency access is expected to function acceptably.



## Parking

The project site plan is still preliminary and as such no parking information is provided so the number of parking spaces that would be required per City Code was calculated. Jurisdiction parking supply requirements are based on the City of Williams Zoning Ordinance 17.02.090; Required Parking and Loading for Residential Uses. The Code requires single-family detached housing to provide parking at a rate of two spaces per dwelling unit. Based on this rate, a total of 206 parking spaces would be required for the project. Each residence is expected to have a two-car garage, which would satisfy City requirements and additional parking would be available on the neighborhood streets.

**Recommendation** – A minimum of two parking spaces should be provided per residence in order to meet the City's parking requirements.



### Conclusions

- Two of the three study intersections have calculated collision rates that are lower than the statewide average. The remaining study intersection did not have any defined trend of collisions that would indicate a safety concern.
- The proposed project would be expected to generate an average of 963 trips per day, including 76 trips during the weekday a.m. peak hour and 102 trips during the weekday p.m. peak hour.
- Upon the addition of project-generated trips the Existing volumes, the study intersections are expected to continue operating acceptably at the same Levels of Service as without project trips and the project's effect on the surrounding roadway network is therefore considered acceptable.
- Under Baseline Conditions, which includes traffic from the pending Valley Ranch Unit 4 Commercial Development, the I-5 Ramp intersections would deteriorate to unacceptable service levels and the planned circulation improvements identified in the City's General Plan would be necessary to achieve acceptable operations. However, because the I-5 intersections would operate acceptably without traffic from the pending commercial project, the proposed project's effect on operation of the surrounding roadway network would be considered acceptable.
- Upon the addition of project-generated traffic to the anticipated Future volumes, and with the planned installation of traffic signals, the study intersections are expected to continue operating acceptably; therefore, the project's long-term effect on operation of the surrounding roadway network is considered acceptable.
- The project street intersection with E Street would operate acceptably during all evaluated scenarios with side-street stop controls.
- As shown on the site plan, sidewalks would be provided on all project streets within the site and along the project frontage on E Street, so pedestrian facilities would be adequate.
- Bicycle facilities serving the project site are adequate and would be further improved upon completion of planned bicycle improvements in the vicinity, including Class II bike lanes on E Street and Husted Road.
- The existing transit stop on Marguerite Street south of E Street is within walking distance of the project site and access for transit riders is therefore considered acceptable, though demand is expected to be minimal.
- The proposed project site is located within an acceptable walking and biking distance of Downtown and other points of interest and would reasonably be expected to have a less-than-significant transportation impact on VMT with implementation of the TDM measures identified in this report.
- Sight lines on E Street at the project street are adequate to accommodate right turns into and out of the project site.
- Emergency access is expected to function acceptably.



### Recommendations

- To offset the cumulative effects of project traffic and help fund the planned circulation improvements identified in the General Plan, the applicant should pay the required development impact fees.
- City staff has expressed interest in modern roundabouts as alternatives to the planned future installation of traffic signals at the study intersections to support buildout of the General Plan; therefore, it is recommended that Intersection Control Evaluations (ICEs) be performed for the I-5 ramp terminals and a feasibility study be prepared for E Street/Marguerite Street to explore the suitability of roundabouts at these locations.
- The project should incorporate TDM measures identified in this report such as high-speed internet, a homeowner's association, and educational materials.
- The intersections within the project site should be uncontrolled as is typical for neighborhood streets, though the intersection that the new project street would form with E Street should be stop-controlled on the northbound minor street approach.
- To maintain existing adequate sight lines, any new signage, or other structures to be located near the intersection should be placed outside of the vision triangle of a driver waiting on the minor street.
- The E Street/Project Street intersection should include a crosswalk with ADA-compliant curb ramps on the southern leg. All new curb ramps within the subdivision should comply with ADA standards.
- The project frontages on E Street and Husted Road should be designed to accommodate the planned future installation of Class II bike lanes on these roadways and adequate right-of-way should be dedicated to the City for these improvements, if not already available.
- A minimum of two parking spaces should be provided per residence in order to meet the City's parking requirements.



## **Study Participants and References**

### **Study Participants**

Principal in Charge	Dalene J. Whitlock, PE, PTOE
Associate Engineer	Cameron Nye, EIT
Graphics	Cameron Wong
Editing/Formatting	Cameron Wong, Hannah Yung-Boxdell
Quality Control	Dalene J. Whitlock, PE, PTOE

### References

2016 Collision Data on California State Highways, California Department of Transportation, 2018 Colusa County Transit Agency, https://www.countyofcolusa.org/181/Transit City of Williams General Plan Update – Final Environmental Impact Report, City of Williams, 2012 Highway Capacity Manual, 6<sup>th</sup> Edition, Transportation Research Board, 2018 Highway Design Manual, 6<sup>th</sup> Edition, California Department of Transportation, 2017 Quantifying Greenhouse Gas Mitigation Measures, California Air Pollution Control Officers Association (CAPCOA), 2010 Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol, 2014, 2016-2020 Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research,

2018

*Trip Generation Manual*, 10<sup>th</sup> Edition, Institute of Transportation Engineers, 2017 *Vehicle Miles Traveled-Focused Transportation Impact Study Guide*, California Department of Transportation, 2020 *Williams 2010 General Plan*, City of Williams, 2012

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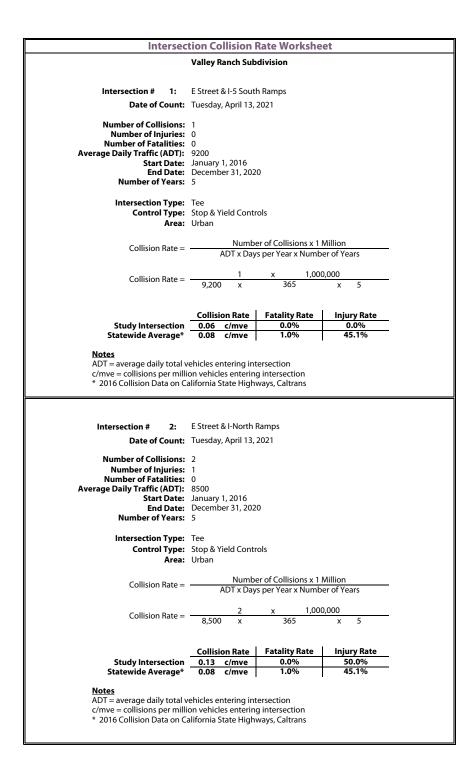
# Appendix A

**Collision Rate Calculations** 





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Val	ley Ranch Subdivi	sion	
Intersection # 3:	E Street & Margue	rite Street	
Date of Count:	Tuesday, April 13,	2021	
	0 0 2800 January 1, 2016 December 31, 202	0	
	Four-Legged Stop & Yield Contr Urban	ols	
Collision Rate =		er of Collisions x s per Year x Nurr	
Collision Rate =	0 2,800 x	x 1,0 365	00,000 x 5
Study Intersection	Collision Rate	Fatality Rate 0.0%	Injury Rate 0.0%
Statewide Average*		1.1%	43.8%
<b>Notes</b> ADT = average daily total v c/mve = collisions per milli * 2016 Collision Data on C	on vehicles enterin	g intersection	

# Appendix **B**

**Intersection Level of Service Calculations** 





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						e Repo uth Ran							
Control Type: Analysis Method: Analysis Period:	Two-way stop HCM 6th Edition 15 minutes		ection 1:	EStree	91/1-5 50		Delay	(sec / v Of Serv Capac	/ice:		15.4 C 0.052		
Intersection Setup	e				1-5 \$	South Ra	mps		E Street			E Street	
Approa	ach	Northbound				outhbour	· ·		astboun		Westbound		
Lane Confi			oranboar			+			F			71	
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Rig
Lane Wid	ith [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes	in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Le	ngth [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.
Speed [	mph]		30.00			45.00			25.00			30.00	
Grade	[%]		0.00			0.00			0.00			0.00	
Crossv	valk		Yes			No			No			No	
Volumes													
Nam	e				I-5 \$	South Ra	mps		E Street			E Street	
Base Volume I	nput [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Base Volume Adju	ustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Heavy Vehicles P	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
In-Process Vol	ume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated	Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trip	os [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trip	os [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustme	ent Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volum	ie [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Vo	lume [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Peak Hour	Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.00
Other Adjustm	nent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Total 15-Minute V	/olume [veh/h]	0	0	0	5	0	21	0	70	19	5	77	0
Total Analysis Vo	olume (veh/h)	0	0	0	19	0	83	0	282	76	22	306	0
Total Analysis V	sidino [ronni]												

Version 7.00-05

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		Yes		
Storage Area [veh]	0	2	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.05	0.00	0.11	0.00	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.40	15.78	10.41	0.00	0.00	0.00	8.07	0.00	0.00
Movement LOS				С	С	В		A	A	А	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.38	0.38	0.38	0.00	0.00	0.00	0.06	0.00	0.00
95th-Percentile Queue Length [ft/In]	0.00	0.00	0.00	9.53	9.53	9.53	0.00	0.00	0.00	1.41	0.00	0.00
d_A, Approach Delay [s/veh]		0.00			11.34			0.00		0.54		
Approach LOS		A			В			А				
d_l, Intersection Delay [s/veh]	1.69											
Intersection LOS						(	2					

Valley Ranch Residential Subdivision TIS AM Existing Ww-Trans

W-Trans

1

Valley Ranch Residential Subdivision TIS AM Existing



Control Type: Analysis Method:	Two-way stop		ection 2		Of Servic									
Analysis Method:	Two-way stop				eu1-3 NO	nui Raii	nps							
								/ (sec / v			17.2			
Analysis Period:	HCM 6th Edition 15 minutes					,	Leve Volume t	I Of Serv			C 0.203			
Analysis Feriou.	15 minutes						volume t	o Capac	aty (v/c).		0.	205		
Intersection Setup								I						
Name			North Ra						E Street			E Street		
Approach		N	orthbour	nd	S	outhbour	nd	E	astboun	d	V	Vestbour	d	
Lane Configura	tion		+						٦İ			F		
Turning Moven	nent	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ	
Lane Width [	ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	
No. of Lanes in F	locket	0	0	0	0	0	0	1	0	0	0	0	0	
Pocket Length	[ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.0	
Speed [mph	]		45.00			25.00			25.00			30.00		
Grade [%]			0.00			0.00			0.00			0.00		
Crosswalk			No			No			No			No		
Volumes														
Name		I-5 I	North Ra	mps					E Street			E Street		
Base Volume Input	[veh/h]	63	0	32	0	0	0	73	207	0	0	238	34	
Base Volume Adjustm	ent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	
Heavy Vehicles Perce	entage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0	
Growth Fact	or	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	
In-Process Volume	[veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trip	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Diverted Trips [v	eh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [v	eh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment	/olume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [v	eh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volume	-	63	0	32	0	0	0	73	207	0	0	238	34	
Peak Hour Fa		0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.90	
Other Adjustment		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	
Total 15-Minute Volu		18	0	9	0	0	0	20	58	0	0	66	9	
Total Analysis Volum		70	0	36	0	0	0	81	230	0	0	264	38	
Pedestrian Volume		10	0	00	0	0	0	01	0	0	0	0	00	

## Version 7.00-05

#### Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes			
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

Intersection LOS						(	c					
d_l, Intersection Delay [s/veh]		3.14										
Approach LOS		С		A				А				
d_A, Approach Delay [s/veh]		15.17			0.00			2.10		0.00		
95th-Percentile Queue Length [ft/ln]	18.88	18.88	18.88	0.00	0.00	0.00	5.15	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [veh/ln]	0.76	0.76	0.76	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00
Movement LOS	С	C C B					A	A			A	A
d_M, Delay for Movement [s/veh]	17.22	17.26	11.20	0.00	0.00	0.00	8.06	0.00	0.00	0.00	0.00	0.00
V/C, Movement V/C Ratio	0.20	0.00	0.04	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00

Valley Ranch Residential Subdivision TIS AM Existing

sion 7.00-05	Inter	section	Level O	f Servic	e Repo	rt						
			E Stree			reet						
Control Type: All-way stop Analysis Method: HCM 6th Edition							(sec / v Of Serv				3.0 A	
Analysis Method: HCM 6th Edition Analysis Period: 15 minutes	1				`	Leve olume t					A 132	
· · · · · · · · · · · · · · · · · · ·												
ntersection Setup	Mar							E 01			E 01	
Name	-	guerite S lorthbour						E Street			E Street	
Approach	I N		a	Southbound			E	astboun	a	v	restbour	a
Lane Configuration		+			ካኮ			<u> </u>			<u> </u>	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.0
Speed [mph]		25.00			25.00			25.00			25.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	
/olumes												
Name		guerite S						E Street			E Street	
Base Volume Input [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0		24		2			
Total Hourly Volume [veh/h] Peak Hour Factor	3 0.8600	0.8600	2	1 0.8600	1 0.8600	17 0.8600	24 0.8600	86 0.8600	2	0	58 0.8600	6 0.860
	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Other Adjustment Factor Total 15-Minute Volume [veh/h]	1.0000	0	1.0000	0	0	1.0000	7	25	1.0000	0	1.0000	1.000
Total Analysis Volume [veh/h]	3	0	2	1	1	20	28	100	2	0	67	7
Pedestrian Volume [ped/h]	3	2	2	1	2	20	20	3	2	0	0	1
lley Ranch Residential Subdivision TIS			<b>((</b> w-т									W-Tr

Version 7.00-05

Lanes

Lunes									
Capacity per Entry Lane [veh/h]	721	647	817	685	757	889	741	741	866
Degree of Utilization, x	0.01	0.00	0.03	0.04	0.13	0.00	0.00	0.09	0.01
Movement, Approach, & Intersection Results									
95th-Percentile Queue Length [veh]	0.02	0.00	0.08	0.13	0.45	0.01	0.00	0.30	0.02
95th-Percentile Queue Length [ft]	0.52	0.12	1.98	3.19	11.34	0.17	0.00	7.43	0.61
Approach Delay [s/veh]	8.03 7.27				8.15				
Approach LOS	A A				А				
Intersection Delay [s/veh]			7.	99					
Intersection LOS			,	4					

Valley Ranch Residential Subdivision TIS AM Existing



Generated with	PTV	VISTRO
Version 7.00-05		

						e Repo uth Ran							
Control Type: Analysis Method: Analysis Period:	Two-way stop HCM 6th Edition 15 minutes		ection 1	EStree	Delay (sec / veh): Level Of Service: Volume to Capacity (v/c):						19.4 C 0.004		
Intersection Setup	9				1.5	South Ra	mpe		E Street			E Street	
Appro	-	N	orthbour	d		outhbour	· ·		astboun			Vestbour	
Lane Confi			ortinbour		3	+			F	u	V	1	
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Rig
Lane Wid	ith [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes	in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Lei	ngth [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.
Speed [	mph]		30.00			45.00			25.00			30.00	
Grade	[%]		0.00			0.00			0.00			0.00	
Crossv	valk		Yes			No			No			No	
Volumes													
Nam	e				I-5 \$	South Ra	mps		E Street			E Street	
Base Volume I	nput [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Base Volume Adju	ustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Heavy Vehicles P	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
In-Process Vol	ume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated	Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trip	os [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trip	os [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustme	ent Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volum	ie [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Vo	lume [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Peak Hour	Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.00
Other Adjustm	nent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Total 15-Minute V	/olume [veh/h]	0	0	0	8	0	31	0	100	22	7	91	0
Total Analysis Vo	olume [veh/h]	0	0	0	34	1	124	0	399	89	28	364	0

Version 7.00-05

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		Yes		
Storage Area [veh]	0	2	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.13	0.00	0.18	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	19.38	19.41	11.20	0.00	0.00	0.00	8.45	0.00	0.00
Movement LOS				С	С	В		A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.66	0.66	0.66	0.00	0.00	0.00	0.08	0.00	0.00
95th-Percentile Queue Length [ft/In]	0.00	0.00	0.00	16.58	16.58	16.58	0.00	0.00	0.00	2.01	0.00	0.00
d_A, Approach Delay [s/veh]		0.00			13.00			0.00			0.60	
Approach LOS		A			В			А			А	
d_I, Intersection Delay [s/veh]						2.5	22					
Intersection LOS	С											

Valley Ranch Residential Subdivision TIS PM Existing Ww-Trans

W-Trans

1

Valley Ranch Residential Subdivision TIS PM Existing



Control Type: Analysis Method:		Inter	section	Level O	f Servic	e Repo	rt							
	_	Interse	ection 2	: E Stree	et/I-5 No	rth Ran								
	Two-way stop HCM 6th Edition							/ (sec / \ I Of Sen						
Analysis Period:	15 minutes					`	Volume t					.274		
ntersection Setup		1-5.1	North Ra	mns					E Street			E Street		
Approach			lorthbour		9	outhbour	nd	F	Eastboun		v	Vestbour		
			. 1 .			outribour			+	u		1.	u	
Lane Configuration	1		T									Γ		
Turning Movemen	t	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Width [ft]		12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Pock	æt	0	0	0	0	0	0	1	0	0	0	0	0	
Pocket Length [ft]		100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00	
Speed [mph]			45.00			25.00			25.00			30.00		
Grade [%]			0.00			0.00			0.00			0.00		
Crosswalk			No			No			No			No		
folumes														
Name			North Ra	· ·					E Street			E Street		
Base Volume Input [ve		67	4	66	0	0	0	82	298	0	0	277	57	
Base Volume Adjustment		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000	1.0000	
Heavy Vehicles Percenta	ige [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Growth Factor		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
In-Process Volume [ve	-	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trips [v	-	0	0	0	0	0	0	0	0	0	0	0	0	
Diverted Trips [veh/		0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/	-	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volu		0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/		0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volume [v Peak Hour Factor	en/nj	67 0.9200	4	66 0.9200	0	0	0	82 0.9200	298 0.9200	0	0	277 0.9200	57 0.9200	
Other Adjustment Fac		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Total 15-Minute Volume		18	1	18	0	0	0	22	81	0	0	75	15	
Total Analysis Volume [	-	73	4	72	0	0	0	89	324	0	0	301	62	
Pedestrian Volume [pe	a/nj		0			0			0		<u> </u>	0		

## Version 7.00-05

Intersecti	on S	ettin	gs
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Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes			
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

Intersection LOS	С											
d_l, Intersection Delay [s/veh]						3.	57					
Approach LOS		С		A				А				
d_A, Approach Delay [s/veh]		17.23		0.00				1.78		0.00		
95th-Percentile Queue Length [ft/In]	29.73	29.73	29.73	0.00	0.00	0.00	6.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [veh/ln]	1.19	1.19	1.19	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00
Movement LOS	С	С	В				A	A			A	A
d_M, Delay for Movement [s/veh]	21.34	21.15	12.84	0.00	0.00	0.00	8.25	0.00	0.00	0.00	0.00	0.00
V/C, Movement V/C Ratio	0.27	0.01	0.10	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00

Valley Ranch Residential Subdivision TIS PM Existing

sion 7.00-05		Inter	section	Level O	f Servic	e Repo	rt								
	Int			E Stree			reet								
	All-way stop CM 6th Edition							(sec / v			8.3 A				
Analysis Method: Ho Analysis Period:	15 minutes					`	Level olume to	Of Serv				A 144			
ntersection Setup Name		More	juerite S	tract				-	E Street			E Street			
Approach			orthboun		9	outhbour	nd		astboun			Vestbour			
Lane Configuration			+			<b>1</b> P						ліг	iu -		
		. 6	These	Diskt	1.0		Disht			Diskt	1 - 6		Diel		
Turning Movement		.eft 2.00	Thru 12.00	Right	Left 12.00	Thru	Right	Left	Thru	Right	Left 12.00	Thru	Righ		
Lane Width [ft] No. of Lanes in Pocket		2.00	0	12.00 0	12.00	12.00 0	12.00 0	12.00	12.00 0	12.00	12.00	12.00 0	12.0		
				-									· ·		
Pocket Length [ft] Speed [mph]	100	0.00	100.00 25.00	100.00	150.00	100.00 25.00	100.00	235.00	100.00 25.00	450.00	120.00	100.00 25.00	120.0		
Grade [%]			0.00			0.00			0.00			0.00			
Crosswalk			Yes		0.00 Yes				Yes			Yes			
/olumes															
Name			juerite S						E Street			E Street			
Base Volume Input [veh/h	-	6	1	4	3	1	45	25	92	9	3	90	2		
Base Volume Adjustment Fa		0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
Heavy Vehicles Percentage		.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0		
Growth Factor		0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
In-Process Volume [veh/h		0	0	0	0	0	0	0	0	0	0	0	0		
Site-Generated Trips [veh		0	0	0	0	0	0	0	0	0	0	0	0		
Diverted Trips [veh/h]		0	0	0	0	0	0	0	0	0	0	0	0		
Pass-by Trips [veh/h] Existing Site Adjustment Volume		0	0	0	0	0	0	0	0	0	0	0	0		
Other Volume [veh/h]		0	0	0	0	0	0	0	0	0	0	0	0		
Total Hourly Volume [veh/		6	1	4	3	1	45	25	92	9	3	90	2		
Peak Hour Factor		_	0.8800	+ 0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.88		
Other Adjustment Factor		0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
Total 15-Minute Volume [ve		2	0	1.0000	1.0000	0	13	7	26	3	1.0000	26	1.00		
Total Analysis Volume [veh		7	1	5	3	1	51	28	105	10	3	102	2		
	-	,		5	5		01	20							
Pedestrian Volume [ped/l	]		0			0			0			0			

Version 7.00-05

Lanes

Lanes									
Capacity per Entry Lane [veh/h]	697	632	797	662	729	850	654	720	837
Degree of Utilization, x	0.02	0.00	0.07	0.04	0.14	0.01	0.00	0.14	0.00
Movement, Approach, & Intersection Results									
95th-Percentile Queue Length [veh]	0.06	0.01	0.21	0.13	0.50	0.04	0.01	0.49	0.01
95th-Percentile Queue Length [ft]	1.43	0.36	5.23	3.31	12.54	0.89	0.35	12.31	0.18
Approach Delay [s/veh]	8.27	7.	58	8 8.35					
Approach LOS	A	/	4		А			-	
Intersection Delay [s/veh]			8.	26					
Intersection LOS	A								

Valley Ranch Residential Subdivision TIS PM Existing



Generated with	PTV	VISTRO
Version 7.00-05		

						e Repo								
Control Type: Analysis Method: Analysis Period:	Two-way stop HCM 6th Editior 15 minutes		ection 1	EStree	91/1-5 50	uth Ran	Delay	r (sec / v Of Serv o Capac	/ice:			85.9 F .027		
Intersection Setup	e				1-5 \$	South Ra	mps		E Street			E Street		
Approa		N	orthbour	d		outhbour	· ·	F	astboun		v	Vestbour		
Lane Config					+			È.				٦İ		
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ	
Lane Wid	ith [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	
No. of Lanes	in Pocket	0	0	0	0	0	0	0	0	0	1	0	0	
Pocket Ler	ngth [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.	
Speed [I	nph]	30.00				45.00			25.00		30.00			
Grade	[%]		0.00			0.00			0.00			0.00		
Crossw	Crosswalk					No			No			No		
Volumes														
Nam	e				I-5 S	South Ra	mps		E Street			E Street		
Base Volume I	nput [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0	
Base Volume Adju	stment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	
Heavy Vehicles P	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0	
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	
In-Process Vol	ume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated	Trips [veh/h]	0	0	0	225	0	0	0	56	0	195	49	0	
Diverted Trip	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trip	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustme	ent Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Other Volum	e [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Vol	ume [veh/h]	0	0	0	243	0	77	0	318	71	215	334	0	
Peak Hour	Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.00	
Other Adjustm	ent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	
Total 15-Minute V	olume [veh/h]	0	0	0	65	0	21	0	85	19	58	90	0	
Total Analysis Vo	lume (veh/h)	0	0	0	261	0	83	0	342	76	231	359	0	
TOTAL ALLARYSIS VC	aditio [activit]		- V			-								

Version 7.00-05

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		Yes		
Storage Area [veh]	0	2	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	2.03	0.00	0.12	0.00	0.00	0.00	0.20	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	585.86	583.85	563.15	0.00	0.00	0.00	8.98	0.00	0.00
Movement LOS				F	F	F		A	А	А	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	27.60	27.60	27.60	0.00	0.00	0.00	0.76	0.00	0.00
95th-Percentile Queue Length [ft/In]	0.00	0.00	0.00	689.95	689.95	689.95	0.00	0.00	0.00	19.04	0.00	0.00
d_A, Approach Delay [s/veh]		0.00		580.38			0.00				3.52	
Approach LOS		A			F			А			А	
d_l, Intersection Delay [s/veh]						149	.20					
Intersection LOS	F											

Valley Ranch Residential Subdivision TIS AM Baseline



W-Trans 2

Valley Ranch Residential Subdivision TIS AM Baseline Ww-Trans

W-Trans

1

				Level C : E Stree										
Control Type:	Two-way stop							/ (sec / \			55.4			
Analysis Method:	HCM 6th Edition 15 minutes	ı				,		I Of Sen				F .626		
Analysis Period:	15 minutes					,	/olume t	o Capac	ity (v/c):		U	.020		
ntersection Setup		151	North Ra					1	E Street			E Street		
	-		lorthbour			outhbour			Eastboun			Vestbour		
Appro				10	5	butnbour	10	E		a	V	+	10	
Lane Conf	-		<u> </u>						<u>רו</u>			<b>–</b>		
Turning Me		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Wi	.,	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes		0	0	0	0	0	0	1	0	0	0	0	0	
Pocket Le	• • • •	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00	
Speed		45.00         25.00         25.00         30.00           0.00         0.00         0.00         0.00         0.00												
Grade		0.00 0.00 0.00 0.00 No									0.00 No			
	VAIK		INO			INU			No			INU		
<b>folumes</b> Nan		1.6.1	North Ra					1	E Street			E Street		
Base Volume		63		32	0	0	0	73	207	0	0	238	34	
Base Volume Adj		1.0000	1.0000		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Heavy Vehicles F		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Growth		1.0000	1.0000		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
In-Process Vo		0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated		0	0	225	0	0	0	0	281	0	0	244	196	
Diverted Tri		0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Tri		0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustm		0	0	0	0	0	0	0	0	0	0	0	0	
Other Volun		0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Vo		63	0	257	0	0	0	73	488	0	0	482	230	
Peak Hou		0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000	
Other Adjustr	nent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Total 15-Minute	/olume [veh/h]	18	0	71	0	0	0	20	136	0	0	134	64	
Total Analysis V	olume [veh/h]	70	0	286	0	0	0	81	542	0	0	536	256	
Pedestrian Vo	ume [ped/h]		0			0			0			0		
		70		286	0		0	81		0	0		25	

## Generated with PTV VISTRO Version 7.00-05

Intersection Settings	
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Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes			
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.63	0.00	0.53	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	55.44	55.78	29.92	0.00	0.00	0.00	9.81	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	D				A	A			A	A
95th-Percentile Queue Length [veh/ln]	6.11	6.11	6.11	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/In]	152.66	152.66	152.66	0.00	0.00	0.00	8.10	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		34.94		0.00				1.28				
Approach LOS		D		A				А				
d_l, Intersection Delay [s/veh]	7.47											
Intersection LOS	F											

Valley Ranch Residential Subdivision TIS AM Baseline

		Inter	section	Level C	f Servic	e Repo	rt							
0.1.17		Interse	ction 3:	E Stree	t/Margu	erite St						3.5		
Control Type: Analysis Method:	All-way stop HCM 6th Editior							(sec / v Of Serv			A.5			
Analysis Period:	15 minutes					١	/olume to				0.196			
Intersection Setup														
Name		Mar	guerite S	treet					E Street			E Street		
Approach	1		orthbour		s	outhbour	nd	Eastbound			Westbound			
Lane Configu			+			<b>7</b>			hir			h		
Turning Move	ment	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ	
Lane Width		12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	
No. of Lanes in		0	0	0	1	0	0	1	0	1	1	0	1	
Pocket Lengt	h [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.0	
Speed [mp	h]		25.00	1		25.00			25.00	I		25.00		
Grade [%	1		0.00			0.00			0.00			0.00		
Crosswal	<		Yes			Yes			Yes			Yes		
Volumes														
Name		Marg	querite S	treet					E Street			E Street		
Base Volume Inp	ut [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6	
Base Volume Adjust	nent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	
Heavy Vehicles Per	entage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0	
Growth Fac	tor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	
In-Process Volum	e [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Tri	ps [veh/h]	0	0	0	0	0	0	0	39	0	0	45	0	
Diverted Trips	veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips	veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment	Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume	veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volun	ne [veh/h]	3	0	2	1	1	17	24	125	2	0	103	6	
Peak Hour Fa	actor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.86	
Other Adjustmer	t Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	
Total 15-Minute Volu	ime [veh/h]	1	0	1	0	0	5	7	36	1	0	30	2	
Total Analysis Volu	me [veh/h]	3	0	2	1	1	20	28	145	2	0	120	7	
Pedestrian Volum	e (ped/h)		2		2				3			0		

## Generated with PTV VISTRO

Version 7.00-05 Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	685	617	772	671	739	864	727	727	846	
Degree of Utilization, x	0.01	0.00	0.03	0.04	0.20	0.00	0.00	0.17	0.01	
Movement, Approach, & Intersection Results										
95th-Percentile Queue Length [veh]	0.02	0.00	0.08	0.13	0.72	0.01	0.00	0.59	0.03	
95th-Percentile Queue Length [ft]	0.55	0.12	2.10	3.26	18.11	0.17	0.00	14.72	0.63	
Approach Delay [s/veh]	8.30	7.	55		8.66		8.54			
Approach LOS	A		A		A			A		
Intersection Delay [s/veh]	8.53									
Intersection LOS	A									

Valley Ranch Residential Subdivision TIS AM Baseline

		Inter	section	Level C	of Servio	e Repo	rt								
Control Type: Analysis Method: Analysis Period:	Signalized HCM 6th Edition 15 minutes		ection 1		12.3 B 0.486										
Intersection Setup															
	ame					South Ra			E Street		E Street				
Ap	broach	Northbound			s	Southbound			astboun	d	Westbound				
Lane Co	onfiguration					+					<b></b>				
Turning	Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Rig		
Lane	Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0		
No. of La	nes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0		
Pocket	Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.		
Spee	ed [mph]		30.00			45.00			25.00			30.00			
Gra	de [%]		0.00			0.00			0.00			0.00			
Curb	Present					No			No		No				
Cro	sswalk		Yes			No			No						
Volumes															
N	ame				I-5 \$	South Ra	mps		E Street			E Street			
Base Volum	ie Input [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0		
Base Volume	Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
Heavy Vehicle	s Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0		
Grow	th Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
In-Process	Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Site-General	ed Trips [veh/h]	0	0	0	225	0	0	0	56	0	195	49	0		
Diverted	Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Pass-by	Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Existing Site Adjus	tment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Other Vo	lume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Right-Turn on F	Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Total Hourly	Volume [veh/h]	0	0	0	243	0	77	0	318	71	215	334	0		
Peak H	our Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.00		
Other Adju	stment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
Total 15-Minu	e Volume [veh/h]	0	0	0	65	0	21	0	85	19	58	90	0		
Total Analysis	Volume [veh/h]	0	0	0	261	0	83	0	342	76	231	359	0		
Presence of C	n-Street Parking				No		No	No		No	No		No		
On-Street Parking	g Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Local Bus St	opping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0		
v_do, Outbound Pedestrian	n Volume crossing major stre	е	0			0			0			0			
v_di, Inbound Pedestrian	/olume crossing major street	[	0			0			0			0			
v_co, Outbound Pedestrian	Nolume crossing minor stre	е	2			0			1	1		0			
v_ci, Inbound Pedestrian \	/olume crossing minor street	[	1			0			2			0			
v_ab, Corner Pede	estrian Volume [ped/h]		0			0			0			0			
B: 1.141	me [bicycles/h]		0			0	0			0					

Valley Ranch Residential Subdivision TIS AM Baseline - With Signal

Ww-Trans

W-Trans 1 Generated with PTV VISTRO

Version 7.00-05

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	19	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS AM Baseline - With Signal





Lane Group	C	С	С	L	C
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	37	37	37	37
g / C, Green / Cycle	0.25	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.22	0.12	0.13	0.27	0.11
s, saturation flow rate [veh/h]	1558	1683	1580	871	3204
c, Capacity [veh/h]	387	1041	977	575	1982
d1, Uniform Delay [s]	21.79	5.00	5.04	9.33	4.93
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.04	0.43	0.50	2.09	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
ne Group Results	·				
X, volume / capacity	0.89	0.20	0.21	0.40	0.18
d, Delay for Lane Group [s/veh]	28.83	5.43	5.54	11.42	5.13
Lane Group LOS	С	A	A	В	A
Critical Lane Group	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.73	1.01	1.03	1.93	0.76
50th-Percentile Queue Length [ft/In]	118.15	25.16	25.63	48.18	18.90
95th-Percentile Queue Length [veh/ln]	8.29	1.81	1.85	3.47	1.36

Version 7.00-05

#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.83	28.83	28.83	0.00	5.48	5.54	11.42	5.13	0.00	
Movement LOS				С	С	С		А	A	В	A		
d_A, Approach Delay [s/veh]		0.00			28.83			5.49					
Approach LOS	A				С			А					
d_l, Intersection Delay [s/veh]						12	12.34						
Intersection LOS						E	3						
Intersection V/C	0.486												

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.032	0.000	0.000	0.000
Crosswalk LOS	В	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	<b>1]</b> 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	500	1233	1233
d_b, Bicycle Delay [s]	30.00	16.88	4.41	4.41
I_b,int, Bicycle LOS Score for Intersection	4.132	2.127	1.904	2.046
Bicycle LOS	D	В	A	В

#### Sequence

Valley Ranch Residential Subdivision TIS

AM Baseline - With Signal

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Valley Ranch Residential Subdivision TIS AM Baseline - With Signal

Ww-Trans

W-Trans

3



ersion 7.00-05	Into	rsection		of Sorvia	o Popo	rt							
		ection 2											
	Signalized			Delay (sec / veh): 13.1 Level Of Service: B									
	M 6th Edition				,			B 506					
Analysis Period:	15 minutes				,	/olume t	o Capac	aty (v/c):		0.	.506		
Intersection Setup													
Name	I-5	North Ra	mps					E Street			E Street		
Approach	1	Northbour	nd	S	outhbour	nd	E	astboun	d	V	Vestbour	d	
Lane Configuration		+						٦II			11		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0	
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.0	
Speed [mph]		45.00			25.00			25.00			30.00		
Grade [%]		0.00			0.00			0.00			0.00		
Curb Present		No						No			No		
Crosswalk		No			No			No			No		
Volumes													
Name	I-5	North Ra	mps					E Street			E Street		
Base Volume Input [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34	
Base Volume Adjustment Fac	tor 1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Heavy Vehicles Percentage [	%] 2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trips [veh/h	i] 0	0	225	0	0	0	0	281	0	0	244	196	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volume	[veh/h] 0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Right-Turn on Red Volume [ve	h/h] 0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volume [veh/h	] 63	0	257	0	0	0	73	488	0	0	482	230	
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.900	
Other Adjustment Factor	1.0000		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Total 15-Minute Volume [veh		0	71	0	0	0	20	136	0	0	134	64	
Total Analysis Volume [veh/		0	286	0	0	0	81	542	0	0	536	256	
Presence of On-Street Parki	•		No				No		No	No		No	
On-Street Parking Maneuver Ra		0	0	0	0	0	0	0	0	0	0	0	
Local Bus Stopping Rate [/h		0	0	0	0	0	0	0	0	0	0	0	
v_do, Outbound Pedestrian Volume cross	• ,				0			0			0		
v_di, Inbound Pedestrian Volume crossin					0			0			0		
v_co, Outbound Pedestrian Volume cross	-				0			0			0		
v_ci, Inbound Pedestrian Volume crossin		-			0			0	0				
v_ab, Corner Pedestrian Volume	[ped/h]	0			0			0	0				

Valley Ranch Residential Subdivision TIS AM Baseline - With Signal

Ww-Trans

W-Trans 5

## Generated with PTV VISTRO

Version 7.00-05

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

#### Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS AM Baseline - With Signal





#### Lane Group Calculation

ane Group Calculations					
Lane Group	С	L	С	С	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	37	37	37	37
g / C, Green / Cycle	0.25	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.24	0.13	0.17	0.24	0.26
s, saturation flow rate [veh/h]	1461	616	3204	1683	1511
c, Capacity [veh/h]	368	391	1971	1035	929
d1, Uniform Delay [s]	22.23	10.86	5.35	5.82	6.03
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.41	1.20	0.35	1.07	1.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
ane Group Results					
X, volume / capacity	0.97	0.21	0.27	0.38	0.43
d, Delay for Lane Group [s/veh]	37.64	12.06	5.70	6.89	7.46
Lane Group LOS	D	В	A	A	A
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/In]	5.78	0.75	1.32	2.13	2.26
50th-Percentile Queue Length [ft/In]	144.41	18.82	32.92	53.30	56.47
95th-Percentile Queue Length [veh/ln]	9.72	1.36	2.37	3.84	4.07
95th-Percentile Queue Length [ft/In]	242.94	33.88	59.26	95.93	101.65

## Generated with PTV VISTRO

Version 7.00-05

#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.64	37.64	37.64	0.00	0.00	0.00	12.06	5.70	0.00	0.00	7.04	7.46
Movement LOS	D	D	D				В	А			A	A
d_A, Approach Delay [s/veh]		37.64		0.00				6.53		7.18		
Approach LOS		D		A				А				
d_I, Intersection Delay [s/veh]						13	.07					
Intersection LOS		В										
Intersection V/C		0.506										

#### Other Modes

g Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
g_waik,mi, Ellective waik mine [s]	0.0	0:0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	i] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	0	1233	1233
d_b, Bicycle Delay [s]	16.88	30.00	4.41	4.41
I_b,int, Bicycle LOS Score for Intersection	2.147	4.132	2.074	2.213
Bicycle LOS	В	D	В	В

#### Sequence

	Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ſ	Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Γ	Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ſ	Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 41s	
SG:6 41s	SG: 8 19s

Valley Ranch Residential Subdivision TIS AM Baseline - With Signal

Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS AM Baseline - With Signal



	Inter	section	Level O	of Servic	e Repo	rt							
	Interse	ction 3:	E Stree	t/Margu	erite St								
Control Type: Signalized Analysis Method: HCM 6th Editio							/ (sec / v			23.1 C			
Analysis Period: 15 minutes	211			Level Of Service: Volume to Capacity (v/c):						0.058			
· · · · · · · · · · · · · · · · · · ·													
Intersection Setup													
Name	Man	guerite S	treet					E Street			E Street		
Approach	N	Northbound			outhbour	nd	E	astboun	d	W	/estbour	d	
Lane Configuration		٦ŀ			٩Þ			٦lb			٦lb		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1	
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.0	
Speed [mph]		25.00			25.00			25.00			25.00		
Grade [%]		0.00		0.00				0.00			0.00		
Curb Present		No			No			No			No		
Crosswalk		Yes			Yes			Yes			Yes		
Volumes													
Name	Mar	guerite S	treet					E Street			E Street		
Base Volume Input [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	39	0	0	45	0	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volume [veh/h]	3	0	2	1	1	17	24	125	2	0	103	6	
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.860	
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Total 15-Minute Volume [veh/h]	1	0	1	0	0	5	7	36	1	0	30	2	
Total Analysis Volume [veh/h]	3	0	2	1	1	20	28	145	2	0	120	7	
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
v_do, Outbound Pedestrian Volume crossing major st	ree	1			1			1			1	<u>.</u>	
v_di, Inbound Pedestrian Volume crossing major stre	et [				1			1			1		
v_co, Outbound Pedestrian Volume crossing minor st	-				1			2			0		
v_ci, Inbound Pedestrian Volume crossing minor stre	-	0			2			1		0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0		0			0			
Bicycle Volume [bicycles/h]	0				0			0			0		

Valley Ranch Residential Subdivision TIS AM Baseline - With Signal

Ww-Trans

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## Generated with PTV VISTRO

Version 7.00-05

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

#### Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	0	24	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
<ol><li>Start-Up Lost Time [s]</li></ol>	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS AM Baseline - With Signal





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Lane Group	L	С	L	С	L	С	C	L	С	
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	(
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2
g_i, Effective Green Time [s]	44	44	44	44	8	8	8	8	8	Ē
g / C, Green / Cycle	0.74	0.74	0.74	0.74	0.13	0.13	0.13	0.13	0.13	(
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.00	0.01	0.02	0.04	0.04	0.00	0.04	(
s, saturation flow rate [veh/h]	1250	1431	1273	1439	1132	1683	1675	1117	1683	1
c, Capacity [veh/h]	1001	1056	1022	1063	184	216	215	177	216	:
d1, Uniform Delay [s]	2.62	2.06	2.55	2.08	27.39	23.84	23.84	0.00	23.69	2
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	(
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.01	0.00	0.00	0.03	0.38	0.93	0.94	0.00	0.75	(
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
e Group Results									-	-
X, volume / capacity	0.00	0.00	0.00	0.02	0.15	0.34	0.34	0.00	0.29	(

d, Delay for Lane Group [s/veh]	2.62	2.06	2.55	2.12	27.77	24.77	24.78	0.00	24.44	24.49
Lane Group LOS	A	A	A	A	С	С	С	А	С	С
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.05	0.39	0.97	0.97	0.00	0.83	0.83
50th-Percentile Queue Length [ft/In]	0.21	0.11	0.07	1.16	9.86	24.21	24.18	0.00	20.75	20.69
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.08	0.71	1.74	1.74	0.00	1.49	1.49
95th-Percentile Queue Length [ft/ln]	0.37	0.20	0.12	2.09	17.75	43.58	43.53	0.00	37.35	37.25

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#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.62	2.06	2.06	2.55	2.12	2.12	27.77	24.77	24.78	0.00	24.47	24.49
Movement LOS	A A A			A	А	А	С	С	С	А	С	С
d_A, Approach Delay [s/veh]		2.40			2.14			25.25			24.47	
Approach LOS		А		A C							С	
d_I, Intersection Delay [s/veh]						23	.06					
Intersection LOS	C											
Intersection V/C	0.058											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	1.923	1.976	2.336	2.327
Crosswalk LOS	A	A	В	В
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	i] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	1067	667	667
d_b, Bicycle Delay [s]	6.53	6.53	13.33	13.33
I_b,int, Bicycle LOS Score for Intersection	1.568	1.596	1.704	1.664
Bicycle LOS	А	A	A	A

#### Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 36s	SG: 4 24s
SG: 102 2 <mark>2</mark> 5	SG: 104 15s
SG:6 36s	SG:8 24s
SG: 106 2 <mark>2</mark> 5	SG: 108 1 <mark>5</mark> s

Valley Ranch Residential Subdivision TIS AM Baseline - With Signal

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Valley Ranch Residential Subdivision TIS AM Baseline - With Signal



Generated with	PTV	VISTRO
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				Level C									
Control Type: Analysis Method: Analysis Period:	interse	ection 1	E Stree	21/1-5 50		Delay	r (sec / v Of Serv o Capac	/ice:			56.1 F 660		
Intersection Setup	2				1-5.5	South Ra	mns		E Street			E Street	
Approa		N	orthbour	d		outhbour	· ·	F	astboun		v	Vestbour	
Lane Config			oranboar			+						71	
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ
Lane Wid	th [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes	in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Ler	igth [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.
Speed [r	nph]		30.00			45.00			25.00			30.00	
Grade	[%]		0.00			0.00			0.00			0.00	
Crossw	alk		Yes			No		No				No	
Volumes													
Name	9				I-5 \$	South Ra	mps		E Street			E Street	
Base Volume Ir	nput [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Base Volume Adju	stment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Heavy Vehicles Pe	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
In-Process Volu	ıme [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated	Trips [veh/h]	0	0	0	140	0	0	0	35	0	150	37	0
Diverted Trip	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trip	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustme	nt Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volum	e [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Vol	ume [veh/h]	0	0	0	170	1	110	0	390	79	175	361	0
Peak Hour	Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.00
Other Adjustm	ent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Total 15-Minute V	olume [veh/h]	0	0	0	48	0	31	0	110	22	49	101	0
Total Analysis Vo	lume [veh/h]	0	0	0	191	1	124	0	438	89	197	406	0

Version 7.00-05

#### Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		Yes		
Storage Area [veh]	0	2	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	1.66	0.01	0.19	0.00	0.00	0.00	0.19	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	456.11	453.58	430.40	0.00	0.00	0.00	9.29	0.00	0.00
Movement LOS				F	F	F		A	A	А	A	
95th-Percentile Queue Length [veh/In]	0.00	0.00	0.00	23.16	23.16	23.16	0.00	0.00	0.00	0.70	0.00	0.00
95th-Percentile Queue Length [ft/in]	0.00	0.00	0.00	579.01	579.01	579.01	0.00	0.00	0.00	17.49	0.00	0.00
d_A, Approach Delay [s/veh]		0.00			446.01			0.00			3.03	
Approach LOS		A			F			А			А	
d_l, Intersection Delay [s/veh]	98.73											
Intersection LOS	F											

Valley Ranch Residential Subdivision TIS PM Baseline



W-Trans 2

Valley Ranch Residential Subdivision TIS PM Baseline Ww-Trans

W-Trans

1

				Level O									
Control Type:	Two-way stop	Interse	ection 2	: E Stree	et/I-5 No	rth Ram		. / /			_	3.8	
Analysis Method:	HCM 6th Edition							/ (sec / v I Of Serv				5.6 F	
Analysis Period:	15 minutes					١		o Capac			0.	596	
ntersection Setup													
Name			North Ra						E Street			E Street	
Approa	ich	N	lorthbour	Id	s	outhbour	nd	E	astboun	d	V	Vestbour	d
Lane Config	guration		+	F									
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Wid	th [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes	in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Len	igth [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [n	nph]	45.00 25.00 25.00								30.00			
Grade [			0.00			0.00			0.00			0.00	
Crossw	alk	No No No							No				
/olumes													
Name	e	I-5 I	North Ra	mps					E Street			E Street	
Base Volume In	nput [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adju		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Pe	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volu	ıme [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated	Trips [veh/h]	0	0	140	0	0	0	0	175	0	0	187	149
Diverted Trip	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trip	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustme	nt Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume	e [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Vol	ume [veh/h]	67	4	206	0	0	0	82	473	0	0	464	206
Peak Hour	Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustme	ent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Ve	olume [veh/h]	18	1	56	0	0	0	22	129	0	0	126	56
	lume [veh/h]	73	4	224	0	0	0	89	514	0	0	504	224
Total Analysis Vo			4         224         0         0         0         89         514         0           0 <td colspan="3">0 0 504 2</td>							0 0 504 2			

## Version 7.00-05

#### Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes			
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

	F											
d I, Intersection Delay [s/veh]						7.	29					
Approach LOS		Е			A			А				
d_A, Approach Delay [s/veh]		36.69		0.00			1.41					
95th-Percentile Queue Length [ft/In]	140.30	140.30	140.30	0.00	0.00	0.00	8.46	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [veh/In]	5.61	5.61	5.61	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	D				A	A			А	A
d_M, Delay for Movement [s/veh]	53.77	53.76	30.82	0.00	0.00	0.00	9.58	0.00	0.00	0.00	0.00	0.00
V/C, Movement V/C Ratio	0.60	0.03	0.40	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.01	0.00

Valley Ranch Residential Subdivision TIS PM Baseline

					of Servic								
		Interse	ction 3:	E Stree	t/Margu	erite St							
Control Type: Analysis Method:	All-way stop HCM 6th Edition							(sec / v Of Serv				3.7 A	
Analysis Period:	15 minutes					`	/olume t					194	
ntersection Setup													
Nar	ne	Man	guerite S	treet					E Street			E Street	
Appro	bach		lorthbour		s	outhbour	nd	E	astboun	d	v	Vestbour	d
Lane Cont	iguration	+			٦ŀ			חור		піг			
Turning M	ovement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ
Lane W	idth [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lane:	s in Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Pocket Le	ength [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.0
Speed			25.00			25.00			25.00			25.00	
Grade	e [%]		0.00								0.00		
Cross			Yes			Yes			Yes			Yes	
olumes													
Nar	ne	Mar	guerite S	treet					E Street			E Street	
Base Volume	Input [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2
Base Volume Ad	justment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Heavy Vehicles	Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth	Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
In-Process Vo	lume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated	Trips [veh/h]	0	0	0	0	0	0	0	30	0	0	28	0
Diverted Tri	ips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Tri	ps [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustr	nent Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volur	ne [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Ve	olume [veh/h]	6	1	4	3	1	45	25	122	9	3	118	2
Peak Hou	ir Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.880
Other Adjustr	ment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Total 15-Minute	Volume [veh/h]	2	0	1	1	0	13	7	35	3	1	34	1
Total Analysis V	/olume [veh/h]	7	1	5	3	1	51	28	139	10	3	134	2
Desta states Ma	lume [ped/h]		0			0			0			0	

Version 7.00-05

Lanes

673	612	766	653	718	835	645	709	822
0.02	0.00	0.07	0.04	0.19	0.01	0.00	0.19	0.00
0.06	0.01	0.22	0.13	0.71	0.04	0.01	0.69	0.01
1.48	0.37	5.45	3.36	17.83	0.91	0.35	17.31	0.18
8.46	7.	79	8.74				8.92	
A	,	4	A				А	
8.66								
A								
	0.02	0.02 0.00 0.06 0.01 1.48 0.37 8.46 7.	0.02 0.00 0.07 0.06 0.01 0.22 1.48 0.37 5.45 8.46 7.79 A A 8.7	0.02 0.00 0.07 0.04 0.06 0.01 0.22 0.13 1.48 0.37 5.45 3.36 8.46 7.79 A A A 8.66	0.02 0.00 0.07 0.04 0.19 0.06 0.01 0.22 0.13 0.71 1.48 0.37 5.45 3.36 17.83 8.46 7.79 8.74 A A A A 8.66	0.02         0.00         0.07         0.04         0.19         0.01           0.06         0.01         0.22         0.13         0.71         0.04           1.48         0.37         5.45         3.36         17.83         0.91           8.46         7.79         8.74         A         A         A         A         A           8.66	0.02         0.00         0.07         0.04         0.19         0.01         0.00           0.06         0.01         0.22         0.13         0.71         0.04         0.01           1.48         0.37         5.45         3.36         17.83         0.91         0.35           8.46         7.79         8.74               A         A         A         A           8.66	0.02         0.00         0.07         0.04         0.19         0.01         0.00         0.19           0.06         0.01         0.22         0.13         0.71         0.04         0.01         0.69           1.48         0.37         5.45         3.36         17.83         0.91         0.35         17.31           8.46         7.79         8.74         8.92           A         A         A         A         A           8.66

Valley Ranch Residential Subdivision TIS PM Baseline

ersion 7.00-05	1.1												
			Level C E Stree										
Control Type: Signalized	inter se		. L Oute		unnun		/ (sec / v	/eh):		1	1.2		
Analysis Method: HCM 6th Edition	ı						I Of Serv				В		
Analysis Period: 15 minutes					١	Volume to	o Capac	ity (v/c):		0.456			
Intersection Setup													
Name				I-5 \$	South Ra	mps		E Street			E Street		
Approach	N	lorthbour	nd	s	outhbour	nd	E	Eastboun	d	V	Vestbour	nd	
Lane Configuration					+     -					<b>  1 </b>			
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Ri	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12	
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	(	
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100	
Speed [mph]		30.00			45.00	-		25.00			30.00		
Grade [%]	0.00 0.00 0.00								0.00				
Curb Present				No				No		No			
Crosswalk	Yes No No						No						
Volumes													
Name				I-5 \$	South Ra	mps	E Street				E Street		
Base Volume Input [veh/h]	0	0	0	30	1	110	0	355	79	25	324	(	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0	
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.	
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0	
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(	
Site-Generated Trips [veh/h]	0	0	0	140	0	0	0	35	0	150	37	(	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(	
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(	
Total Hourly Volume [veh/h]	0	0	0	170	1	110	0	390	79	175	361	(	
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.0	
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0	
Total 15-Minute Volume [veh/h]	0	0	0	48	0	31	0	110	22	49	101	(	
Total Analysis Volume [veh/h]	0	0	0	191	1	124	0	438	89	197	406	(	
Presence of On-Street Parking				No		No	No		No	No		N	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	(	
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	(	
v_do, Outbound Pedestrian Volume crossing major stre	e	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stre	e	1			0			1			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	1			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0		
Bicycle Volume [bicycles/h]		0			0			0			0		

Valley Ranch Residential Subdivision TIS PM Baseline - With Signal

Ww-Trans

W-Trans 1 Generated with PTV VISTRO

Version 7.00-05

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	19	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall		1			No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS PM Baseline - With Signal





### Lane Group Calculations

Lane Group Calculations					
Lane Group	С	С	С	L	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	38	38	38	38
g / C, Green / Cycle	0.23	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.21	0.16	0.17	0.25	0.13
s, saturation flow rate [veh/h]	1531	1683	1587	788	3204
c, Capacity [veh/h]	360	1063	1003	529	2024
d1, Uniform Delay [s]	22.15	4.84	4.89	9.27	4.67
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.85	0.56	0.64	2.01	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
ane Group Results					
X, volume / capacity	0.88	0.25	0.26	0.37	0.20
d, Delay for Lane Group [s/veh]	29.00	5.40	5.53	11.28	4.90
Lane Group LOS	С	A	A	В	A
Critical Lane Group	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.35	1.25	1.28	1.64	0.82
50th-Percentile Queue Length [ft/In]	108.83	31.23	31.88	41.03	20.43
95th-Percentile Queue Length [veh/ln]	7.77	2.25	2.30	2.95	1.47
95th-Percentile Queue Length [ft/ln]	194.37	56.22	57.38	73.85	36.78

## Generated with PTV VISTRO

Version 7.00-05

#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	29.00	29.00	29.00	0.00	5.45	5.53	11.28	4.90	0.00
Movement LOS				С	С	С		A	A	В	A	
d_A, Approach Delay [s/veh]	0.00				29.00			5.46				
Approach LOS	A				С			А			А	
d_l, Intersection Delay [s/veh]						11	.24					
Intersection LOS						E	3					
Intersection V/C	0.456											

#### Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.964	0.000	0.000	0.000
Crosswalk LOS	А	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	<b>1]</b> 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	500	1233	1233
d_b, Bicycle Delay [s]	30.00	16.88	4.41	4.41
I_b,int, Bicycle LOS Score for Intersection	4.132	2.081	1.994	2.057
Bicycle LOS	D	В	A	В

#### Sequence

Valley Ranch Residential Subdivision TIS

PM Baseline - With Signal

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Valley Ranch Residential Subdivision TIS PM Baseline - With Signal

Ww-Trans

W-Trans

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ersion 7.00-05	Inter	section	Level C	f Servic	e Reno	rt						
			: E Stree									
Control Type: Signaliz						/ (sec / v				0.4		
Analysis Method: HCM 6th E Analysis Period: 15 minu					,	Level olume to	I Of Serv				В 444	
Analysis Pendu. 15 minu	les				,	volume u	o Gapad	ity (v/c).		0.	444	
Intersection Setup												
Name	I-5 N	North Ra	mps					E Street			E Street	
Approach	N	orthbour	nd	Southbound			E	astboun	d	V	Vestboun	d
Lane Configuration		+						<b>٦</b> ]]			IF	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.0
Speed [mph]		45.00	1		25.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No						No			No	
Crosswalk		No No						No				
Volumes												
Name	I-5 N	North Ra	mps					E Street			E Street	
Base Volume Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	140	0	0	0	0	175	0	0	187	149
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	4	206	0	0	0	82	473	0	0	464	206
Peak Hour Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Total 15-Minute Volume [veh/h]	18	1	56	0	0	0	22	129	0	0	126	56
Total Analysis Volume [veh/h]	73	4	224	0	0	0	89	514	0	0	504	224
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing maj		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing min	or stree				0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor	street [	-			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0		0		
Bicycle Volume [bicycles/h]		0			0			0			0	_

Version 7.00-05

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

#### Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS PM Baseline - With Signal



W-Trans 6

PM Baseline - With Signal

Valley Ranch Residential Subdivision TIS

Ww-Trans

W-Trans

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#### Lane Group Calculation

ne Group Calculations					
Lane Group	С	L	С	С	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	38	38	38	38
g / C, Green / Cycle	0.23	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.20	0.14	0.16	0.22	0.24
s, saturation flow rate [veh/h]	1472	654	3204	1683	1518
c, Capacity [veh/h]	343	432	2030	1066	962
d1, Uniform Delay [s]	22.21	9.51	4.81	5.15	5.31
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.11	1.08	0.30	0.87	1.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
e Group Results					
X, volume / capacity	0.88	0.21	0.25	0.34	0.38
d, Delay for Lane Group [s/veh]	29.32	10.59	5.11	6.02	6.44
Lane Group LOS	С	В	A	A	A
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.18	0.75	1.14	1.75	1.84
50th-Percentile Queue Length [ft/ln]	104.41	18.82	28.43	43.76	46.03
95th-Percentile Queue Length [veh/ln]	7.52	1.35	2.05	3.15	3.31
95th-Percentile Queue Length [ft/In]	187.94	33.87	51.17	78.77	82.86

## Generated with PTV VISTRO

Version 7.00-05

#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.32	29.32	29.32	0.00	0.00	0.00	10.59	5.11	0.00	0.00	6.14	6.44	
Movement LOS	С	С	С				В	А			A	A	
d_A, Approach Delay [s/veh]		29.32			0.00			5.92			6.23		
Approach LOS	С			A				А					
d_l, Intersection Delay [s/veh]						10	.37						
Intersection LOS		В											
Intersection V/C		0.444											

#### Other Modes

			1	
g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	i] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	0	1233	1233
d_b, Bicycle Delay [s]	16.88	30.00	4.41	4.41
I_b,int, Bicycle LOS Score for Intersection	2.056	4.132	2.057	2.160
Bicycle LOS	В	D	В	В

#### Sequence

	Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Γ	Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
	Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG:2 41s		
SG:6 41s	SG: 8 1	95

Valley Ranch Residential Subdivision TIS PM Baseline - With Signal

Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS PM Baseline - With Signal



	Inter	section	Level O	f Servic	e Repo	rt							
	Interse	ction 3:	E Stree	t/Margu	erite St								
Control Type: Signalized Analysis Method: HCM 6th Edition							/ (sec / v		21.0 C				
Analysis Method: HCM 6th Edition Analysis Period: 15 minutes	1			Level Of Service: Volume to Capacity (v/c):						0.081			
Analysis i chod. To minutes						volume e	o oupuo	ity (v/o).		0.	001		
Intersection Setup	_						-						
Name	Marg	guerite S	treet					E Street			E Street		
Approach	N	lorthbour	nd	S	outhbour	nd	E	astboun	d	V	/estbour	ıd	
Lane Configuration		71			٦F			٦IF			אור		
Turning Movement		Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1	
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.0	
Speed [mph]		25.00			25.00			25.00			25.00		
Grade [%]		0.00			0.00			0.00			0.00		
Curb Present		No		No				No			No		
Crosswalk		Yes			Yes			Yes			Yes		
Volumes													
Name	Marg	guerite S	treet					E Street			E Street		
Base Volume Input [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	30	0	0	28	0	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volume [veh/h]	6	1	4	3	1	45	25	122	9	3	118	2	
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.880	
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Total 15-Minute Volume [veh/h]	2	0	1	1	0	13	7	35	3	1	34	1	
Total Analysis Volume [veh/h]	7	1	5	3	1	51	28	139	10	3	134	2	
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
v_do, Outbound Pedestrian Volume crossing major stre	e	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stre	e	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0		0			0			
Bicycle Volume [bicycles/h]		0		0			0			0			

Valley Ranch Residential Subdivision TIS PM Baseline - With Signal

Ww-Trans

W-Trans 9 Generated with PTV VISTRO

Version 7.00-05

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	0	24	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
<ol><li>Clearance Lost Time [s]</li></ol>	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS PM Baseline - With Signal





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	L	С	L	С	L	С	C	L	С
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	44	44	8	8	8	8	8
g / C, Green / Cycle	0.74	0.74	0.74	0.74	0.13	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.00	0.04	0.02	0.04	0.05	0.00	0.04
s, saturation flow rate [veh/h]	1217	1467	1269	1435	1128	1683	1644	1114	1683
c, Capacity [veh/h]	970	1082	1017	1058	182	217	212	176	217
d1, Uniform Delay [s]	2.74	2.07	2.58	2.14	27.49	23.82	23.84	27.12	23.72
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.01	0.01	0.09	0.39	0.94	0.98	0.04	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

	A, volume / capacity	0.01	0.01	0.00	0.05	0.15	0.34	0.35	0.02	0.51	0.31
	d, Delay for Lane Group [s/veh]	2.75	2.08	2.58	2.23	27.87	24.76	24.82	27.16	24.54	24.55
	Lane Group LOS	A	A	A	A	С	С	С	С	С	С
	Critical Lane Group	No	No	No	Yes	No	No	Yes	No	No	No
	50th-Percentile Queue Length [veh/In]	0.02	0.01	0.01	0.12	0.40	0.98	0.98	0.04	0.89	0.89
Ī	50th-Percentile Queue Length [ft/ln]	0.51	0.33	0.20	2.96	9.89	24.62	24.49	1.04	22.25	22.23
	95th-Percentile Queue Length [veh/In]	0.04	0.02	0.01	0.21	0.71	1.77	1.76	0.07	1.60	1.60
	95th-Percentile Queue Length [ft/ln]	0.91	0.59	0.37	5.33	17.80	44.31	44.08	1.87	40.05	40.02

## Generated with PTV VISTRO

Version 7.00-05

#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.75	2.08	2.08	2.58	2.23	2.23	27.87	24.79	24.82	27.16	24.54	24.55
Movement LOS	A	А	A	A	А	A	С	С	С	С	С	С
d_A, Approach Delay [s/veh]		2.44		2.25				25.28		24.60		
Approach LOS		А			А			С				
d_I, Intersection Delay [s/veh]						20	.96					
Intersection LOS	С											
Intersection V/C	0.081											

#### Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	1.932	1.984	2.350	2.331
Crosswalk LOS	A	A	В	В
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	i] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	1067	667	667
d_b, Bicycle Delay [s]	6.53	6.53	13.33	13.33
I_b,int, Bicycle LOS Score for Intersection	1.581	1.650	1.706	1.674
Bicycle LOS	А	A	A	A

#### Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 36s	SG: 4 24s
SG: 102 2 <mark>2</mark> 5	SG: 104 15s
SG:6 36s	SG:8 24s
SG: 106 2 <mark>2</mark> 5	SG: 108 1 <mark>5</mark> s

Valley Ranch Residential Subdivision TIS PM Baseline - With Signal

Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS PM Baseline - With Signal



		Inter	section	Level O	f Servic	e Repo	rt								
		Interse	ection 1	E Stree	et/I-5 So	uth Ran									
Control Type: Analysis Method:	Signalized HCM 6th Editior	n Delay (sec / veh): Level Of Service:										15.6 B			
Analysis Netriod: Analysis Period:	15 minutes	Volume to Capacity (v/c):										в 0.611			
Intersection Setup	<u>,</u>				1.5.9	South Ra	mpc		E Street			E Street			
Approa		N	lorthbour	d		outhbour			Eastboun		E Street Westbound				
			Ionanbour	iu	3					u	v v	**	iu		
Lane Config	uration					<u> </u>			<u> </u>			<u>וור</u>			
Turning Mo	/ement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ		
Lane Wid	th [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0		
No. of Lanes	n Pocket	0	0	0	0	0	0	0	0	0	1	0	0		
Pocket Len	gth [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.0		
Speed [n	nph]		30.00			45.00			25.00			30.00			
Grade [	%]		0.00		0.00				0.00			0.00			
Curb Pre	sent					No			No		No				
Crossw		Yes		No No						No					
Volumes															
Name	3				I-5 S	South Ra	mps		E Street			E Street			
Base Volume In	put [veh/h]	0	0	0	378	0	150	0	715	143	125	611	0		
Base Volume Adju	stment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
Heavy Vehicles Pe	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0		
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
In-Process Volu	me [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Site-Generated	[rips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Diverted Trip	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Pass-by Trip:	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Existing Site Adjustme	nt Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Other Volume	e [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Right-Turn on Red	Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Total Hourly Vol	ume [veh/h]	0	0	0	378	0	150	0	715	143	125	611	0		
Peak Hour	Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
Other Adjustme	ent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00		
Total 15-Minute Ve	olume [veh/h]	0	0	0	95	0	38	0	179	36	31	153	0		
Total Analysis Vo	lume [veh/h]	0	0	0	378	0	150	0	715	143	125	611	0		
Presence of On-S	treet Parking				No		No	No		No	No		No		
On-Street Parking Ma	neuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Local Bus Stopp	ng Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0		
v_do, Outbound Pedestrian Vo			0			0			0			0			
v_di, Inbound Pedestrian Volu			0			0			0			0			
v_co, Outbound Pedestrian Vo	-		2			0			1			0			
v_ci, Inbound Pedestrian Volu	ě	[	1			0			2			0			
v_ab, Corner Pedestria	an Volume [ped/h]		0			0		0				0			
Bicycle Volume	[bicycles/b]		0			0			0			0			

Valley Ranch Residential Subdivision TIS AM Future

Ww-Trans

W-Trans 1

## Generated with PTV VISTRO

Version 7.00-05

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

#### Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	48	0	0	12	0	0	12	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall		1			No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS AM Future





### Lane Group Calculations

ine Group Calculations					
Lane Group	С	С	С	L	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	29	29	29	29
g / C, Green / Cycle	0.38	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.34	0.25	0.27	0.22	0.19
s, saturation flow rate [veh/h]	1550	1683	1588	579	3204
c, Capacity [veh/h]	587	821	775	273	1564
d1, Uniform Delay [s]	17.59	10.57	10.80	20.71	9.73
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.29	2.37	2.84	5.43	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
ne Group Results					
X, volume / capacity	0.90	0.52	0.55	0.46	0.39
d, Delay for Lane Group [s/veh]	22.88	12.94	13.64	26.14	10.47
Lane Group LOS	С	В	В	С	В
Critical Lane Group	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/In]	6.31	3.92	4.07	1.91	2.29
50th-Percentile Queue Length [ft/ln]	157.86	98.10	101.64	47.67	57.31
95th-Percentile Queue Length [veh/ln]	10.44	7.06	7.32	3.43	4.13
95th-Percentile Queue Length [ft/In]	260.89	176.57	182.95	85.81	103.1

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Version 7.00-05

#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	22.88	22.88	22.88	0.00	13.22	13.64	26.14	10.47	0.00
Movement LOS				С	С	С		В	В	С	В	
d_A, Approach Delay [s/veh]		0.00			22.88			13.29			13.13	
Approach LOS		А			С		В					
d_l, Intersection Delay [s/veh]	15.62											
Intersection LOS	В											
Intersection V/C	0.611											

#### Other Modes

g_Walk,mi, Effective Walk Time [s]         9.0         0.0         0.0         0.0           M_corner, Corner Circulation Area [ft?/ped]         0.00         0.00         0.00         0.00           M_CW, Crosswalk Circulation Area [ft?/ped]         0.00         0.00         0.00         0.00           M_CW, Crosswalk Circulation Area [ft?/ped]         0.00         0.00         0.00         0.00           d_p, Pedestrian Delay [s]         21.68         0.00         0.000         0.000           Crosswalk LOS         A         F         F         F           s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         0         1467         267         267           d_b, Bicycle Delay [s]         30.00         2.13         22.53         22.53           I_b,hit, Bicycle LOS         D         B         B         B					
M_CW, Crosswalk Circulation Area [ft7ped]         0.00         0.00         0.00         0.00           d_p, Pedestrian Delay [s]         21.68         0.00         0.00         0.00           I_p,int, Pedestrian LOS Score for Intersection         1.843         0.000         0.000         0.000           Crosswalk LOS         A         F         F         F           s_b, Saturation Flow Rate of the bicycle lane [bicyclesnt]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicyclesnt]         0         1467         267         267           d_b, Bicycle Delay [s]         30.00         2.13         22.53         22.53           I_b, int, Bicycle LOS Score for Intersection         4.132         2.431         2.267         2.167	g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
d_p, Pedestrian Delay [s]         21.68         0.00         0.00         0.00           I_p,int, Pedestrian LOS Score for Intersection         1.843         0.000         0.000         0.000           Crosswalk LOS         A         F         F         F           s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         0         1467         267         267           d_b, Bicycle Delay [s]         30.00         2.13         22.53         22.53           I_b, int, Bicycle LOS score for Intersection         4.132         2.431         2.267         2.167	M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection         1.843         0.000         0.000           Crosswalk LOS         A         F         F         F           s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         0         1467         267         267           d_b, Bicycle Delay [s]         30.00         2.13         22.53         22.53           I_b,int, Bicycle LOS Score for Intersection         4.132         2.431         2.267         2.167	M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
Crosswalk LOS         A         F         F           S_b, Saturation Flow Rate of the bicycle lane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         0         1467         267         267           d_b, Bicycle Delay [s]         30.00         2.13         22.53         22.53           I_b, int, Bicycle LOS Score for Intersection         4.132         2.431         2.267         2.167	d_p, Pedestrian Delay [s]	21.68	0.00	0.00	0.00
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         0         1467         267         267           d_b, Bicycle Delay [s]         30.00         2.13         22.53         22.53           I_b, int, Bicycle LOS Score for Intersection         4.132         2.431         2.267         2.167	I_p,int, Pedestrian LOS Score for Intersection	1.843	0.000	0.000	0.000
c_b, Capacity of the bicycle lane [bicyclesh]         0         1467         267         267           d_b, Bicycle Delay [s]         30.00         2.13         22.53         22.53           I_b, int, Bicycle LOS Score for Intersection         4.132         2.431         2.267         2.167	Crosswalk LOS	A	F	F	F
d_b, Bicycle Delay [s]         30.00         2.13         22.53         22.53           I_b,int, Bicycle LOS Score for Intersection         4.132         2.431         2.267         2.167	s_b, Saturation Flow Rate of the bicycle lane [bicycles/i	2000	2000	2000	2000
I_b,int, Bicycle LOS Score for Intersection         4.132         2.431         2.267         2.167	c_b, Capacity of the bicycle lane [bicycles/h]	0	1467	267	267
	d_b, Bicycle Delay [s]	30.00	2.13	22.53	22.53
Bicycle LOS D B B B	I_b,int, Bicycle LOS Score for Intersection	4.132	2.431	2.267	2.167
	Bicycle LOS	D	В	В	В

#### Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Valley Ranch Residential Subdivision TIS AM Future Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS AM Future



ersion 7.00-05	Inter	section	Level C	f Servic	e Repo	rt						
			: E Stree									
Control Type: Signalized							(sec / v			1	3.9	
Analysis Method: HCM 6th Editi Analysis Period: 15 minutes	on				,	Leve Volume t	Of Serv			0	B .604	
Analysis Feriou. 13 minutes						volume t	J Capac	ity (v/c).		0.	.004	
Intersection Setup												
Name	I-5 I	North Ra	mps					E Street			E Street	
Approach	N	lorthbour	nd	S	outhbour	nd	E	astboun	d	V	Vestbour	nd
Lane Configuration		+						٦II			IF	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.0
Speed [mph]		45.00			25.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No						No			No	
Crosswalk		No			No			No			No	
Volumes												
Name	I-5 I	North Ra	mps					E Street			E Street	
Base Volume Input [veh/h]	171	5	274	0	0	0	124	969	0	0	565	186
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	171	5	274	0	0	0	124	969	0	0	565	186
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Total 15-Minute Volume [veh/h]	43	1	69	0	0	0	31	242	0	0	141	47
Total Analysis Volume [veh/h]	171	5	274	0	0	0	124	969	0	0	565	186
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major s		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major stre		0			0			0		L	0	
v_co, Outbound Pedestrian Volume crossing minor s	_	0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor stre	et [	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]	_	0			0		0			0		
Bicycle Volume [bicycles/h]		0			0			0			0	

Ww-Trans

Valley Ranch Residential Subdivision TIS

AM Future

W-Trans

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## Phasing & Timing

Generated with PTV VISTRO

Located in CBD

Signal Coordination Group Cycle Length [s]

Coordination Type

Actuation Type

Offset [s]

Offset Reference

Permissive Mode Lost time [s]

Version 7.00-05

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	51	0	0	0	0	0	9	0	0	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Yes

60

Time of Day Pattern Isolated

Fully actuated

0.0

LeadGreen SingleBand

0.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS AM Future





#### Lane Group Calculations

Lane Group Calculations					
Lane Group	С	L	С	С	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	32	32	32	32
g / C, Green / Cycle	0.34	0.53	0.53	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.30	0.19	0.30	0.22	0.24
s, saturation flow rate [veh/h]	1494	640	3204	1683	1548
c, Capacity [veh/h]	508	337	1689	887	816
d1, Uniform Delay [s]	18.76	16.24	9.63	8.65	8.87
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.42	3.07	1.42	1.48	1.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
Lane Group Results					
X, volume / capacity	0.89	0.37	0.57	0.42	0.46
d, Delay for Lane Group [s/veh]	24.17	19.31	11.05	10.13	10.74
Lane Group LOS	С	В	В	В	В
Critical Lane Group	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/In]	5.57	1.57	3.96	2.78	2.90
50th-Percentile Queue Length [ft/In]	139.20	39.29	99.02	69.49	72.50
95th-Percentile Queue Length [veh/In]	9.44	2.83	7.13	5.00	5.22
95th-Percentile Queue Length [ft/ln]	235.94	70.72	178.23	125.08	130.50

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#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.17         24.17         24.17         0.00         0.00         19.31         11.05         0.00         0.00         10.33									10.74			
Movement LOS	vement LOS C C C							В		В	В		
d_A, Approach Delay [s/veh]		24.17			0.00			11.99		10.43			
Approach LOS		С			А			В		В			
d_l, Intersection Delay [s/veh]						13	.87						
Intersection LOS	В												
Intersection V/C						0.6	604						

#### Other Modes

g_Walk,mi, Effective Walk Time [s]         0.0         0.0         0.0         0.0           M_corner, Corner Circulation Area [ft²/ped]         0.00         0.00         0.00         0.00           M_CW, Crosswalk Circulation Area [ft²/ped]         0.00         0.00         0.00         0.00           M_CW, Crosswalk Circulation Area [ft²/ped]         0.00         0.00         0.00         0.00           d_p, Pedestrian Delay [s]         0.00         0.00         0.00         0.000           I_p,int, Pedestrian LOS Score for Intersection         0.000         0.000         0.000         0.000           Crosswalk LOS         F         F         F         F         F           s_b, Saturation Flow Rate of the bicycle iane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         1567         0         167         167           d_b, Bicycle Delay [s]         1.41         30.00         25.21         25.21           I_b, bicycle Delay [s]         1.41         30.00         25.21         25.21           J_b, bicycle LOS Score for Intersection         2.302         4.132         2.461         2.179           Bicycle LOS         B         D         B					
M_CW, Crosswalk Circulation Area [ft*/ped]         0.00         0.00         0.00         0.00           d_p, Pedestrian Delay [s]         0.00         0.00         0.00         0.00           I_p.int, Pedestrian LOS Score for Intersection         0.000         0.000         0.000         0.000           Crosswalk LOS         F         F         F         F         F           s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         1567         0         167         167           d_b, Bicycle Delay [s]         1.41         30.00         25.21         25.21           I_b,int, Bicycle LOS Score for Intersection         2.302         4.132         2.461         2.179	g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
d_p, Pedestrian Delay [s]         0.00         0.00         0.00         0.00           I_p,int, Pedestrian LOS Score for Intersection         0.000         0.000         0.000         0.000           Crosswalk LOS         F         F         F         F         F           s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         1567         0         167         167           d_b, Bicycle Delay [s]         1.41         30.00         25.21         25.21           I_b, int, Bicycle LOS Score for Intersection         2.302         4.132         2.461         2.179	M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection         0.000         0.000         0.000         0.000           Crosswalk LOS         F         T         F         T         F         T         G         O         O         O         O         O         O         O         O         O         O         O         O         O         D         O         D         O         D         D         D         D         D         D         D         D	M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
Crosswalk LOS         F         F         F         F           s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         1567         0         167         167           d_b, Bicycle Delay [s]         1.41         30.00         25.21         25.21           I_b,int, Bicycle LOS Score for Intersection         2.302         4.132         2.461         2.179	d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]         2000         2000         2000         2000           c_b, Capacity of the bicycle lane [bicycles/h]         1567         0         167         167           d_b, Bicycle Delay [s]         1.41         30.00         25.21         25.21           I_b,int, Bicycle LOS Score for Intersection         2.302         4.132         2.461         2.179	I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
c_b, Capacity of the bicycle lane (bicycles/h)         1567         0         167         167           d_b, Bicycle Delay [s]         1.41         30.00         25.21         25.21           I_b, hit, Bicycle LOS Score for Intersection         2.302         4.132         2.461         2.179	Crosswalk LOS	F	F	F	F
d_b, Bicycle Delay [s]         1.41         30.00         25.21         25.21           I_b,int, Bicycle LOS Score for Intersection         2.302         4.132         2.461         2.179	s_b, Saturation Flow Rate of the bicycle lane [bicycles/	n] 2000	2000	2000	2000
I_b,int, Bicycle LOS Score for Intersection         2.302         4.132         2.461         2.179	c_b, Capacity of the bicycle lane [bicycles/h]	1567	0	167	167
	d_b, Bicycle Delay [s]	1.41	30.00	25.21	25.21
Bicycle LOS B D B B	I_b,int, Bicycle LOS Score for Intersection	2.302	4.132	2.461	2.179
	Bicycle LOS	В	D	В	В

#### Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6G: 2 9s		<u></u>														

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Valley Ranch Residential Subdivision TIS AM Future



			Level O									
Control Type: Signalized Analysis Method: HCM 6th Editior Analysis Period: 15 minutes		ction 3:	E Stree	t/Margu		Delay	/ (sec / v I Of Serv o Capac	/ice:			5.1 B 295	
Intersection Setup												
Name	Mar	guerite S	treet					E Street			E Street	1
Approach	N	lorthbour	ıd	s	outhbour	nd	E	astboun	d	v	Vestbour	nd
Lane Configuration		٦ŀ			٦Þ			-			-11r	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Rig
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120
Speed [mph]		25.00			25.00			25.00			25.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	
Volumes												
Name	Man	querite S	treet					E Street			E Street	
Base Volume Input [veh/h]	85	19	24	44	6	49	156	723	28	8	406	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(
Total Hourly Volume [veh/h]	85	19	24	44	6	49	156	723	28	8	406	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
Total 15-Minute Volume [veh/h]	21	5	6	11	2	12	39	181	7	2	102	8
Total Analysis Volume [veh/h]	85	19	24	44	6	49	156	723	28	8	406	3
Presence of On-Street Parking	No		No	No		No	No		No	No		N
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	(
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	(
v_do, Outbound Pedestrian Volume crossing major stre	e	1			1			1			1	
v_di, Inbound Pedestrian Volume crossing major street	[	1			1			1			1	
v_co, Outbound Pedestrian Volume crossing minor stre	e	0			1			2			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			2			1			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0		0		0			

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#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

#### Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
<ol><li>Clearance Lost Time [s]</li></ol>	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### **Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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Lane Group Calculations

Lane Group	L	С	L	С	L	С	C C	L	С	С
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.0
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	23	23	23	23	23	23
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.07	0.03	0.04	0.04	0.18	0.22	0.22	0.01	0.13	0.13
s, saturation flow rate [veh/h]	1212	1532	1227	1452	854	1683	1661	640	1683	163
c, Capacity [veh/h]	659	752	672	712	324	633	625	217	633	616
d1, Uniform Delay [s]	9.94	8.01	9.41	8.09	21.24	15.07	15.07	21.85	13.45	13.4
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.1
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
d2, Incremental Delay [s]	0.40	0.15	0.19	0.21	1.10	0.91	0.92	0.07	0.33	0.3
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
ne Group Results										
X, volume / capacity	0.13	0.06	0.07	0.08	0.48	0.60	0.60	0.04	0.35	0.3
	1	i	1	i		i	i		i	i –

d, Delay for Lane Group [s/veh]	10.35	8.16	9.60	8.31	22.35	15.97	15.99	21.92	13.78	13.81
Lane Group LOS	В	A	A	A	С	В	В	С	В	В
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/In]	0.68	0.29	0.33	0.37	2.01	3.94	3.89	0.10	2.04	2.00
50th-Percentile Queue Length [ft/ln]	16.89	7.20	8.29	9.36	50.37	98.49	97.27	2.43	50.92	50.08
95th-Percentile Queue Length [veh/In]	1.22	0.52	0.60	0.67	3.63	7.09	7.00	0.17	3.67	3.61
95th-Percentile Queue Length [ft/ln]	30.41	12.95	14.92	16.86	90.66	177.28	175.09	4.37	91.66	90.15

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#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.35	8.16	8.16	9.60	8.31	8.31	22.35	15.98	15.99	21.92	13.80	13.81		
Movement LOS	В	А	A	A	А	A	С	В	В	С	В	В		
d_A, Approach Delay [s/veh]		9.61			8.88			17.07			13.94			
Approach LOS		А			А			В В		с в 13.94				
d_I, Intersection Delay [s/veh]	15.07													
Intersection LOS						E	3							
Intersection V/C						0.2	95				В			

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	1.978	2.226	2.637	2.544
Crosswalk LOS	А	В	В	В
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	ı] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	12.03	12.03	7.50	7.50
I_b,int, Bicycle LOS Score for Intersection	1.771	1.723	2.308	1.928
Bicycle LOS	A	A	В	A

#### Sequence

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Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 26s	SG: 4 34s	
SG: 102 2 <mark>2</mark> 5	SG: 104 15s	8
SG: 6 26s	SG: 8 34s	
SG: 106 22s	SG: 108 15s	8

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		section										
Control Type: Signalized Analysis Method: HCM 6th Edition Analysis Period: 15 minutes		ection 1	EStree	21/1-5 50		Delay	/ (sec / v I Of Serv o Capac	/ice:			5.3 B .692	
Intersection Setup												
Name				I-5 S	South Ra	mps		E Street			E Street	1
Approach	N	lorthbour	ıd	S	outhbour	nd	E	astboun	d	V	Vestbour	nd
Lane Configuration				+				IF			٦II	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.0
Speed [mph]		30.00			45.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			No			No			No	
Volumes												
Name				I-5 S	South Ra	mps		E Street			E Street	
Base Volume Input [veh/h]	0	0	0	250	5	178	0	675	173	239	753	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	250	5	178	0	675	173	239	753	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Total 15-Minute Volume [veh/h]	0	0	0	63	1	45	0	169	43	60	188	0
Total Analysis Volume [veh/h]	0	0	0	250	5	178	0	675	173	239	753	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	e	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	1			0			1			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	1		0		1			0			
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0		1	0	

Valley Ranch Residential Subdivision TIS PM Future

Ww-Trans

W-Trans 1

## Generated with PTV VISTRO

Version 7.00-05

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

#### Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	48	0	0	12	0	0	12	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall		1			No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS PM Future





Lane Group Calculations

ine Group Calculations					
Lane Group	С	С	С	L	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	33	33	33	33
g / C, Green / Cycle	0.32	0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.28	0.25	0.27	0.41	0.23
s, saturation flow rate [veh/h]	1528	1683	1569	585	3204
c, Capacity [veh/h]	491	918	855	318	1747
d1, Uniform Delay [s]	19.30	8.31	8.52	21.60	8.13
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.33	1.67	2.05	15.07	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
ne Group Results					
X, volume / capacity	0.88	0.46	0.50	0.75	0.43
d, Delay for Lane Group [s/veh]	24.63	9.98	10.57	36.67	8.90
Lane Group LOS	С	А	В	D	A
Critical Lane Group	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/In]	5.42	3.22	3.35	4.62	2.50
50th-Percentile Queue Length [ft/In]	135.44	80.38	83.65	115.50	62.48
95th-Percentile Queue Length [veh/In]	9.23	5.79	6.02	8.15	4.50
95th-Percentile Queue Length [ft/In]	230.87	144.69	150.57	203.63	112.4

## Generated with PTV VISTRO

Version 7.00-05

#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.63	24.63	24.63	0.00	10.20	10.57	36.67	8.90	0.00
Movement LOS			С	С	С		В	В	D	A		
d_A, Approach Delay [s/veh]		0.00		24.63			10.27			15.59		
Approach LOS	A			С			В					
d_l, Intersection Delay [s/veh]	15.33											
Intersection LOS	В											
Intersection V/C	0.692											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.151	0.000	0.000	0.000
Crosswalk LOS	В	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	<b>1]</b> 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1467	267	267
d_b, Bicycle Delay [s]	30.00	2.13	22.53	22.53
I_b,int, Bicycle LOS Score for Intersection	4.132	2.274	2.259	2.378
Bicycle LOS	D	В	В	В

#### Sequence

Valley Ranch Residential Subdivision TIS

PM Future

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Valley Ranch Residential Subdivision TIS PM Future Ww-Trans

W-Trans

3



ersion 7.00-05	Inter	section	Level C	of Servic	e Repo	rt								
		ection 2				nps								
Control Type: Signalized Analysis Method: HCM 6th Editi	~~						/ (sec / v			1	10.2			
Analysis Method: 15 minutes	011	Level Of Service: Volume to Capacity (v/c):								B 0.607				
,								, ( . ,						
Intersection Setup														
Name	I-5	North Ra	mps					E Street			E Street			
Approach	N	lorthbour	nd	S	outhbour	nd	E	astboun	d	Westbou				
Lane Configuration		+						٦II						
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ		
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0		
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	0	0	0		
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.0		
Speed [mph]		45.00			25.00			25.00			30.00			
Grade [%]		0.00			0.00			0.00		0.00				
Curb Present		No						No			No			
Crosswalk		No			No			No		No				
Volumes														
Name	I-5	North Ra	mps					E Street			E Street			
Base Volume Input [veh/h]	140	5	127	0	0	0	75	850	0	0 0 852		436		
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000		
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00		
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000		
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Total Hourly Volume [veh/h]	140	5	127	0	0	0	75	850	0	0	852	436		
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000		
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000		
Total 15-Minute Volume [veh/h]	35	1	32	0	0	0	19	213	0	0	213	109		
Total Analysis Volume [veh/h]	140	5	127	0	0	0	75	850	0	0	852	436		
Presence of On-Street Parking	No		No				No		No	No		No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0		
v_do, Outbound Pedestrian Volume crossing major s	_	0			0			0	0					
v_di, Inbound Pedestrian Volume crossing major stre		0			0			0			0			
v_co, Outbound Pedestrian Volume crossing minor s		0			0			0						
v_ci, Inbound Pedestrian Volume crossing minor stre	etil	0			0			0			0			
v_ab, Corner Pedestrian Volume [ped/h] Bicycle Volume [bicycles/h]	_	0			0			0			0			

Valley Ranch Residential Subdivision TIS PM Future Ww-Trans

W-Trans 5 Generated with PTV VISTRO

Version 7.00-05

## Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	51	0	0	0	0	0	9	0	0	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS PM Future





## Lane Group Calculation

ane Group Calculations					
Lane Group	С	L	С	С	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	39	39	39	39
g / C, Green / Cycle	0.21	0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.18	0.19	0.27	0.38	0.43
s, saturation flow rate [veh/h]	1519	386	3204	1683	1503
c, Capacity [veh/h]	327	253	2087	1096	979
d1, Uniform Delay [s]	22.53	15.97	4.97	5.92	6.39
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.44	2.96	0.59	2.31	3.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
ane Group Results					
X, volume / capacity	0.83	0.30	0.41	0.59	0.66
d, Delay for Lane Group [s/veh]	27.98	18.93	5.56	8.23	9.85
Lane Group LOS	С	В	A	A	A
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/In]	3.66	0.98	1.99	3.75	4.23
50th-Percentile Queue Length [ft/In]	91.38	24.41	49.77	93.71	105.70
95th-Percentile Queue Length [veh/ln]	6.58	1.76	3.58	6.75	7.60
95th-Percentile Queue Length [ft/In]	164.49	43.93	89.58	168.68	190.01

# Generated with PTV VISTRO

Version 7.00-05

#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.98	27.98	27.98	0.00	0.00	0.00	18.93	5.56	0.00	0.00	8.62	9.85
Movement LOS	С	С	С				В	А			A	A
d_A, Approach Delay [s/veh]		27.98			0.00			6.65				
Approach LOS		С			Α			А				
d_l, Intersection Delay [s/veh]						10	.22					
Intersection LOS	В											
Intersection V/C		0.607										

## Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	n] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1567	0	167	167
d_b, Bicycle Delay [s]	1.41	30.00	25.21	25.21
I_b,int, Bicycle LOS Score for Intersection	2.008	4.132	2.323	2.622
Bicycle LOS	В	D	В	В

## Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G: 2 9s																00000

Valley Ranch Residential Subdivision TIS PM Future Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS PM Future



			Level O										
Control Type:         Signalized           Analysis Method:         HCM 6th Edition           Analysis Period:         15 minutes		ction 3:	E Stree	t/Margu		Delay	/ (sec / v I Of Serv o Capac	vice:		1 0.			
Intersection Setup													
Name	Mar	guerite S	treet					E Street			E Street		
Approach	Northbound			Southbound			E	astboun	d	Westbound			
Lane Configuration		46			46			-11-		-11-			
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1	
Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.0	
Speed [mph]		25.00	1		25.00			25.00	I		25.00		
Grade [%]		0.00			0.00			0.00			0.00		
Curb Present		No			No			No			No		
Crosswalk		Yes			Yes			Yes		Yes			
Volumes													
Name	Man	querite S	treet					E Street			E Street		
Base Volume Input [veh/h]	29	14	15	67	24	117	54	416	49	25	574	72	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volume [veh/h]	29	14	15	67	24	117	54	416	49	25	574	72	
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Total 15-Minute Volume [veh/h]	7	4	4	17	6	29	14	104	12	6	144	18	
Total Analysis Volume [veh/h]	29	14	15	67	24	117	54	416	49	25	574	72	
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
v_do, Outbound Pedestrian Volume crossing major stre	e	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stre	e	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0		
Bicycle Volume [bicycles/h]		0			0			0			0		

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#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

#### Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
<ol><li>Clearance Lost Time [s]</li></ol>	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS PM Future



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Valley Ranch Residential Subdivision TIS PM Future

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Lane Group	L	C	L	С	L	С	C	L	С	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.0
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.0
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
g_i, Effective Green Time [s]	32	32	32	32	20	20	20	20	20	20
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.34	0.34	0.34	0.34	0.34	0.3
(v / s)_i Volume / Saturation Flow Rate	0.03	0.02	0.05	0.10	0.08	0.14	0.14	0.03	0.20	0.2
s, saturation flow rate [veh/h]	1123	1542	1243	1468	706	1683	1622	835	1683	16
c, Capacity [veh/h]	638	818	742	779	208	566	545	270	566	54
d1, Uniform Delay [s]	8.93	6.74	7.91	7.31	24.89	15.39	15.41	20.84	16.44	16.
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
d2, Incremental Delay [s]	0.13	0.08	0.24	0.51	0.65	0.49	0.52	0.15	0.95	1.0
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.
ne Group Results										
X, volume / capacity	0.05	0.04	0.09	0.18	0.26	0.42	0.42	0.09	0.58	0.
d. Delay for Lane Group [s/yeh]	9.07	6.82	8.15	7.82	25.55	15.88	15.93	20.98	17.39	17

d, Delay for Lane Group [s/veh]	9.07	6.82	8.15	7.82	25.55	15.88	15.93	20.98	17.39	17.46
Lane Group LOS	A	A	A	A	С	В	В	С	В	В
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/In]	0.21	0.17	0.45	0.92	0.74	2.38	2.32	0.30	3.58	3.47
50th-Percentile Queue Length [ft/In]	5.30	4.28	11.28	22.91	18.38	59.60	58.05	7.38	89.62	86.72
95th-Percentile Queue Length [veh/In]	0.38	0.31	0.81	1.65	1.32	4.29	4.18	0.53	6.45	6.24
95th-Percentile Queue Length [ft/ln]	9.54	7.70	20.30	41.24	33.09	107.28	104.48	13.28	161.31	156.10

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#### Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.07	9.07 6.82 6.82			7.82	7.82	25.55	15.90	15.93	20.98	17.42	17.46
Movement LOS	Α	А	A	A	А	A	С	В	В	С	В	В
d_A, Approach Delay [s/veh]		7.94		7.93				16.91		17.56		
Approach LOS	A				А			В				
d_I, Intersection Delay [s/veh]					15.57							
Intersection LOS	В											
Intersection V/C	0.292											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	1.999	2.092	2.523	2.566
Crosswalk LOS	A	В	В	В
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	i] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	12.03	12.03	7.50	7.50
I_b,int, Bicycle LOS Score for Intersection	1.655	1.903	1.988	2.113
Bicycle LOS	А	A	A	В

## Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 26s	SG:4 34s
SG: 102 2 <mark>2</mark> 5	SG: 104 15s
SG:6 26s	SG:8 34s
SG: 106 2 <mark>2</mark> s	SG: 108 15s

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Valley Ranch Residential Subdivision TIS PM Future

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Version 2021 (S	P 0-4)	

					ce Repo outh Ran							
Control Type: Two-way st Analysis Method: HCM 6th Edi Analysis Period: 15 minute	op tion		E Stree	201-5 50		Delay Level	(sec / v Of Serv	/ice:			6.8 C 072	
Analysis Period: 15 minute	s				```	/olume to	o Capac	ity (v/c):		0.	072	
ntersection Setup												
Name				I-5 \$	South Ra	mps		E Street		E Street		
Approach	N	orthbour	d	S	outhbour	nd	E	Eastbound Westbo			Vestboun	nd
Lane Configuration					+			F			1	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Rig
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Speed [mph]		30.00			45.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk	Yes				No			No			No	
Volumes												
Name				I-5 \$	South Ra	mps		E Street			E Street	
Base Volume Input [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	0	0	5	0	23	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	21	0	77	0	267	71	43	299	0
Total Hourly Volume [veh/h]				0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.00
Total Hourly Volume [veh/h] Peak Hour Factor	1.0000	1.0000	1.0000	0.9300								1
, , , ,		1.0000 1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Peak Hour Factor	1.0000				1.0000	1.0000 21	1.0000 0	1.0000 72	1.0000 19	1.0000 12	1.0000 80	
Peak Hour Factor Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000								1.00 0

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Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		Yes		
Storage Area [veh]	0	2	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.12	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	16.75	17.01	10.52	0.00	0.00	0.00	8.15	0.00	0.00
Movement LOS				С	С	В		A	A	А	A	
95th-Percentile Queue Length [veh/In]	0.00	0.00	0.00	0.39	0.39	0.39	0.00	0.00	0.00	0.12	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	9.75	9.75	9.75	0.00	0.00	0.00	3.02	0.00	0.00
d_A, Approach Delay [s/veh]		0.00			11.87			0.00			1.02	
Approach LOS		A			В			А				
d_l, Intersection Delay [s/veh]	1.95											
Intersection LOS	C											

Valley Ranch Residential Subdivision TIS AM Existing + Project

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				Level O									
Control Type: Analysis Method: Analysis Period:	Two-way stop HCM 6th Edition 15 minutes		ection 2	: E Stree	et/I-5 No		Dela	y (sec / v I Of Serv o Capac	/ice:			8.4 C 222	
Intersection Setup													
Nam	e	I-5 I	North Ra	mps					E Street			E Street	
Appro	ach	N	lorthbour	nd	S	outhbour	nd	E	astboun	d	V	Vestbour	d
Lane Confi	guration		+						Ъ			F	
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Wi	ith [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in	Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket	Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in	Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket I	ength [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [	mph]		45.00	-		25.00			25.00			30.00	
Grade	[%]		0.00			0.00			0.00			0.00	
Crossv	valk		No			No			No			No	
Volumes													
Nam	e	I-5 I	North Ra	mps					E Street			E Street	
Base Volume I	nput [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34
Base Volume Adj	ustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles F	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Vol	ume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated	Trips [veh/h]	0	0	8	0	0	0	0	8	0	0	37	9
Diverted Trip	os [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trip	is [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustm	ent Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volum	e [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Vo	lume [veh/h]	63	0	40	0	0	0	73	215	0	0	275	43
Peak Hour	Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000
Other Adjustn	ent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute \		18	0	11	0	0	0	20	60	0	0	76	12
Total Analysis V	olume [veh/h]	70	0	44	0	0	0	81	239	0	0	306	48
Pedestrian Vol	ume [ped/h]		0			0			0			0	
alley Ranch Residential Sub	division TIS			Ти									W-Trans

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes			
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

0.22	0.00	0.06	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
18.44	18.42	11.50	0.00	0.00	0.00	8.20	0.00	0.00	0.00	0.00	0.00
С	С	В				A	A			A	A
0.84	0.84	0.84	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00
21.10	21.10	21.10	0.00	0.00	0.00	5.40	0.00	0.00	0.00	0.00	0.00
	15.76			0.00			2.08			0.00	
	С			A			А			А	
					3.	12					
					(	С					
	18.44 C 0.84	18.44         18.42           C         C           0.84         0.84           21.10         21.10           15.76	18.44         18.42         11.50           C         C         B           0.84         0.84         0.84           21.10         21.10         21.10           15.76	18.44         18.42         11.50         0.00           C         C         B            0.84         0.84         0.84         0.00           21.10         21.10         21.10         0.00           15.76	18.44         18.42         11.50         0.00         0.00           C         C         B             0.84         0.84         0.84         0.00         0.00           21.10         21.10         21.00         0.00         0.00	18.44         18.42         11.50         0.00         0.00         0.00           C         C         B         -         -         -           0.84         0.84         0.84         0.00         0.00         0.00           21.10         21.10         0.00         0.00         0.00           15.76         0.00         -         A	18.44         18.42         11.50         0.00         0.00         0.00         8.20           C         C         B          A           0.84         0.84         0.84         0.00         0.00         0.00         0.22           21.10         21.10         21.10         0.00         0.00         0.00         5.40           15.76         0.02         0.02         0.02         0.02         0.02         0.00         <	18.44         18.42         11.50         0.00         0.00         0.00         8.20         0.00           C         C         B          A         A           0.84         0.84         0.84         0.00         0.00         0.00         0.22         0.00           21.10         21.10         21.10         0.00         0.00         0.00         5.40         0.00           15.76         0.00         A         A         A           C         A         3.12         A         A	18.44         18.42         11.50         0.00         0.00         8.20         0.00         0.00           C         C         B          A         A           0.84         0.84         0.84         0.00         0.00         0.00         0.00           21.10         21.10         0.00         0.00         0.00         5.40         0.00         0.00           15.76         0.00         A         A         A         A           Sc         A         Sc         3.12         A         A	18.44         18.42         11.50         0.00         0.00         8.20         0.00         0.00         0.00           C         C         B          A         A             0.84         0.84         0.84         0.00         0.00         0.00         0.22         0.00         0.00         0.00           21.10         21.10         0.00         0.00         0.00         5.40         0.00         0.00         0.00           15.76         0.00         A         A         A         A         A            C         A         A         A         A         A         A             15.76         0.00         0.00         5.40         0.00         0.00         0.00            C         A         A         A         A         A         A	18.44         18.42         11.50         0.00         0.00         0.00         8.20         0.00         0.00         0.00           C         C         B         Image: Constraint of the state of

Valley Ranch Residential Subdivision TIS AM Existing + Project

Control Type: Analysis Method: Analysis Period:		Inter	section	Level C	f Servic	e Repo	rt						
Analysis Method:		Interse	ction 3:	E Stree	t/Margu	erite St						~ .	
	All-way stop HCM 6th Editio	n						/ (sec / v I Of Serv				8.4 A	
	15 minutes					,	Volume t				0	.150	
Internetien Ontern													
Intersection Setup	2	Man	querite S	treet					E Street			E Street	
Approa			lorthbour		s	outhbou	nd		astboun		v	Vestbour	
Lane Config			+			-			-	u			
Turning Mo		Left	Thru	Right	Left Thru Right		Left	Thru	Right	Left	Thru	Righ	
Lane Wid		12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes in E		0	0	0	12.00	0	0	12.00	0	12.00	12.00	0	12.0
Entry Pocket L		100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.0
No. of Lanes in	0 11	0	0	0	0	0	0	235.00	0	450.00	0	0	120.0
Exit Pocket L		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [n		0.00	25.00	0.00	0.00	25.00	0.00	0.00	25.00	0.00	0.00	25.00	0.00
Grade [			0.00		0.00			25.00			0.00		
Crossw			Yes			Yes			Yes			Yes	
Volumes			100			100			100			100	
Name		Mar	guerite S	treet					E Street			E Street	
Name Base Volume Input [veh/h]		3	0	2	1	1	17	24	86	2	0	58	6
Base Volume Adju	stment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Heavy Vehicles Pe	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
In-Process Volu	me [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated	[rips [veh/h]	46	0	6	0	0	0	0	8	8	3	0	0
Diverted Trip	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
	s [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trip			0	0	0	0	0	0	0	0	0	0	0
		0				0	0	0	0	0	0	0	0
Pass-by Trip	nt Volume [veh/h]	0	0	0	0					10	1		
Pass-by Trip: Existing Site Adjustme	nt Volume [veh/h] e [veh/h]		0	0	0	1	17	24	94		3	58	6
Pass-by Trip Existing Site Adjustme Other Volum	nt Volume [veh/h] e [veh/h] ume [veh/h]	0					17 0.8600	24 0.8600	94 0.8600	0.8600	3 0.8600	58 0.8600	
Pass-by Trip Existing Site Adjustme Other Volum Total Hourly Vol	nt Volume [veh/h] e [veh/h] ume [veh/h] Factor	0 49	0	8	1	1				0.8600		<u> </u>	6 0.860 1.000
Pass-by Trip Existing Site Adjustme Other Volum Total Hourly Vol Peak Hour	nt Volume [veh/h] e [veh/h] ume [veh/h] Factor ent Factor	0 49 0.8600	0 0.8600	8 0.8600	1 0.8600	1 0.8600	0.8600	0.8600	0.8600		0.8600	0.8600	0.860
Pass-by Trip Existing Site Adjustme Other Volum Total Hourly Vol Peak Hour Other Adjustm	nt Volume [veh/h] e [veh/h] ume [veh/h] Factor ent Factor olume [veh/h]	0 49 0.8600 1.0000	0 0.8600 1.0000	8 0.8600 1.0000	1 0.8600 1.0000	1 0.8600 1.0000	0.8600	0.8600	0.8600	1.0000	0.8600	0.8600	0.860

Version 2021 (SP 0-4) Intersection Settings

Lanes

Lanes									
Capacity per Entry Lane [veh/h]	685	626	784	659	726	845	643	706	819
Degree of Utilization, x	0.10	0.00	0.03	0.04	0.15	0.01	0.00	0.09	0.01
Movement, Approach, & Intersection Results									
95th-Percentile Queue Length [veh]	0.32	0.00	0.08	0.13	0.53	0.04	0.01	0.31	0.03
95th-Percentile Queue Length [ft]	7.96	0.12	2.06	3.32	13.17	1.08	0.35	7.83	0.65
Approach Delay [s/veh]	8.81	7.	47		8.39			8.22	
Approach LOS	A	/	4		А			А	
Intersection Delay [s/veh]			8.	37					
Intersection LOS				4					

Valley Ranch Residential Subdivision TIS AM Existing + Project



W-Trans 6

AM Existing + Project

Ww-Trans

Generated with	PTV	VISTRO
Version 2021 (S	P 0-4)	

			Level Of Servic 4: E Street/Proj				
Control Type: Analysis Method: Analysis Period:	Two-way stop HCM 6th Edition 15 minutes	mersection	. E ouccurroj	Delay Level	v (sec / veh): Of Service: o Capacity (v/c):		3.8 A 006
Analysis Fellou.	10 minutes			volume a	o capacity (v/c).	0.	000
tersection Setup							
Nam	ie	Project	Street	E SI	reet		
Approa	ach	North	bound	Eastb	ound	West	bound
Lane Confi	guration		<b>→</b>	F	•	+	1
Turning Mo	ovement	Left	Right	Thru	Right	Left	Thru
Lane Wie	dth [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in	Entry Pocket	0	0	0	0	0	0
Entry Pocket	Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in	Exit Pocket	0	0	0	0	0	0
Exit Pocket I	_ength [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [	Speed [mph]		25.00		.00	25	.00
Grade	[%]	0.	00	0.	00	0.	00
Crossv	valk	N	0	N	0	N	lo
olumes							
Nam	ie	Project	Street	E SI	reet		
Base Volume I	nput [veh/h]	0	0	89	0	0	64
Base Volume Adj	ustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Heavy Vehicles P	Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
In-Process Vol	ume [veh/h]	0	0	0	0	0	0
Site-Generated	Trips [veh/h]	0	6	6	8	0	3
Diverted Trip	os [veh/h]	0	0	0	0	0	0
Pass-by Trir	ac [vob/b]	0	0	0	0	0	0
1 ass-by 114	Pass-by Trips [veh/h]						0
Existing Site Adjustme	. ,	0	0	0	0	0	0
, ,	ent Volume [veh/h]		0	0	0	0	0
Existing Site Adjustme	ent Volume [veh/h] ne [veh/h]	0	-	-	-		
Existing Site Adjustme Other Volum	ent Volume [veh/h] ne [veh/h] lume [veh/h]	0	0	0	0	0	0 67
Existing Site Adjustme Other Volum Total Hourly Vo	ent Volume [veh/h] ent (veh/h] lume [veh/h] Factor	0 0 0 0	0	0 95	0 8	0	0 67 1.000
Existing Site Adjustme Other Volum Total Hourly Vo Peak Hour	ent Volume [veh/h] e [veh/h] e [veh/h] e [veh/h] e [veh/h] e factor ent Factor	0 0 0 1.0000	0 6 1.0000	0 95 1.0000	0 8 1.0000	0 0 1.0000	0 67 1.0000
Existing Site Adjustm Other Volum Total Hourly Vo Peak Hour Other Adjustm	ent Volume [veh/h] ne [veh/h] lume [veh/h] r Factor nent Factor /olume [veh/h]	0 0 0 1.0000 1.0000	0 6 1.0000 1.0000	0 95 1.0000 1.0000	0 8 1.0000 1.0000	0 0 1.0000 1.0000	0 67 1.0000 1.0000

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.39	8.79	0.00	0.00	7.42	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/In]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/In]	0.47	0.47	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.	79	0.0	00	0.0	00
Approach LOS	A	A.	A	A.	A	4
d_l, Intersection Delay [s/veh]			0.3	30		
Intersection LOS			F	Ą		

Valley Ranch Residential Subdivision TIS AM Existing + Project

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AM Existing + Project

Valley Ranch Residential Subdivision TIS



Generated with	PTV	VISTRO
Version 2021 (S	P 0-4)	

					e Repo							
Control Type:         Two-way sto           Analysis Method:         HCM 6th Edit           Analysis Period:         15 minutes	p ion		2000			Delay	r (sec / v Of Serv o Capac	vice:			21.0 C .188	
ntersection Setup												
Name				I-5 \$	South Ra	mps		E Street			E Street	
Approach	N	orthbour	ıd	s	outhbour	nd	E	astboun	d	v	Vestboun	ıd
Lane Configuration					+			F			1	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Rig
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	(
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.
Speed [mph]		30.00			45.00			25.00			30.00	<u> </u>
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			No			No				
olumes												
Name				I-5 \$	South Ra	mps		E Street			E Street	
Base Volume Input [veh/h]	0	0	0	30	1	110	0	355	79	25	324	- (
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(
Site-Generated Trips [veh/h]	0	0	0	10	0	0	0	16	0	14	10	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volume [veh/h]	0	0	0	40	1	110	0	371	79	39	334	- (
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.0
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
Total 15-Minute Volume [veh/h]	0	0	0	11	0	31	0	104	22	11	94	
		0	0	45	1	124	0	417	89	44	375	
Total Analysis Volume [veh/h]	0	0	0	45	1 '	124	0					

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		Yes		
Storage Area [veh]	0	2	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

0.00	0.00	0.00	0.19	0.00	0.18	0.00	0.00	0.00	0.04	0.00	0.00
0.00	0.00	0.00	21.01	20.85	11.33	0.00	0.00	0.00	8.56	0.00	0.00
			С	С	В		A	A	А	A	
0.00	0.00	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.13	0.00	0.00
0.00	0.00	0.00	17.70	17.70	17.70	0.00	0.00	0.00	3.26	0.00	0.00
	0.00			13.95			0.00			0.90	
	A			В			А			А	
					2.	51					
					(	2					
	0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00         0.00         0.00           0.00         0.00         0.00           0.00         0.00         0.00           0.00         0.00         0.00	0.00         0.00         0.00         21.01             C           0.00         0.00         0.71           0.00         0.00         17.70	0.00         0.00         0.00         21.01         20.85           0.00         0.00         C         C         C           0.00         0.00         0.00         0.71         0.71           0.00         0.00         0.00         17.70         17.70           0.00         0.00         13.95         13.95	0.00         0.00         0.00         21.01         20.85         11.33           0.00         0.00         C         C         B           0.00         0.00         0.71         0.71         0.71           0.00         0.00         0.00         17.70         17.70         17.70           0.00         A         B         B         B         B	0.00         0.00         21.01         20.85         11.33         0.00           Image: Constraint of the stress of	0.00         0.00         0.00         21.01         20.85         11.33         0.00         0.00           0.00         0.00         0.7         C         C         B         A           0.00         0.00         0.71         0.71         0.71         0.00         0.00           0.00         0.00         17.70         17.70         17.70         0.00         0.00           0.00         .0.00         13.95         0.00         A         A	0.00         0.00         0.00         21.01         20.85         11.33         0.00         0.00         0.00           0.00         0.00         0.00         C         C         B         A         A           0.00         0.00         0.01         0.71         0.71         0.71         0.00         0.00         0.00           0.00         0.00         17.70         17.70         17.70         0.00         0.00         0.00           0.00         0.00         13.95         A         A           2.51	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	0.00         0.00         21.01         20.85         11.33         0.00         0.00         8.56         0.00           Image: Ima

Valley Ranch Residential Subdivision TIS PM Existing + Project

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Valley Ranch Residential Subdivision TIS PM Existing + Project



ersion 2021 (SP 0-4)				Level O										
Control Type: Analysis Method: Analysis Period:	Two-way stop HCM 6th Edition 15 minutes		ection 2	: E Stree	et/I-5 No		Dela Leve	y (sec / v I Of Sen to Capac			22.8 C 0.300			
Intersection Setup														
Nar	ne	I-5 I	North Ra	mps					E Street			E Street		
Appro	bach	N	lorthbour	nd	S	outhbour	nd	E	Eastboun	d	V	Vestbour	d	
Lane Con	figuration		+						лİ			F		
Turning M	lovement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane W	idth [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in	Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0	
Entry Pocke	t Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00	
No. of Lanes i		0	0	0	0	0	0	0	0	0	0	0	0	
Exit Pocket		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Speed			45.00	1		25.00	1		25.00			30.00	1	
Grade			0.00			0.00			0.00			0.00		
Cross			No			No			No			No		
Volumes														
Nar	ne	I-5 I	North Ra	mps					E Street			E Street		
Base Volume	Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57	
Base Volume Input [veh/h] Base Volume Adjustment Factor		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Heavy Vehicles Percentage [%]		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Growth		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
In-Process Vo		0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated		0	0	26	0	0	0	0	26	0	0	24	6	
Diverted Tr		0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Tr		0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustn		0	0	0	0	0	0	0	0	0	0	0	0	
Other Volu		0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly V		67	4	92	0	0	0	82	324	0	0	301	63	
Peak Hou		0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200	
Other Adjust		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Total 15-Minute		1.0000	1.0000	25	0	0	0	22	88	0	0	82	17	
Total Analysis \		73	4	100	0	0	0	89	352	0	0	327	68	
Pedestrian Vo		15	0	100	U	0	0	09	0	U	0	0	00	
											1			
alley Ranch Residential Su	bdivision TIS			<b>W</b> w-1									W-Tran	

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes			
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

morononi, reprouon, a interoconon recounto												
V/C, Movement V/C Ratio	0.30	0.02	0.14	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	22.77	22.44	13.16	0.00	0.00	0.00	8.35	0.00	0.00	0.00	0.00	0.00
Movement LOS	С	С	В				A	A			A	А
95th-Percentile Queue Length [veh/ln]	1.35	1.35	1.35	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	33.78	33.78	33.78	0.00	0.00	0.00	6.20	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]		17.33			0.00			1.69			0.00	
Approach LOS		С			A			А			А	
d_I, Intersection Delay [s/veh]						3.	76					
Intersection LOS						(	C					

Valley Ranch Residential Subdivision TIS PM Existing + Project

						e Repo							
Control Type:	All-way stop	Interse	ction 3:	E Stree	t/Margu	erite St		/ (sec / v	(ob):			8.6	
Analysis Method:	HCM 6th Edition	ı						Of Serv				A.	
Analysis Period:	15 minutes					`	/olume t	o Capac	ity (v/c):		0	.190	
Intersection Setup													
Name		Mar	guerite S	treet					E Street			E Street	
Approach		N	lorthbour	ıd	s	outhbour	nd	E	astboun	d	V	Vestbour	d
Lane Configur	ation		+			٦ŀ			חור			חור	
Turning Move	ment	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Rig
Lane Width	[ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.
No. of Lanes in Ent	ry Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Ler	ngth [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120
No. of Lanes in Ex	it Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Len	gth [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Speed [mp	h]		25.00			25.00			25.00			25.00	
Grade [%]	]		0.00			0.00			0.00			0.00	
Crosswall	(		Yes			Yes			Yes			Yes	
Volumes								-					
Name		Mar	guerite S	treet					E Street			E Street	
Base Volume Inpu	ıt [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2
Base Volume Adjustr	nent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Heavy Vehicles Perc	entage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
Growth Fac	tor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
In-Process Volum	e [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Tri	ps [veh/h]	30	0	4	0	0	0	0	26	26	12	0	0
Diverted Trips [	veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted https [		0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [	veh/h]	-		0	0	0	0	0	0	0	0	0	0
	-	0	0	0	Ů		0	0	0	0	0	0	0
Pass-by Trips [	Volume [veh/h]		0	0	0	0	0	-					
Pass-by Trips [ Existing Site Adjustment	Volume [veh/h] veh/h]	0			-	0	45	25	118	35	15	90	2
Pass-by Trips [ Existing Site Adjustment Other Volume [	Volume [veh/h] veh/h] ne [veh/h]	0	0	0	0			-	118 0.8800	35 0.8800	15 0.8800	90 0.8800	
Pass-by Trips [ Existing Site Adjustment Other Volume [ Total Hourly Volum	Volume [veh/h] veh/h] ne [veh/h] actor	0 0 36	0	0	0	1	45	25					2 0.88 1.00
Pass-by Trips [ Existing Site Adjustment Other Volume [ Total Hourly Volum Peak Hour Fa	Volume [veh/h] veh/h] ne [veh/h] actor t Factor	0 0 36 0.8800	0 1 0.8800	0 8 0.8800	0 3 0.8800	1 0.8800	45 0.8800	25 0.8800	0.8800	0.8800	0.8800	0.8800	0.88
Pass-by Trips [ Existing Site Adjustment Other Volume [ Total Hourly Volum Peak Hour Fa Other Adjustmen	Volume [veh/h] veh/h] ne [veh/h] actor t Factor ume [veh/h]	0 0 36 0.8800 1.0000	0 1 0.8800 1.0000	0 8 0.8800 1.0000	0 3 0.8800 1.0000	1 0.8800 1.0000	45 0.8800 1.0000	25 0.8800 1.0000	0.8800	0.8800 1.0000	0.8800	0.8800	0.88

Version 2021 (SP 0-4) Intersection Settings

Lanes

Lunes									
Capacity per Entry Lane [veh/h]	652	604	753	641	703	815	626	686	791
Degree of Utilization, x	0.08	0.00	0.07	0.04	0.19	0.05	0.03	0.15	0.00
Movement, Approach, & Intersection Results									
95th-Percentile Queue Length [veh]	0.25	0.01	0.22	0.14	0.70	0.15	0.08	0.52	0.01
95th-Percentile Queue Length [ft]	6.34	0.37	5.55	3.42	17.47	3.86	2.09	13.01	0.19
Approach Delay [s/veh]	8.99	7.	88		8.62			8.80	
Approach LOS	A	/	4		А			А	
Intersection Delay [s/veh]			8.	62					
Intersection LOS			,	4					

Valley Ranch Residential Subdivision TIS PM Existing + Project



W-Trans 6

PM Existing + Project

Ww-Trans

Generated with	PTV	VISTRO
Version 2021 (S	P 0-4)	

			Level Of Servic 4: E Street/Proj					
Control Type: Analysis Method:	Two-way stop HCM 6th Edition		,	Delay Leve	/ (sec / veh): I Of Service:		3.9 A	
Analysis Period:	15 minutes			Volume t	o Capacity (v/c):	0.	004	
ntersection Setup								
Nam	e	Projec	t Street	E S	treet			
Approa	ach	North	bound	East	oound	Westbound		
Lane Config	guration	1	<b>F</b>	l F	•	+	1	
Turning Mo	ovement	Left	Right	Thru	Right	Left	- Thru	
Lane Wid	ith [ft]	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in	Entry Pocket	0	0	0	0	0	0	
Entry Pocket	Length [ft]	100.00	100.00	100.00	100.00	100.00	100.0	
No. of Lanes in	Exit Pocket	0	0	0	0	0	0	
Exit Pocket L	ength [ft]	0.00	0.00	0.00	0.00	0.00	0.00	
Speed [	mph]	25	.00	25	.00	25	.00	
Grade	[%]	0.00		0.	00	0.	00	
Crossw	valk	N	lo	N	lo	Ν	lo	
/olumes								
Nam	e	Projec	t Street	E S	treet			
Base Volume I	nput [veh/h]	0	0	99	0	0	95	
Base Volume Adju	ustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Heavy Vehicles P	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
In-Process Vol	ume [veh/h]	0	0	0	0	0	0	
Site-Generated	Trips [veh/h]	0	4	4	26	0	12	
Diverted Trip	os [veh/h]	0	0	0	0	0	0	
Pass-by Trip	os [veh/h]	0	0	0	0	0	0	
Existing Site Adjustme	ent Volume [veh/h]	0	0	0	0	0	0	
Other Volum	ne [veh/h]	0	0	0	0	0	0	
Total Hourly Vo	lume [veh/h]	0	4	103	26	0	107	
Peak Hour	Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
		1.0000	1.0000	1.0000	1.0000	1.0000	1.000	
Other Adjustm	ent Factor				i –		i	
		0	1	26	7	0	27	
Other Adjustm	/olume [veh/h]		1 4	26 103	7 26	0	27	

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.72	8.86	0.00	0.00	7.47	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/In]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/In]	0.32	0.32	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.	86	0.	00	0.0	00
Approach LOS	A	A.	1	A.	A	4
d_l, Intersection Delay [s/veh]			0.	15		
Intersection LOS			/	Ą		

Valley Ranch Residential Subdivision TIS PM Existing + Project

Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS PM Existing + Project



			Level C									
Control Type: Two-way stop		ection 1	: E Stree	et/I-5 So	uth Ran		/ (sec / v	(eh):		7.	46 7	
Analysis Method: HCM 6th Editio							Of Serv				F	
Analysis Period: 15 minutes					١	/olume t	o Capac	ity (v/c):		2	.368	
Intersection Setup												
Name				I-5 S	South Ra	mps		E Street			E Street	
Approach	N	lorthbour	nd	S	outhbour	nd	E	astboun	d	V	Vestbour	d
Lane Configuration					+			F			7	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.0
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]		30.00			45.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			No			No			No	
/olumes												
Name				I-5 S	South Ra	mps		E Street			E Street	
Base Volume Input [veh/h]	0	0	0	18	0	77	0	262	71	Left         Thru           12.00         12.00           135.00         100.00           0         0           135.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00           0.00         0.00	0	
	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2.368 E Street Vestbound 12.00 135.00 0.00	1.00	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000							F         2.368           E Street         Westbound           1         1           1         1           1         12.00           0         12.00           0         0           0         0           0         0           0         0.00           0         0.00           0         0.00           0         0.00           0         2.85           0         1.000           0         2.00           0         2.00           0         1.000           0         0           0         2.00           0         1.000           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0<	2.0
Base Volume Adjustment Factor Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.01
,					2.00 1.0000		2.00 1.0000	2.00 1.0000	2.00 1.0000			1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00						1.0000	1.0000	_
Heavy Vehicles Percentage [%] Growth Factor	2.00 1.0000	2.00 1.0000	2.00 1.0000	2.00 1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000 0	1.0000 0	1.000
Heavy Vehicles Percentage [%] Growth Factor In-Process Volume [veh/h]	2.00 1.0000 0	2.00 1.0000 0	2.00 1.0000 0	2.00 1.0000 0	1.0000 0	1.0000 0	1.0000	1.0000 0	1.0000 0	1.0000 0 218	1.0000 0 63	1.000
Heavy Vehicles Percentage [%] Growth Factor In-Process Volume [veh/h] Site-Generated Trips [veh/h]	2.00 1.0000 0 0	2.00 1.0000 0 0	2.00 1.0000 0 0	2.00 1.0000 0 228	1.0000 0 0	1.0000 0 0	1.0000 0 0	1.0000 0 61	1.0000 0 0	1.0000 0 218 0	1.0000 0 63 0	1.000 0
Heavy Vehicles Percentage [%] Growth Factor In-Process Volume [veh/h] Site-Generated Trips [veh/h] Diverted Trips [veh/h]	2.00 1.0000 0 0 0	2.00 1.0000 0 0 0	2.00 1.0000 0 0 0	2.00 1.0000 0 228 0	1.0000 0 0	1.0000 0 0	1.0000 0 0	1.0000 0 61 0	1.0000 0 0 0	1.0000 0 218 0 0	1.0000 0 63 0 0	1.000 0 0
Heavy Vehicles Percentage [%] Growth Factor In-Process Volume [veh/h] Site-Generated Trips [veh/h] Diverted Trips [veh/h] Pass-by Trips [veh/h]	2.00 1.0000 0 0 0 0	2.00 1.0000 0 0 0 0	2.00 1.0000 0 0 0 0	2.00 1.0000 0 228 0 0	1.0000 0 0 0 0	1.0000 0 0 0 0	1.0000 0 0 0	1.0000 0 61 0 0	1.0000 0 0 0 0	1.0000 0 218 0 0 0	1.0000 0 63 0 0 0	1.000 0 0 0
Heavy Vehicles Percentage [%] Growth Factor In-Process Volume [veh/h] Site-Generated Trips [veh/h] Diverted Trips [veh/h] Pass-by Trips [veh/h] Existing Site Adjustment Volume [veh/h]	2.00 1.0000 0 0 0 0 0	2.00 1.0000 0 0 0 0 0	2.00 1.0000 0 0 0 0 0	2.00 1.0000 0 228 0 0 0 0	1.0000 0 0 0 0 0	1.0000 0 0 0 0	1.0000 0 0 0 0	1.0000 0 61 0 0 0	1.0000 0 0 0 0 0	1.0000 0 218 0 0 0 0 0	1.0000 0 63 0 0 0 0 0	1.000 0 0 0 0
Heavy Vehicles Percentage [%] Growth Factor In-Process Volume [veh/h] Site-Generated Trips [veh/h] Diverted Trips [veh/h] Pass-by Trips [veh/h] Existing Site Adjustment Volume [veh/h] Other Volume [veh/h]	2.00 1.0000 0 0 0 0 0 0 0	2.00 1.0000 0 0 0 0 0 0	2.00 1.0000 0 0 0 0 0 0	2.00 1.0000 0 228 0 0 0 0 0 0	1.0000 0 0 0 0 0 0 0	1.0000 0 0 0 0 0 0 0	1.0000 0 0 0 0 0 0	1.0000 0 61 0 0 0 0	1.0000 0 0 0 0 0 0 0	1.0000 0 218 0 0 0 0 0 238	1.0000 0 63 0 0 0 0 348	1.00 0 0 0 0 0 0 0
Heavy Vehicles Percentage [%] Growth Factor In-Process Volume [veh/h] Stite-Generated Trips [veh/h] Diverted Trips [veh/h] Pass-by Trips [veh/h] Existing Site Adjustment Volume [veh/h] Other Volume [veh/h] Total Hourly Volume [veh/h]	2.00 1.0000 0 0 0 0 0 0 0 0 0 0	2.00 1.0000 0 0 0 0 0 0 0 0	2.00 1.0000 0 0 0 0 0 0 0 0	2.00 1.0000 0 228 0 0 0 0 0 0 246	1.0000 0 0 0 0 0 0 0 0	1.0000 0 0 0 0 0 0 777	1.0000 0 0 0 0 0 0 0 0	1.0000 0 61 0 0 0 0 323	1.0000 0 0 0 0 0 0 71	1.0000 0 218 0 0 0 0 238 0.9300	1.0000 0 63 0 0 0 0 0 348 0.9300	1.00 0 0 0 0 0 0 1.00
Heavy Vehicles Percentage [%] Growth Factor In-Process Volume [veh/h] Site-Generated Trips [veh/h] Diverted Trips [veh/h] Pass-by Trips [veh/h] Existing Site Adjustment Volume [veh/h] Other Volume [veh/h] Total Hourly Volume [veh/h] Peak Hour Factor	2.00 1.0000 0 0 0 0 0 0 0 0 0 0 0 1.0000 1.0000	2.00 1.0000 0 0 0 0 0 0 0 0 0 1.0000	2.00 1.0000 0 0 0 0 0 0 0 0 0 1.0000	2.00 1.0000 0 228 0 0 0 0 0 246 0.9300	1.0000 0 0 0 0 0 0 0 0 0.9300	1.0000 0 0 0 0 0 0 0 77 0.9300	1.0000 0 0 0 0 0 0 0 1.0000	1.0000 0 61 0 0 0 0 323 0.9300	1.0000 0 0 0 0 0 0 0 71 0.9300	1.0000 0 218 0 0 0 0 238 0.9300	1.0000 0 63 0 0 0 0 348 0.9300 1.0000	1.000 0 0 0 0 0 0
Heavy Vehicles Percentage [%] Growth Factor In-Process Volume [veh/h] Site-Generated Trips [veh/h] Diverted Trips [veh/h] Pass-by Trips [veh/h] Existing Site Adjustment Volume [veh/h] Other Volume [veh/h] Total Hourly Volume [veh/h] Peak Hour Factor Other Adjustment Factor	2.00 1.0000 0 0 0 0 0 0 0 1.0000 1.0000	2.00 1.0000 0 0 0 0 0 1.0000 1.0000	2.00 1.0000 0 0 0 0 0 1.0000 1.0000	2.00 1.0000 0 228 0 0 0 0 0 246 0.9300 1.0000	1.0000 0 0 0 0 0 0 0 0.9300 1.0000	1.0000 0 0 0 0 0 0 0 77 0.9300 1.0000	1.0000 0 0 0 0 0 0 1.0000 1.0000	1.0000 0 61 0 0 0 0 323 0.9300 1.0000	1.0000 0 0 0 0 0 0 0 71 0.9300 1.0000	1.0000 0 218 0 0 0 0 238 0.9300 1.0000	1.0000 0 63 0 0 0 0 348 0.9300 1.0000 94	1.000 0 0 0 0 0 0 1.000

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		Yes		
Storage Area [veh]	0	2	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

## Movement, Approach, & Intersection Results

Valley Ranch Residential Subdivision TIS

AM Baseline + Project

V/C, Movement V/C Ratio	0.00	0.00	0.00	2.37	0.00	0.12	0.00	0.00	0.00	0.23	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	746.65	743.93	719.84	0.00	0.00	0.00	9.12	0.00	0.00
Movement LOS				F	F	F		A	А	А	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	30.31	30.31	30.31	0.00	0.00	0.00	0.87	0.00	0.00
95th-Percentile Queue Length [ft/In]	0.00	0.00	0.00	757.77	757.77	757.77	0.00	0.00	0.00	21.79	0.00	0.00
d_A, Approach Delay [s/veh]		0.00			740.26			0.00			3.70	
Approach LOS		A			F			А			А	
d_l, Intersection Delay [s/veh]						185	.54					
Intersection LOS						F	-					

Valley Ranch Residential Subdivision TIS AM Baseline + Project

Ww-Trans

W-Trans



Control Type: Two-way stop Analysis Method: HCM 6th Edition Analysis Period: 15 minutes ntersection Setup Name Approach Lane Configuration	I-5 M			tt/I-5 No		Delay	/ (sec / v I Of Serv o Capac	ice:			5.9 F 687			
Analysis Method: HCM 6th Edition Analysis Period: 15 minutes ntersection Setup Name Approach Lane Configuration					١	Leve	I Of Serv	ice:			F			
Name Approach Lane Configuration					١	/olume t	o Capac	ity (v/c):		0.	687			
Name Approach Lane Configuration														
Approach Lane Configuration														
Lane Configuration	N	orthbour	North Ramps					E Street			E Street			
-	+				nd	S	outhbour	nd	Eastbound			Westbound		
								٦Ē		<u> </u>				
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
.,	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00		
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0		
Entry Pocket Length [ft] 1	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00		
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0		
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Speed [mph]		45.00			25.00			25.00			30.00			
Grade [%]		0.00			0.00			0.00			0.00			
Crosswalk		No			No			No			No			
Volumes														
Name	I-5 N	North Ra	mps					E Street			E Street			
Base Volume Input [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34		
Base Volume Adjustment Factor 1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00		
Growth Factor 1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Site-Generated Trips [veh/h]	0	0	233	0	0	0	0	289	0	0	281	205		
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0		
Total Hourly Volume [veh/h]	63	0	265	0	0	0	73	496	0	0	519	239		
Peak Hour Factor 0	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.9000		
Other Adjustment Factor 1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
Total 15-Minute Volume [veh/h]	18	0	74	0	0	0	20	138	0	0	144	66		
Total Analysis Volume [veh/h]	70	0	294	0	0	0	81	551	0	0	577	266		
Pedestrian Volume [ped/h]		0			0			0			0			
	70		294	0		0	81		0	0		266		

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes			
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

0.69	0.00	0.55	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.01	0.00	
65.92	66.17	37.36	0.00	0.00	0.00	10.06	0.00	0.00	0.00	0.00	0.00	
F	F	E				В	A			А	A	
7.43	7.43	7.43	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	
185.72	185.72	185.72	0.00	0.00	0.00	8.50	0.00	0.00	0.00	0.00	0.00	
	42.85			0.00			1.29					
	Е			A A						A		
					8.	92						
F												
	65.92 F 7.43	65.92         66.17           F         F           7.43         7.43           185.72         185.72           42.85	65.92         66.17         37.36           F         F         E           7.43         7.43         7.43           185.72         185.72         185.72           42.85	65.92         66.17         37.36         0.00           F         F         E	65.92         66.17         37.36         0.00         0.00           F         F         E	65.92         66.17         37.36         0.00         0.00         0.00           F         F         E	65.92         66.17         37.36         0.00         0.00         0.00         10.06           F         F         E           B           7.43         7.43         7.43         0.00         0.00         0.00         0.34           185.72         185.72         185.72         0.00         0.00         0.00         8.50           42.85         0.00         0.00         0.00         8.50           E         A         8.92         8.92	65.92         66.17         37.36         0.00         0.00         10.06         0.00           F         F         E          B         A           7.43         7.43         7.43         0.00         0.00         0.00         0.34         0.00           185.72         185.72         0.00         0.00         0.00         8.50         0.00           42.85         0.00         -         -         1.29           E         A         -         A           8.92         -         -         A	65.92         66.17         37.36         0.00         0.00         10.06         0.00         0.00           F         F         E          B         A            7.43         7.43         7.43         0.00         0.00         0.00         0.34         0.00         0.00           185.72         185.72         185.72         0.00         0.00         0.00         8.50         0.00         0.00           42.85          O          A         A           E         A         A         A         A	65.92         66.17         37.36         0.00         0.00         10.06         0.00         0.00         0.00           F         E         E         B         A         P           7.43         7.43         7.43         0.00	65.92         66.17         37.36         0.00         0.00         0.00         10.06         0.00         0.00         0.00           F         E         E         B         A         A         A           7.43         7.43         7.43         0.00         0.00         0.00         0.34         0.00         0.00         0.00           185.72         185.72         185.72         0.00         0.00         0.00         8.50         0.00         0.00         0.00           42.85         0.00         -         -         1.29         0.00           E         A         E         A         A         A	

Valley Ranch Residential Subdivision TIS AM Baseline + Project

				Level C									
Control Type:	All-way stop	Interse	ction 3:	E Stree	t/Margu	erite St		/ (sec / v	oh).			8.9	
Analysis Method:	HCM 6th Edition	ı						Of Serv				A	
Analysis Period:	15 minutes					`	/olume t	o Capac	ity (v/c):		0	.219	
Intersection Setup													
1	Vame	Mar	guerite S	treet					E Street			E Street	
Ар	proach	N	lorthbour	nd	s	outhbour	nd	E	astboun	d	V	Vestbour	nd
Lane C	onfiguration		+			٦F			٦Г		716		
Turning	Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Riç
Lane	Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12
No. of Lanes	s in Entry Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Entry Poo	ket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120
No. of Lane	es in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	C
Exit Poc	ket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Spe	ed [mph]		25.00			25.00			25.00			25.00	
Gra	ade [%]		0.00		0.00		0.00						
Cro	osswalk		Yes		Yes		Yes			Yes			
Volumes													
1	lame	Mar	guerite S	treet					E Street			E Street	
Base Volur	ne Input [veh/h]	3	0	2	1	1	17	24	86	2	0	58	6
Base Volume	Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
Heavy Vehicle	es Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
Grow	th Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00
In-Process	Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	C
Site-Genera	ted Trips [veh/h]	46	0	6	0	0	0	0	47	8	3	45	(
Diverted	Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by	Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adju	stment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	C
Other Vo	olume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	(
Total Hourly	/ Volume [veh/h]	49	0	8	1	1	17	24	133	10	3	103	6
Peak H	Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.86
Other Adju	ustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
Total 15-Minu	ite Volume [veh/h]	14	0	2	0	0	5	7	39	3	1	30	2
			0	9	1	1	20	28	155	12	3	120	7
	is Volume [veh/h]	57	0					28 155 12			0 120		

# Generated with PTV VISTRO

Version 2021 (SP 0-4) Intersection Settings

Lanes

Lanos										
Capacity per Entry Lane [veh/h]	651	598	740	644	708	821	631	691	799	
Degree of Utilization, x	0.10	0.00	0.03	0.04	0.22	0.01	0.00	0.17	0.01	
Movement, Approach, & Intersection Results										
95th-Percentile Queue Length [veh]	0.34	0.01	0.09	0.14	0.83	0.04	0.01	0.62	0.03	
95th-Percentile Queue Length [ft]	8.41	0.13	2.19	3.40	20.78	1.11	0.36	15.61	0.66	
Approach Delay [s/veh]	9.15	7.	76		8.99			8.89		
Approach LOS	A	/	4		А					
Intersection Delay [s/veh]			8.	92						
Intersection LOS	A									

Valley Ranch Residential Subdivision TIS AM Baseline + Project



Generated with	PTV	VISTRO
Version 2021 (S	P 0-4)	

			Level Of Servic 4: E Street/Proje				
Control Type: Analysis Method: Analysis Period:	Two-way stop HCM 6th Edition 15 minutes			Delay Level	v (sec / veh): Of Service: o Capacity (v/c):		9.0 A 007
tersection Setup							
Nam		Projoc	t Street	ES	reet		
Approa			bound		ound	Woot	bound
							•
Lane Config	guration	. т	<b>F</b>	P	•	+	1
Turning Mo	vement	Left	Right	Thru	Right	Left	Thru
Lane Wid	ith [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in	Entry Pocket	0	0	0	0	0	0
Entry Pocket	Length [ft]	100.00	100.00	100.00	100.00	100.00	100.0
No. of Lanes in	Exit Pocket	0	0	0	0	0	0
Exit Pocket L	_ength [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [I	mph]	25	.00	25	.00	25	.00
Grade	[%]	0.	00	0.0	00	0.	00
Crossw	valk	N	lo	N	0	N	lo
olumes							
Nam	e	Projec	t Street	E SI	reet		
Base Volume I	nput [veh/h]	0	0	89	0	0	64
Base Volume Adju		1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Heavy Vehicles P			0.00	2.00	2.00		
	'ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth F		2.00	1.0000	1.0000	1.0000	2.00	
,	Factor						
Growth F	Factor ume [veh/h]	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Growth F In-Process Vol	Factor ume [veh/h] Trips [veh/h]	1.0000 0	1.0000 0	1.0000	1.0000 0	1.0000	1.000
Growth F In-Process Vol Site-Generated	Factor Trips [veh/h] State of the second sec	1.0000 0 0	1.0000 0 6	1.0000 0 45	1.0000 0 8	1.0000 0 0	1.000 0 48
Growth F In-Process Vol Site-Generated Diverted Trip	Factor ume [veh/h] Trips [veh/h] Ss [veh/h]	1.0000 0 0 0	1.0000 0 6 0	1.0000 0 45 0	1.0000 0 8 0	1.0000 0 0 0	1.000 0 48 0
Growth F In-Process Vol Site-Generated Diverted Trip Pass-by Trip	Factor           ume [veh/h]           Trips [veh/h]           ps [veh/h]           ps [veh/h]           ps [veh/h]	1.0000 0 0 0 0	1.0000 0 6 0 0	1.0000 0 45 0 0	1.0000 0 8 0 0	1.0000 0 0 0 0	1.000 0 48 0 0
Growth F In-Process Vol Site-Generated Diverted Trip Pass-by Trip Existing Site Adjustme	Factor         Image: Content of the second sec	1.0000 0 0 0 0 0 0	1.0000 0 6 0 0 0	1.0000 0 45 0 0 0	1.0000 0 8 0 0 0 0	1.0000 0 0 0 0 0	1.000 0 48 0 0 0
Growth F In-Process Vol Site-Generated Diverted Trip Pass-by Trip Existing Site Adjustme Other Volum	Factor ume [veh/h] Trips [veh/h] ss [veh/h] ss [veh/h] ent Volume [veh/h] lume [veh/h]	1.0000 0 0 0 0 0 0 0	1.0000 0 6 0 0 0 0 0	1.0000 0 45 0 0 0 0 0	1.0000 0 8 0 0 0 0 0	1.0000 0 0 0 0 0 0 0	1.000 0 48 0 0 0 0 112
Growth F In-Process Voli Site-Generated Diverted Trip Pass-by Trip Existing Site Adjustme Other Volum Total Hourly Vo	Factor           ume [veh/h]           Trips [veh/h]           ps [veh/h]           ps [veh/h]           pe [veh/h]           pe [veh/h]           lume [veh/h]           lume [veh/h]           r Factor	1.0000 0 0 0 0 0 0 0 0 0 0	1.0000 0 6 0 0 0 0 6 6	1.0000 0 45 0 0 0 0 134	1.0000 0 8 0 0 0 0 0 8 8	1.0000 0 0 0 0 0 0 0 0 0 0	1.000 0 48 0 0 0 0 112 1.000
Growth F In-Process Vol Site-Generated Diverted Trip Pass-by Trip Existing Site Adjustme Other Volum Total Hourly Vo Peak Hour	Factor           ume [veh/h]           Trips [veh/h]           ps [veh/h]           ps [veh/h]           ent Volume [veh/h]           e [veh/h]           ume [veh/h]           r Factor           nent Factor	1.0000 0 0 0 0 0 0 0 0 0 0 0 0 1.0000	1.0000 0 6 0 0 0 0 6 1.0000	1.0000 0 45 0 0 0 0 134 1.0000	1.0000 0 8 0 0 0 0 8 1.0000	1.0000 0 0 0 0 0 0 0 0 0 0 0 1.0000	1.000 0 48 0 0 0 0 112 1.000
Growth F In-Process Vol Site-Generated Diverted Trip Pass-by Trip Existing Site Adjustme Other Volum Total Hourty Vo Peak Hour Other Adjustm	Factor           ume (veh/h]           Trips (veh/h]           ps (veh/h]           ps (veh/h]           ent Volume (veh/h]           te (veh/h)           re (veh/h)           re (veh/h)           re factor           nent Factor           /olume (veh/h]	1.0000 0 0 0 0 0 0 1.0000 1.0000	1.0000 0 6 0 0 0 6 1.0000 1.0000	1.0000 0 45 0 0 0 0 134 1.0000 1.0000	1.0000 0 8 0 0 0 0 8 1.0000 1.0000	1.0000 0 0 0 0 0 0 1.0000 1.0000	1.0000 0 48 0 0 0 0 0 112 1.0000 1.0000

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

## Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00		
d_M, Delay for Movement [s/veh]	9.90	8.98	0.00	0.00	7.50	0.00		
Movement LOS	A	A	A	A	A	A		
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00		
95th-Percentile Queue Length [ft/In]	0.50	0.50	0.00	0.00	0.00	0.00		
d_A, Approach Delay [s/veh]	8.	98	0.	00	0.0	00		
Approach LOS	, A	A.	1	A.	A	4		
d_l, Intersection Delay [s/veh]			0.:	21				
Intersection LOS	A							

Valley Ranch Residential Subdivision TIS AM Baseline + Project

Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS AM Baseline + Project



			section											
Control Type: Analysis Method: Analysis Period:	Signalized HCM 6th Edition 15 minutes			Loued			Delay Leve /olume t		12.5 B 0.519					
Intersection Setup														
Nam	e				I-5 South Ramps				E Street					
Approa	ich	N	lorthbour	d	Southbound			Eastbound			Westbound			
Lane Config	Lane Configuration					+			IF		<u>– 1  </u>			
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Wid	th [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in I	Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0	
Entry Pocket	_ength [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.0	
No. of Lanes in	Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	
Exit Pocket L	ength [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Speed [r	nph]		30.00			45.00			25.00			30.00		
Grade	[%]		0.00			0.00			0.00			0.00		
Curb Pre	sent					No			No			No		
Crossw	alk		Yes			No			No		No			

Version 2021 (SP 0-4)

Volumes

Name				1-5 5	South Ra	mps		E Street			E Street	
Base Volume Input [veh/h]	0	0	0	18	0	77	0	262	71	20	285	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	228	0	0	0	61	0	218	63	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	246	0	77	0	323	71	238	348	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9300	0.9300	0.9300	1.0000	0.9300	0.9300	0.9300	0.9300	1.000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Total 15-Minute Volume [veh/h]	0	0	0	66	0	21	0	87	19	64	94	0
Total Analysis Volume [veh/h]	0	0	0	265	0	83	0	347	76	256	374	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	е	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	2			0			1			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	1			0			2			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)

Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)





Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	19	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
<ol><li>Start-Up Lost Time [s]</li></ol>	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

# Generated with PTV VISTRO

Version 2021 (SP 0-4)

Lane Gro	oup Calculations	

-					
Lane Group	С	С	С	L	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	37	37	37	37
g / C, Green / Cycle	0.25	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.22	0.13	0.13	0.30	0.12
s, saturation flow rate [veh/h]	1558	1683	1581	867	3204
c, Capacity [veh/h]	391	1037	974	570	1975
d1, Uniform Delay [s]	21.73	5.06	5.11	9.86	5.01
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.10	0.44	0.51	2.55	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
Lane Group Results					
X, volume / capacity	0.89	0.20	0.22	0.45	0.19
d, Delay for Lane Group [s/veh]	28.83	5.51	5.62	12.41	5.23
Lane Group LOS	С	A	A	В	A
Critical Lane Group	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.78	1.03	1.05	2.26	0.80
50th-Percentile Queue Length [ft/In]	119.56	25.75	26.23	56.62	20.00
95th-Percentile Queue Length [veh/ln]	8.37	1.85	1.89	4.08	1.44
95th-Percentile Queue Length [ft/In]	209.22	46.35	47.21	101.92	36.00

Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)



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Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)

Ww-Trans

W-Trans



## Movement, Approach, & Intersection Results

0.00	0.00	0.00	28.83	28.83	28.83	0.00	5.55	5.62	12.41	5.23	0.00
			С	С	С		A	A	В	A	
	0.00			28.83			5.57		8.15		
	А			С			А				
12.50											
В											
0.519											
	0.00			C	C C	C         C         C           0.00         28.83         C           A         C         12	C         C         C         C           0.00         28.83	C         C         C         C         A           0.00         28.83         5.57           A         C         A           12.50           B	C         C         C         C         A         A           0.00         28.83         5.57         A         A         A           A         C         A         A         B <t< td=""><td>C         C         C         A         A         B           0.00         28.83         5.57         I           A         C         A         I         I           12.50</td><td>C         C         C         A         A         B         A           0.00         28.83         5.57         8.15           A         C         A         A         A         A         A         A         B         A           I2.50         B         I</td></t<>	C         C         C         A         A         B           0.00         28.83         5.57         I           A         C         A         I         I           12.50	C         C         C         A         A         B         A           0.00         28.83         5.57         8.15           A         C         A         A         A         A         A         A         B         A           I2.50         B         I

## Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.092	0.000	0.000	0.000
Crosswalk LOS	В	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	<b>1]</b> 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	499	1232	1232
d_b, Bicycle Delay [s]	30.03	16.90	4.43	4.43
I_b,int, Bicycle LOS Score for Intersection	4.132	2.134	1.909	2.079
Bicycle LOS	D	В	A	В

## Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



## Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)



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# Generated with PTV VISTRO

Version 2021 (SP 0-4)			
	14 . 0004	(00 0 4)	
	version 2021	(SP 0-4)	

		Intersection Level Of Service Report	
	1	ntersection 2: E Street/I-5 North Ramps	
Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	В
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

#### Intersection Setup

Name	I-5	North Ra	mps					E Street			E Street	
Approach	N	lorthbour	nd	S	outhbour	nd	E	astboun	d	Westbound		
Lane Configuration		+						٦H		IF		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left 1	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]		45.00			25.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No						No		No		
Crosswalk		No			No			No		No		

Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)





Volumes

Name	I-5 I	North Ra	mps					E Street			E Street	
Base Volume Input [veh/h]	63	0	32	0	0	0	73	207	0	0	238	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	233	0	0	0	0	289	0	0	281	205
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	0	265	0	0	0	73	496	0	0	519	239
Peak Hour Factor	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	0.9000	0.9000	1.0000	1.0000	0.9000	0.900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Total 15-Minute Volume [veh/h]	18	0	74	0	0	0	20	138	0	0	144	66
Total Analysis Volume [veh/h]	70	0	294	0	0	0	81	551	0	0	577	266
Presence of On-Street Parking	No		No				No		No	No	1	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	e	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	L [	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Generated with PTV VISTRO

Version 2021 (SP 0-4)

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)

Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)





## Lane Group Calculations

Lane Group Calculations					
Lane Group	С	L	С	С	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	0.00	0.00	0.00
<ol><li>Clearance Lost Time [s]</li></ol>	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	37	37	37	37
g / C, Green / Cycle	0.25	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.25	0.14	0.17	0.25	0.28
s, saturation flow rate [veh/h]	1461	587	3204	1683	1514
c, Capacity [veh/h]	368	371	1971	1035	931
d1, Uniform Delay [s]	22.40	11.41	5.37	5.94	6.16
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.59	1.35	0.35	1.19	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
Lane Group Results					
X, volume / capacity	0.99	0.22	0.28	0.41	0.45
d, Delay for Lane Group [s/veh]	41.99	12.76	5.73	7.12	7.75
Lane Group LOS	D	В	A	A	A
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/In]	6.33	0.79	1.34	2.32	2.47
50th-Percentile Queue Length [ft/In]	158.21	19.63	33.59	58.05	61.68
95th-Percentile Queue Length [veh/ln]	10.45	1.41	2.42	4.18	4.44
95th-Percentile Queue Length [ft/ln]	261.35	35.33	60.46	104.48	111.02

Generated with PTV VISTRO

Version 2021 (SP 0-4)

## Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.99	41.99	41.99	0.00	0.00	0.00	12.76	5.73	0.00	0.00	7.29	7.75	
Movement LOS	D	D	D				В	А			A	А	
d_A, Approach Delay [s/veh]		41.99			0.00			6.63			7.44		
Approach LOS		D			A			А					
d_l, Intersection Delay [s/veh]						14	.00						
Intersection LOS						l	3						
Intersection V/C		0.528											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	ı] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	0	1233	1233
d_b, Bicycle Delay [s]	16.89	30.02	4.42	4.42
I_b,int, Bicycle LOS Score for Intersection	2.160	4.132	2.081	2.255
Bicycle LOS	В	D	В	В

## Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 41s		
SG:6 41s	SG:8 19#	

Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)

Ww-Trans

W-Trans

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Valley Ranch Residential Subdivision TIS AM Baseline + Project (Signalized)



				Level C									
Control Type: Analysis Method: Analysis Period:	Two-way stop HCM 6th Editior 15 minutes		ection 1	: E Stree	et/I-5 So		Delay	/ (sec / \ I Of Sen o Capac	vice:			04.0 F .971	
Intersection Setup					1-5.5	South Ra	mns		E Street			E Street	
Approacl	1	N	lorthbour	nd		outhbou		F	Eastboun			Vestbour	
Lane Configu			Northbound			+			F	-		7	
Turning Move	ement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Ric
Lane Width		12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.
No. of Lanes in En	try Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Le	ngth [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100
No. of Lanes in E	xit Pocket	0	0	0	0	0	0	0	0	0	0	0	(
Exit Pocket Ler	ngth [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.
Speed [mp	bh]		30.00			45.00			25.00	1	30.00		
Grade [%	j]	0.00 0.00 0.00					0.00						
Crosswal	k		Yes			No			No			No	
Volumes								1					
Name					I-5 S	South Ra	mps		E Street			E Street	
Base Volume Inp	ut [veh/h]	0	0	0	30	1	110	0	355	79	25	324	(
Base Volume Adjust	ment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
Heavy Vehicles Per	centage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0
Growth Fac	CLOF	1.0000				0	0	0	0	0	0	0	(
Growth Fac		0	0	0	0	0							(
	ne [veh/h]		0	0	0 150	0	0	0	51	0	164	47	
In-Process Volum	ne [veh/h] ips [veh/h]	0					0	0	51 0	0	164 0	47 0	
In-Process Volun Site-Generated Tr	ne [veh/h] ips [veh/h] [veh/h]	0	0	0	150	0	-			-			(
In-Process Volum Site-Generated Tr Diverted Trips	ne [veh/h] ips [veh/h] [veh/h] [veh/h]	0 0 0	0	0	150 0	0	0	0	0	0	0	0	(
In-Process Volum Site-Generated Tr Diverted Trips Pass-by Trips	ne [veh/h] ips [veh/h] [veh/h] [veh/h] ! Volume [veh/h]	0 0 0	0	0	150 0 0	0 0 0	0	0	0	0	0	0	(
In-Process Volum Site-Generated Tr Diverted Trips Pass-by Trips Existing Site Adjustmen	ne (veh/h) ips (veh/h) (veh/h) (veh/h) i Volume (veh/h) (veh/h)	0 0 0 0	0	0	150 0 0 0	0 0 0 0 0	0 0 0	0	0 0 0	0	0 0 0	0 0 0	
In-Process Volum Site-Generated Tr Diverted Trips Pass-by Trips Existing Site Adjustmen Other Volume	ne [veh/h] ips [veh/h] [veh/h] [veh/h] I Volume [veh/h] [veh/h] ne [veh/h]	0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	150 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0	
In-Process Volum Site-Generated Tr Diverted Trips Pass-by Trips Existing Site Adjustmen Other Volume Total Hourly Volur	e [veh/h] ips [veh/h] [veh/h] (veh/h] t Volume [veh/h] (veh/h] me [veh/h] actor	0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	150 0 0 0 0 180	0 0 0 0 0 1	0 0 0 0 110	0 0 0 0 0 0 0	0 0 0 0 406	0 0 0 0 79	0 0 0 0 189	0 0 0 0 371	() () () () () () () ()
In-Process Volum Site-Generated Tr Diverted Trips Pass-by Trips Existing Site Adjustmen Other Volume Total Hourly Volur Peak Hour F	ne [veh/h] ips [veh/h] [veh/h] t Volume [veh/h] [veh/h] ne [veh/h] actor nt Factor	0 0 0 0 0 0 0 1.0000	0 0 0 0 0 0 1.0000	0 0 0 0 0 0 1.0000	150 0 0 0 180 0.8900	0 0 0 0 0 1 0.8900	0 0 0 0 110 0.8900	0 0 0 0 1.0000	0 0 0 406 0.8900	0 0 0 0 79 0.8900	0 0 0 189 0.8900	0 0 0 371 0.8900	() () () () () () () () () () () () () (
In-Process Volum Site-Generated Tr Diverted Trips Pass-by Trips Existing Site Adjustmen Other Volume Total Hourly Volur Peak Hour F Other Adjustmen	ne [veh/h] jps [veh/h] [veh/h] (veh/h] i Volume [veh/h] (veh/h] ne [veh/h] actor nt Factor ume [veh/h]	0 0 0 0 0 0 1.0000 1.0000	0 0 0 0 0 1.0000 1.0000	0 0 0 0 0 1.0000 1.0000	150 0 0 0 180 0.8900 1.0000	0 0 0 0 1 0.8900 1.0000	0 0 0 110 0.8900 1.0000	0 0 0 0 1.0000 1.0000	0 0 0 406 0.8900 1.0000	0 0 0 0 79 0.8900 1.0000	0 0 0 189 0.8900 1.0000	0 0 0 371 0.8900 1.0000	

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		Yes		
Storage Area [veh]	0	2	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	1.97	0.01	0.20	0.00	0.00	0.00	0.21	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	604.04	600.82	574.57	0.00	0.00	0.00	9.45	0.00	0.00
Movement LOS				F	F	F		A	A	А	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	26.58	26.58	26.58	0.00	0.00	0.00	0.78	0.00	0.00
95th-Percentile Queue Length [ft/In]	0.00	0.00	0.00	664.53	664.53	664.53	0.00	0.00	0.00	19.52	0.00	0.00
d_A, Approach Delay [s/veh]		0.00		592.86				0.00				
Approach LOS		А			F			А				
d_l, Intersection Delay [s/veh]	130.49											
Intersection LOS	F											

WW-Trans

W-Trans

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W-Trans 2

Valley Ranch Residential Subdivision TIS PM Baseline + Project

			Level O									
Control Type:Two-way sAnalysis Method:HCM 6th EcAnalysis Period:15 minute	top lition	ection 2	: E Stree	et/I-5 No		Delay	/ (sec / v I Of Serv o Capac	/ice:			3.8 F 654	
ntersection Setup												
Name	1-51	North Ra	mps					E Street			E Street	
Approach	N	orthbour	d	S	outhbour	nd	E	astboun	d	v	Vestbour	nd
Lane Configuration		+						Чİ			F	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]		45.00			25.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		No			No			No			No	
olumes												
Name	I-5 I	North Ra	mps					E Street			E Street	
Base Volume Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	166	0	0	0	0	201	0	0	211	155
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	4	232	0	0	0	82	499	0	0	488	212
Peak Hour Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	1	63	0	0	0	22	136	0	0	133	58
Total Analysis Volume [veh/h]	73	4	252	0	0	0	89	542	0	0	530	230
Pedestrian Volume [ped/h]		0			0			0			0	
Total Analysis Volume [veh/h]		4			0			542			530	

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes			
Storage Area [veh]	2	0	0	0
Two-Stage Gap Acceptance	No			
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

0.65	0.04	0.47	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.01	0.00
63.81	63.58	38.20	0.00	0.00	0.00	9.72	0.00	0.00	0.00	0.00	0.00
F	F	E				A	A			A	A
7.04	7.04	7.04	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00
176.10	176.10	176.10	0.00	0.00	0.00	8.72	0.00	0.00	0.00	0.00	0.00
	44.19		0.00				1.37				
	Е			A			А				
8.96											
F											
	63.81 F 7.04	63.81         63.58           F         F           7.04         7.04           176.10         176.10           44.19	63.81         63.58         38.20           F         F         E           7.04         7.04         7.04           176.10         176.10         176.10           44.19	63.81         63.58         38.20         0.00           F         F         E	Alt         Alt         Slope         0.00         0.00           F         F         E         -         -           7.04         7.04         7.04         0.00         0.00           176.10         176.10         0.00         0.00           44.19         -         -         0.00	Alt         Alt         Base         0.00         0.00         0.00           F         F         E             7.04         7.04         7.04         0.00         0.00         0.00           176.10         176.10         176.10         0.00         0.00         0.00           44.19         0.00         A         A         8.	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $

Valley Ranch Residential Subdivision TIS PM Baseline + Project

				Level C									
Control Type:	All-way stop	Interse	ction 3:	E Stree	t/Margu	erite St		/ (sec / v	(eh):			9.0	
Analysis Method:	HCM 6th Edition	ı						Of Serv				A	
Analysis Period:	15 minutes					`	/olume t	o Capac	ity (v/c):		0	.243	
Intersection Setup													
	Name	Marg	guerite S	treet					E Street			E Street	
A	oproach	N	lorthbour	nd	s	outhbour	nd	E	astboun	d	v	Vestbour	d
Lane C	Configuration	+			٦٢			חור			חור		
Turnin	g Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ
Lane	Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lane	s in Entry Pocket	0	0	0	1	0	0	1	0	1	1	0	1
Entry Po	cket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.0
No. of Lan	es in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Poo	ket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spe	ed [mph]		25.00			25.00			25.00			25.00	
G	ade [%]		0.00			0.00			0.00			0.00	
Cr	osswalk		Yes			Yes			Yes			Yes	
Volumes													
	Name	-	guerite S	treet					E Street			E Street	
	me Input [veh/h]	6	1	4	3	1	45	25	92	9	3	90	2
	Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
	es Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	wth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
	Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
	ated Trips [veh/h]	30	0	4	0	0	0	0	56	26	12	28	0
	Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
	r Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
, s	istment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
	olume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Haur	y Volume [veh/h]	36	1	8	3	1	45	25	148	35	15	118	2
	Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.880
Peak		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Peak Other Adj	ustment Factor			2	1	0	13	7	42	10	4	34	1
Peak Other Adj Total 15-Min	ute Volume [veh/h]	10	0		0	4						404	
Peak Other Adj Total 15-Min			0	9	3	1	51	28	168	40	17	134	2

# Generated with PTV VISTRO

Version 2021 (SP 0-4) Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	631 586 725 63		632	693	801	617	675	777	
Degree of Utilization, x	0.08 0.01 0.07 0.0		0.04	0.24	0.05	0.03	0.20	0.00	
Movement, Approach, & Intersection Results									
95th-Percentile Queue Length [veh]	0.26	0.02	0.23	0.14	0.95	0.16	0.08	0.73	0.01
95th-Percentile Queue Length [ft]	6.57	0.39 5.78		3.47	23.67	3.94	2.12	18.37	0.19
Approach Delay [s/veh]	9.21	8.	09	9.09			9.25		
Approach LOS	A	/	A			A			
Intersection Delay [s/veh]	9.04								
Intersection LOS	A								

Valley Ranch Residential Subdivision TIS PM Baseline + Project

Generated with	PTV	VISTRO
Version 2021 (S	P 0-4)	

			Level Of Servic 4: E Street/Proj				
Control Type: Analysis Method:	Two-way stop HCM 6th Edition 15 minutes	Intersection	4. E Ouccurroj	Delay Leve	(sec / veh): Of Service:		9.0 A .004
Analysis Period:	15 minutes			volume t	o Capacity (v/c):	0.	004
ntersection Setup							
Nam	e	Projec	t Street	E S	reet		
Approa	ach	North	bound	East	ound	West	bound
Lane Config	guration	1	<b>→</b>	l F	•	+	1
Turning Mo	vement	Left	Right	Thru	Right	Left	Thru
Lane Wid	ith [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in	Entry Pocket	0	0	0	0	0	0
Entry Pocket	Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in	Exit Pocket	0	0	0	0	0	0
Exit Pocket L	ength [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [I	mph]	25	.00	25	.00	25	.00
Grade	[%]	0.	00	0.	00	0.	.00
Crossw	valk	N	lo	N	0	N	٩٥
/olumes							
Nam	e	Projec	t Street	ES	reet		
Base Volume I	nput [veh/h]	0	0	99	0	0	95
Base Volume Adju	ustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Heavy Vehicles P	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
In-Process Vol	ume [veh/h]	0	0	0	0	0	0
Site-Generated	Trips [veh/h]	0	4	34	26	0	40
Diverted Trip	os [veh/h]	0	0	0	0	0	0
Pass-by Trip	os [veh/h]	0	0	0	0	0	0
Existing Site Adjustme	ent Volume [veh/h]	0	0	0	0	0	0
Other Volum	ne [veh/h]	0	0	0	0	0	0
Total Hourly Vo	lume [veh/h]	0	4	133	26	0	135
Peak Hour	Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Othor Adjuster	nent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Aujusti			i	33	7	0	34
Total 15-Minute V	/olume [veh/h]	0	1	33	· · ·	0	0-
,		0	1 4	133	26	0	135

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

#### Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00			
d_M, Delay for Movement [s/veh]	10.10	9.01	0.00	0.00	7.53	0.00			
Movement LOS	В	A	A	A	A	A			
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00			
95th-Percentile Queue Length [ft/In]	0.33	0.33	0.00	0.00	0.00	0.00			
d_A, Approach Delay [s/veh]	9.	01	0.	00	0.00				
Approach LOS	A	4	1	A.	A				
d_l, Intersection Delay [s/veh]	0.12								
Intersection LOS	A								

Valley Ranch Residential Subdivision TIS PM Baseline + Project

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		Inter	section	Level O	f Servic	e Repoi	rt							
		Interse	ection 1	E Stree	et/I-5 So	uth Ram	nps							
Control Type:	Signalized						Delay Level		11.5					
Analysis Method:	HCM 6th Edition							В						
Analysis Period:	15 minutes					\	/olume to	o Capac	ity (v/c):		0.	.487		
Intersection Setup														
Name					I-5 South Ramps				E Street		E Street			
Approach Lane Configuration		Northbound Southbound			Southbound			Eastbound			Westbound			
							IF		٦İİ					
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ	
Lane Wid	th [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in E	Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0	
Entry Pocket I	_ength [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.0	
No. of Lanes in	Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	
Exit Pocket L	ength [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Speed [r	nph]		30.00			45.00			25.00			30.00		
Grade	%]		0.00			0.00			0.00			0.00		
Curb Pre	sent					No			No			No	-	
Crossw	alk		Yes			No			No		No			

Version 2021 (SP 0-4)

Volumes

Name				I-5 S	South Ra	mps		E Street			E Street	
Base Volume Input [veh/h]	0	0	0	30	1	110	0	355	79	25	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	150	0	0	0	51	0	164	47	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	180	1	110	0	406	79	189	371	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	0.8900	1.0000	0.8900	0.8900	0.8900	0.8900	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	51	0	31	0	114	22	53	104	0
Total Analysis Volume [veh/h]	0	0	0	202	1	124	0	456	89	212	417	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	e	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	1			0			1			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	1			0			1			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Valley Ranch Residential Subdivision TIS PM Baseline + Project (Signalized)

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Valley Ranch Residential Subdivision TIS PM Baseline + Project (Signalized)





Intersection Settings

Located in CBD	Yes
Signal Coordination Group	
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	19	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
<ol><li>Start-Up Lost Time [s]</li></ol>	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

# Generated with PTV VISTRO

Version 2021 (SP 0-4)

Lane Gro	oup Calculations	

Lane Group	С	С	С	L	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	38	38	38	38
g / C, Green / Cycle	0.24	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.21	0.16	0.17	0.27	0.13
s, saturation flow rate [veh/h]	1533	1683	1590	775	3204
c, Capacity [veh/h]	370	1052	994	514	2004
d1, Uniform Delay [s]	21.98	5.04	5.09	9.98	4.85
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.98	0.60	0.68	2.43	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
Lane Group Results					
X, volume / capacity	0.88	0.26	0.27	0.41	0.21
d, Delay for Lane Group [s/veh]	28.95	5.63	5.78	12.42	5.09
Lane Group LOS	С	A	A	В	A
Critical Lane Group	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.50	1.34	1.36	1.89	0.87
50th-Percentile Queue Length [ft/ln]	112.57	33.44	34.12	47.33	21.72
95th-Percentile Queue Length [veh/ln]	7.98	2.41	2.46	3.41	1.56
95th-Percentile Queue Length [ft/In]	199.57	60.19	61.41	85.19	39.10

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Valley Ranch Residential Subdivision TIS PM Baseline + Project (Signalized) W-Trans



## Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.95	28.95	28.95	0.00	5.69	5.78	12.42	5.09	0.00
Movement LOS				С	С	С		А	A	В	А	
d_A, Approach Delay [s/veh]	0.00			28.95			5.70			7.56		
Approach LOS	A				С			А		A		
d_l, Intersection Delay [s/veh]						11	.55					
Intersection LOS						E	3					
Intersection V/C		0.487										

## Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.000	0.000	0.000	0.000
Crosswalk LOS	В	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	<b>]</b> 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	499	1232	1232
d_b, Bicycle Delay [s]	30.03	16.90	4.43	4.43
I_b,int, Bicycle LOS Score for Intersection	4.132	2.099	2.009	2.079
Bicycle LOS	D	В	В	В

## Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



## Valley Ranch Residential Subdivision TIS PM Baseline + Project (Signalized)



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# Generated with PTV VISTRO

Version 2021	(CD 0 4)	

		Intersection Level Of Service Report	
	li li	ntersection 2: E Street/I-5 North Ramps	
Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	В
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

#### Intersection Setup

Name	I-5	I-5 North Ramps						E Street			E Street		
Approach	N	Northbound			Southbound			astboun	d	Westbound			
Lane Configuration		+						٦H		IF			
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0	
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00	
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Speed [mph]		45.00			25.00			25.00			30.00		
Grade [%]		0.00			0.00			0.00			0.00		
Curb Present		No						No		No			
Crosswalk		No			No			No			No		

Valley Ranch Residential Subdivision TIS PM Baseline + Project (Signalized)





Volumes

Name	I-5 I	North Ra	mps					E Street			E Street	
Base Volume Input [veh/h]	67	4	66	0	0	0	82	298	0	0	277	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	166	0	0	0	0	201	0	0	211	155
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	4	232	0	0	0	82	499	0	0	488	212
Peak Hour Factor	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	0.9200	0.9200	1.0000	1.0000	0.9200	0.920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Total 15-Minute Volume [veh/h]	18	1	63	0	0	0	22	136	0	0	133	58
Total Analysis Volume [veh/h]	73	4	252	0	0	0	89	542	0	0	530	230
Presence of On-Street Parking	No		No				No		No	No	1	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	e	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	1	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	t [	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0		0			0		
Bicycle Volume [bicycles/h]		0			0			0			0	

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Version 2021 (SP 0-4)

## Intersection Settings

Located in CBD	Yes
Signal Coordination Group	
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Valley Ranch Residential Subdivision TIS PM Baseline + Project (Signalized)

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Valley Ranch Residential Subdivision TIS PM Baseline + Project (Signalized)





## Lane Group Calculations

ane Group Calculations					
Lane Group	С	L	С	С	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	37	37	37	37
g / C, Green / Cycle	0.25	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.22	0.14	0.17	0.23	0.25
s, saturation flow rate [veh/h]	1468	635	3204	1683	1521
c, Capacity [veh/h]	369	404	1973	1036	936
d1, Uniform Delay [s]	21.73	10.66	5.34	5.73	5.92
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.56	1.25	0.35	1.00	1.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
ane Group Results					
X, volume / capacity	0.89	0.22	0.27	0.37	0.41
d, Delay for Lane Group [s/veh]	29.29	11.91	5.69	6.73	7.22
Lane Group LOS	С	В	A	A	A
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.57	0.82	1.31	2.01	2.12
50th-Percentile Queue Length [ft/In]	114.19	20.44	32.83	50.29	52.95
95th-Percentile Queue Length [veh/In]	8.07	1.47	2.36	3.62	3.81
95th-Percentile Queue Length [ft/In]	201.81	36.80	59.10	90.51	95.32

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## Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.29	29.29	29.29	0.00	0.00	0.00	11.91	5.69	0.00	0.00	6.87	7.22	
Movement LOS	С	C C C					В	А			A	А	
d_A, Approach Delay [s/veh]		29.29			0.00			6.56			6.98		
Approach LOS		С		A			A						
d_l, Intersection Delay [s/veh]						11	.09						
Intersection LOS						l	3						
Intersection V/C					0.474								

## Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	n] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	499	0	1232	1232
d_b, Bicycle Delay [s]	16.90	30.03	4.43	4.43
I_b,int, Bicycle LOS Score for Intersection	2.102	4.132	2.080	2.187
Bicycle LOS	В	D	В	В

## Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 41s	
SG: 6 41s	SG:8 19s

Valley Ranch Residential Subdivision TIS PM Baseline + Project (Signalized)

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Valley Ranch Residential Subdivision TIS PM Baseline + Project (Signalized)



				Level C E Stree									
Control Type: Analysis Method: Analysis Period:	Signalized HCM 6th Edition 15 minutes		Delay (sec / veh): Level Of Service: Volume to Capacity (v/c):								16.1 B 0.614		
Intersection Setup					1.5.6				F Street			F Street	
Name Approa		I-5 South Ramps Northbound Southbound						E Street			Westbound		
Lane Config			oranooar			+			11			וור	
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ
Lane Wid	:h [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
No. of Lanes in E	ntry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket I	ength [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.0
No. of Lanes in	Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket L	ength [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [n	ıph]		30.00			45.00			25.00			30.00	
Grade [	%]		0.00			0.00			0.00			0.00	
Curb Pre	sent					No			No			No	
Crossw			Yes			No			No			No	

Version 2021 (SP 0-4)

Volumes

Name				I-5 S	South Ra	mps		E Street			E Street	
Base Volume Input [veh/h]	0	0	0	378	0	150	0	715	143	125	611	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	0	0	5	0	23	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	381	0	150	0	720	143	148	625	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	95	0	38	0	180	36	37	156	0
Total Analysis Volume [veh/h]	0	0	0	381	0	150	0	720	143	148	625	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	е	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	[	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	2			0			1			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	1			0			2			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0		0			0		
Bicycle Volume [bicycles/h]		0			0			0			0	

Valley Ranch Residential Subdivision TIS AM Future + Project

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Valley Ranch Residential Subdivision TIS AM Future + Project





Intersection Settings

interocontion oottinigo	
Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	48	0	0	12	0	0	12	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
<ol><li>Start-Up Lost Time [s]</li></ol>	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
<ol><li>Clearance Lost Time [s]</li></ol>	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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Lar	ne Gro	oup Ca	Iculatio	ons
		up ou	····	

Lane Group	С	С	С	L	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	29	29	29	29
g / C, Green / Cycle	0.38	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.34	0.26	0.27	0.26	0.20
s, saturation flow rate [veh/h]	1550	1683	1588	577	3204
c, Capacity [veh/h]	590	818	772	270	1558
d1, Uniform Delay [s]	17.54	10.67	10.90	22.07	9.86
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.29	2.43	2.91	7.76	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
Lane Group Results					
X, volume / capacity	0.90	0.53	0.56	0.55	0.40
d, Delay for Lane Group [s/veh]	22.83	13.10	13.81	29.83	10.63
Lane Group LOS	С	В	В	С	В
Critical Lane Group	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.34	3.98	4.12	2.46	2.37
50th-Percentile Queue Length [ft/In]	158.51	99.48	103.10	61.55	59.31
95th-Percentile Queue Length [veh/ln]	10.47	7.16	7.42	4.43	4.27
95th-Percentile Queue Length [ft/In]	261.75	179.07	185.57	110.78	106.76

Valley Ranch Residential Subdivision TIS AM Future + Project



W-Trans 4

Valley Ranch Residential Subdivision TIS AM Future + Project W-Trans



## Movement, Approach, & Intersection Results

0.00	0.00 0.00 0.00		22.83	22.83	22.83	0.00	13.38	13.81	29.83	10.63	0.00
		С	С	С		В	В	С	В		
0.00			22.83			13.45			14.31		
A			С				В				
	16.										
В											
0.614											
	0.00			С	C C	C         C         C           0.00         22.83	C         C         C         C           0.00         22.83	C         C         C         C         B           0.00         22.83         13.45           A         C         B           16.05           B	C         C         C         B         B           0.00         22.83         13.45         13.45           A         C         B         B	C         C         C         B         B         C           0.00         22.83         13.45         I3.45         I3.4	C         C         C         B         B         C         B           0.00         22.83         13.45         14.31           A         C         B

## Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	1.898	0.000	0.000	0.000
Crosswalk LOS	A	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	<b>]</b> 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1465	266	266
d_b, Bicycle Delay [s]	30.03	2.15	22.56	22.56
I_b,int, Bicycle LOS Score for Intersection	4.132	2.436	2.272	2.197
Bicycle LOS	D	В	В	В

## Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



# Valley Ranch Residential Subdivision TIS





# W-Trans

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# Generated with PTV VISTRO

Version 2021	(SP 0-4)
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		Intersection Level Of Service Report ntersection 2: E Street/I-5 North Ramps	
	1	ntersection 2: E Street/I-5 North Ramps	
Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	В
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.612

#### Intersection Setup

Name	I-5 I	I-5 North Ramps						E Street		E Street		
Approach	Northbound Southbound			E	astboun	d	Westbound					
Lane Configuration	+					IF						
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]		45.00			25.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No						No			No	
Crosswalk		No			No			No			No	

## Valley Ranch Residential Subdivision TIS AM Future + Project





Volumes

Name	I-5 I	North Ra	mps					E Street			E Street	
Base Volume Input [veh/h]	171	5	274	0	0	0	124	969	0	0	565	186
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	8	0	0	0	0	8	0	0	37	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	171	5	282	0	0	0	124	977	0	0	602	195
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Total 15-Minute Volume [veh/h]	43	1	71	0	0	0	31	244	0	0	151	49
Total Analysis Volume [veh/h]	171	5	282	0	0	0	124	977	0	0	602	195
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	е	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	1	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	t [	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

# Generated with PTV VISTRO

Version 2021 (SP 0-4)

#### Intersection Settings

Located in CBD	Yes
Signal Coordination Group	
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	51	0	0	0	0	0	9	0	0	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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## Lane Group Calculations

Lane Group Calculations					
Lane Group	С	L	С	С	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	31	31	31	31
g / C, Green / Cycle	0.34	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.31	0.20	0.30	0.24	0.26
s, saturation flow rate [veh/h]	1493	613	3204	1683	1549
c, Capacity [veh/h]	516	317	1671	878	808
d1, Uniform Delay [s]	18.59	17.38	9.90	9.01	9.26
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.42	3.61	1.50	1.69	2.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
Lane Group Results					
X, volume / capacity	0.89	0.39	0.58	0.45	0.49
d, Delay for Lane Group [s/veh]	24.01	20.99	11.40	10.71	11.41
Lane Group LOS	С	С	В	В	В
Critical Lane Group	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/In]	5.64	1.66	4.08	3.07	3.21
50th-Percentile Queue Length [ft/In]	141.09	41.62	102.12	76.76	80.32
95th-Percentile Queue Length [veh/In]	9.54	3.00	7.35	5.53	5.78
95th-Percentile Queue Length [ft/In]	238.49	74.92	183.81	138.17	144.57

# Generated with PTV VISTRO

Version 2021 (SP 0-4)

## Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.01	24.01	24.01	0.00	0.00	0.00	20.99	11.40	0.00	0.00	10.94	11.41
Movement LOS	С	С	С				С	В			В	В
d_A, Approach Delay [s/veh]		24.01 0.00				12.48		11.06				
Approach LOS		C A					В					
d_l, Intersection Delay [s/veh]						14	.24					
Intersection LOS					l	3						
Intersection V/C						0.6	612					

## Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	ı] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1565	0	166	166
d_b, Bicycle Delay [s]	1.42	30.03	25.24	25.24
I_b,int, Bicycle LOS Score for Intersection	2.315	4.132	2.468	2.217
Bicycle LOS	В	D	В	В

## Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6G: 2 9s		1														

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Version 2021 (S	P 0-4)	

131011 2021 (31 0=4)															
				Level O											
		Interse	ction 3:	E Stree	t/Margu	erite Str	reet								
Control Type:	Control Type: Signalized Delay (sec / veh):										15.1				
Analysis Method:	HCM 6th Edition						Leve	l Of Serv	/ice:		В				
Analysis Period:	15 minutes					\	/olume t	o Capac	ity (v/c):		0.	.338			
ntersection Setup															
Nam	ie	Març	guerite S	treet					E Street			E Street			
Appro	ach	Northbound			S	Southbound			astboun	d	V	d			
Lane Confi	guration	<b>-1</b> -			<u>- ч</u> Р			-11-			רור <u> </u>				
Turning Mo	ovement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ		
Lane Wi	dth [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0		
No. of Lanes in	Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1		
Entry Pocket	Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.0		
No. of Lanes in	n Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1		
Exit Pocket	Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.2		
Speed [mph]			25.00		25.00			25.00			25.00				
Grade	[%]		0.00		0.00			0.00							
Curb Pr	esent		No		No			No			No				
Crosswalk			Yes		Yes				Yes		Yes				

# Generated with PTV VISTRO Version 2021 (SP 0-4)

Name	Marg	guerite S	treet					E Street			E Street	
Base Volume Input [veh/h]	85	19	24	44	6	49	156	723	28	8	406	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	46	0	6	0	0	0	0	8	8	3	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	131	19	30	44	6	49	156	731	36	11	406	33
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	5	8	11	2	12	39	183	9	3	102	8
Total Analysis Volume [veh/h]	131	19	30	44	6	49	156	731	36	11	406	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	e	1			1			1			1	
v_di, Inbound Pedestrian Volume crossing major street	[	1			1			1			1	
v_co, Outbound Pedestrian Volume crossing minor stre	e	0			1			2			0	
v_ci, Inbound Pedestrian Volume crossing minor street	[	0			2			1			0	
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0					
Bicycle Volume [bicycles/h]		0			0			0			0	

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Intersection Settings

interocention octainge	
Located in CBD	Yes
Signal Coordination Group	
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No	İ		No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

# Generated with PTV VISTRO Version 2021 (SP 0-4)

Lane Group	L	С	L	С	L	С	С	L	С	С
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
<ol><li>Clearance Lost Time [s]</li></ol>	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	23	23	23	23	23	23
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.11	0.03	0.04	0.04	0.18	0.23	0.23	0.02	0.13	0.13
s, saturation flow rate [veh/h]	1212	1519	1220	1452	854	1683	1655	631	1683	1638
c, Capacity [veh/h]	659	745	666	712	325	634	623	213	634	617
d1, Uniform Delay [s]	10.39	8.06	9.51	8.11	21.21	15.15	15.15	22.21	13.44	13.45
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	0.17	0.19	0.21	1.10	0.96	0.97	0.10	0.33	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Group Results										
X, volume / capacity	0.20	0.07	0.07	0.08	0.48	0.61	0.61	0.05	0.35	0.35
d, Delay for Lane Group [s/veh]	11.06	8.23	9.70	8.32	22.31	16.10	16.12	22.31	13.77	13.80
Lane Group LOS	В	A	A	A	С	В	В	С	В	В
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/In]	1.09	0.33	0.33	0.38	2.01	4.06	3.99	0.14	2.04	2.00
50th-Percentile Queue Length [ft/In]	27.30	8.26	8.35	9.38	50.32	101.45	99.87	3.39	50.88	50.0
95th-Percentile Queue Length [veh/In]	1.97	0.59	0.60	0.68	3.62	7.30	7.19	0.24	3.66	3.60
95th-Percentile Queue Length [ft/In]	49.14	14.86	15.03	16.88	90.57	182.61	179.76	6.09	91.58	90.0

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Version 2021 (SP 0-4)

## Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.06	8.23	8.23	9.70	8.32	8.32	22.31	16.11	16.12	22.31	13.78	13.80	
Movement LOS	B A A			Α	А	А	С	В	В	С	В	В	
d_A, Approach Delay [s/veh]	10.29			8.93			17.16			13.99			
Approach LOS	В			A			В			В			
d_I, Intersection Delay [s/veh]						15	.06						
Intersection LOS	В												
Intersection V/C	0.338												

## Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	2.000	2.226	2.712	2.547
Crosswalk LOS	A	В	В	В
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	ı] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	12.04	12.04	7.51	7.51
I_b,int, Bicycle LOS Score for Intersection	1.857	1.723	2.321	1.931
Bicycle LOS	A	A	В	A

## Sequence

Γ	Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Γ	Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Γ	Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 26₅	SG: 4 34s	
SG: 102 2 <mark>2</mark> 5	5G: 104 1 <mark>5</mark> s	
SG:6 26s	SG: 8 34s	
SG: 106 2 <mark>2</mark> s	SG. 108 15s	

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## Generated with PTV VISTRO Version 2021 (SP 0-4)

		Intersection Level Of Service Report Intersection 4: E Street/Project Street	
Control Type:	Two-way stop	Delay (sec / veh):	14.5
Analysis Method:	HCM 6th Edition	Level Of Service:	В
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

#### Intersection Setup

Name	Projec	t Street	ES	treet			
Approach	North	bound	East	bound	Westbound		
Lane Configuration	-	r		<b>→</b>	-		
Turning Movement	Left	Right	Thru	Right	Left	Thru	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Entry Pocket	0	0	0	0	0	0	
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	
No. of Lanes in Exit Pocket	0	0	0	0	0	0	
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	
Speed [mph]	25	.00	25	.00	25	.00	
Grade [%]	0.	.00	0	.00	0.	00	
Crosswalk	1	No	1	No	No		

## Volumes

Name	Project	t Street	ES	treet		
Base Volume Input [veh/h]	0	0	791	0	0	447
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	6	8	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	797	8	0	450
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	199	2	0	113
Total Analysis Volume [veh/h]	0	6	797	8	0	450
Pedestrian Volume [ped/h]	(	0		)		D

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Version 2021 (SP 0-4) Intersection Settings

intereordien oottinge			
Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

## Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.00		
d_M, Delay for Movement [s/veh]	24.05	14.51	0.00	0.00	9.39	0.00		
Movement LOS	С	В	A	A	A	A		
95th-Percentile Queue Length [veh/In]	0.05	0.05	0.00	0.00	0.00	0.00		
95th-Percentile Queue Length [ft/In]	1.19	1.19	0.00	0.00	0.00	0.00		
d_A, Approach Delay [s/veh]	14	.51	0.	00	0.00			
Approach LOS	E	3	ŀ	4	A			
d_l, Intersection Delay [s/veh]			0.0	07				
Intersection LOS	В							

# Generated with PTV VISTRO

Version 2021 (SP 0-4)

Intersection Level Of Service Report
Intersection 1: E Street/I-5 South Ramps
Control Type: Signalized Delay (sec / veh):
Analysis Method: HCM 6th Edition Level Of Service:

	intersection 1. E offeeti-o ooutin rumps	
Signalized	Delay (sec / veh):	16.5
HCM 6th Edition	Level Of Service:	В
15 minutes	Volume to Capacity (v/c):	0.729

## Intersection Setup

Analysis Period:

Name				I-5 \$	South Ra	mps		E Street			E Street	
Approach	N	lorthbour	nd	S	outhbour	nd	Eastbound			Westbound		
Lane Configuration					+			IF				
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	135.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]		30.00			45.00			25.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		Yes			No			No			No	
Crosswalk					No			No		No		

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Volumes

Name				I-5 S	South Ra	mps		E Street			E Street	
Base Volume Input [veh/h]	0	0	0	250	5	178	0	675	173	239	753	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	10	0	0	0	16	0	14	10	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	260	5	178	0	691	173	253	763	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	65	1	45	0	173	43	63	191	0
Total Analysis Volume [veh/h]	0	0	0	260	5	178	0	691	173	253	763	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	е	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	1	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	1			0			1			0	-
v_ci, Inbound Pedestrian Volume crossing minor street	1	1			0		1					
v_ab, Corner Pedestrian Volume [ped/h]		0		0			0					
Bicycle Volume [bicycles/h]		0			0			0			0	-

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Version 2021 (SP 0-4)

## Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												1
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	48	0	0	12	0	0	12	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	3	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
<ol><li>Start-Up Lost Time [s]</li></ol>	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
<ol><li>Clearance Lost Time [s]</li></ol>	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall		1			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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# Lane Group Calculations

Lane Group Calculations					
Lane Group	С	С	С	L	С
C, Cycle Length [s]	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	32	32	32	32
g / C, Green / Cycle	0.33	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.29	0.26	0.28	0.44	0.24
s, saturation flow rate [veh/h]	1530	1683	1571	576	3204
c, Capacity [veh/h]	502	907	847	308	1727
d1, Uniform Delay [s]	19.12	8.59	8.81	22.75	8.38
k, delay calibration	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.32	1.79	2.19	21.23	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00
Lane Group Results					
X, volume / capacity	0.88	0.48	0.51	0.82	0.44
d, Delay for Lane Group [s/veh]	24.44	10.38	11.01	43.97	9.21
Lane Group LOS	С	В	В	D	A
Critical Lane Group	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/In]	5.52	3.37	3.51	5.31	2.60
50th-Percentile Queue Length [ft/ln]	137.93	84.29	87.75	132.71	65.00
95th-Percentile Queue Length [veh/In]	9.37	6.07	6.32	9.09	4.68
95th-Percentile Queue Length [ft/In]	234.24	151.72	157.96	227.17	117.01

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Version 2021 (SP 0-4)

## Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.44	24.44	24.44	0.00	10.62	11.01	43.97	9.21	0.00	
Movement LOS				С	С	С		В	В	D	A		
d_A, Approach Delay [s/veh]		0.00			24.44			10.69			17.86		
Approach LOS		А		C B B									
d_I, Intersection Delay [s/veh]						16	.45				В		
Intersection LOS						E	3						
Intersection V/C						0.7	'29						

## Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.71	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.184	0.000	0.000	0.000
Crosswalk LOS	В	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	<b>1]</b> 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1465	266	266
d_b, Bicycle Delay [s]	30.03	2.15	22.56	22.56
I_b,int, Bicycle LOS Score for Intersection	4.132	2.291	2.272	2.398
Bicycle LOS	D	В	В	В

## Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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				Level C : E Stree										
Control Type: Analysis Method: Analysis Period:	Signalized HCM 6th Edition 15 minutes		ection 2	: E Stree	et/I-5 NO		11.3 B 0.635							
Intersection Setup														
Nam	e	I-5 I	North Ra	mps					E Street		E Street			
Approa	ach		lorthbour	nd	S	outhbour	nd	E	astboun	d	V	Vestboun	d	
Lane Config	guration		+						٦Ħ		IF			
Turning Mo	vement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Righ	
Lane Wid	th [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0	
No. of Lanes in I	Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0	
Entry Pocket	_ength [ft]	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.0	
No. of Lanes in	Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0	
Exit Pocket L	ength [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Speed [r	nph]		45.00			25.00			25.00			30.00		
Grade	[%]		0.00			0.00			0.00		0.00			
Curb Pre	sent		No						No			No		
Crossw	alk		No			No			No			No		

Version 2021 (SP 0-4)

Volumes

Name	1-51	North Ra	mps					E Street			E Street	
Base Volume Input [veh/h]	140	5	127	0	0	0	75	850	0	0	852           1.0000           2.00           1.0000           0	436
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	26	0	0	0	0	26	0	0	24	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	5	153	0	0	0	75	876	0	0	876	442
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000
Total 15-Minute Volume [veh/h]	35	1	38	0	0	0	19	219	0	0	219	111
Total Analysis Volume [veh/h]	140	5	153	0	0	0	75	876	0	0	876	442
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	e	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major stree	t [	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street	t [	0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

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Intersection Settings

interessentin settings	
Located in CBD	Yes
Signal Coordination Group	and the second second second second second second second second second second second second second second second
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	51	0	0	0	0	0	9	0	0	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
<ol><li>Start-Up Lost Time [s]</li></ol>	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
<li>I2, Clearance Lost Time [s]</li>	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

#### Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

# Generated with PTV VISTRO

Version 2021 (SP 0-4)

Lane Group Calculations

Lane Group	С		L	С	C	С
C, Cycle Length [s]	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00		4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00		2.00	0.00	0.00	0.00
<ol><li>Clearance Lost Time [s]</li></ol>	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14		38	38	38	38
g / C, Green / Cycle	0.23		0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.20		0.20	0.27	0.39	0.44
s, saturation flow rate [veh/h]	1511		375	3204	1683	1505
c, Capacity [veh/h]	354		234	2027	1065	952
d1, Uniform Delay [s]	21.95		18.17	5.59	6.67	7.22
k, delay calibration	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43		3.59	0.67	2.70	4.13
d3, Initial Queue Delay [s]	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00		1.00	1.00	1.00	1.00
Lane Group Results	1	•				
X, volume / capacity	0.84		0.32	0.43	0.62	0.69
d, Delay for Lane Group [s/veh]	27.38		21.75	6.26	9.37	11.35
Lane Group LOS	С		С	A	A	В
Critical Lane Group	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/In]	3.96		1.07	2.28	4.30	4.88
50th-Percentile Queue Length [ft/In]	98.94		26.77	56.89	107.58	122.11
95th-Percentile Queue Length [veh/In]	7.12		1.93	4.10	7.71	8.51
95th-Percentile Queue Length [ft/ln]	178.09		48.19	102.41	192.63	212.72

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## Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.38	27.38	27.38	0.00	0.00	0.00	21.75	6.26	0.00	0.00	9.86	11.35		
Movement LOS	С	С	С				С	А			А	В		
d_A, Approach Delay [s/veh]		27.38			0.00			7.48			10.36			
Approach LOS		С			А			А			В			
d_I, Intersection Delay [s/veh]						11	.27				B			
Intersection LOS							В							
Intersection V/C						0.6	635							

## Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	n] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1565	0	166	166
d_b, Bicycle Delay [s]	1.42	30.03	25.24	25.24
I_b,int, Bicycle LOS Score for Intersection	2.051	4.132	2.344	2.647
Bicycle LOS	В	D	В	В

## Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



#### Valley Ranch Residential Subdivision TIS Ww-Trans PM Future + Project



# Generated with PTV VISTRO

Version 2021	(SP 0-4)	

	Ir	Intersection Level Of Service Report ntersection 3: E Street/Marguerite Street	
Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	В
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.292

#### Intersection Setup

Name	Mar	guerite S	treet					E Street			E Street		
Approach	N	Northbound			Southbound		Eastbound			Westbound			
Lane Configuration		٦۲			٦ŀ			רור – <u>אור</u>			-11-		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1	
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	235.00	100.00	450.00	120.00	100.00	120.00	
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1	
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	
Speed [mph]		25.00			25.00			25.00			25.00		
Grade [%]		0.00			0.00		0.00			0.00			
Curb Present		No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes			

Valley Ranch Residential Subdivision TIS PM Future + Project



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Volumes

Name	Mar	guerite S	treet					E Street		E Street		
Base Volume Input [veh/h]	29	14	15	67	24	117	54	416	49	25	574	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	0	4	0	0	0	0	26	26	12	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	14	19	67	24	117	54	442	75	37	574	72
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	4	5	17	6	29	14	111	19	9	144	18
Total Analysis Volume [veh/h]	59	14	19	67	24	117	54	442	75	37	574	72
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stre	е	0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street	1	0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stre	e	e 0			0			0			-	
v_ci, Inbound Pedestrian Volume crossing minor street	[ 0				0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]	0			0		0						
Bicycle Volume [bicycles/h]		0		0			0			0		

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## Intersection Settings

Located in CBD	Yes
Signal Coordination Group	
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
<li>I2, Clearance Lost Time [s]</li>	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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Lane Group Calculations

ane Group Calculations										
Lane Group	L	С	L	С	L	С	С	L	С	С
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.0
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.0
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0
g_i, Effective Green Time [s]	32	32	32	32	20	20	20	20	20	20
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.34	0.34	0.34	0.34	0.34	0.3
(v / s)_i Volume / Saturation Flow Rate	0.05	0.02	0.05	0.10	0.08	0.16	0.16	0.05	0.20	0.2
s, saturation flow rate [veh/h]	1123	1528	1238	1468	706	1683	1599	796	1683	161
c, Capacity [veh/h]	636	808	736	777	210	568	540	252	568	54
d1, Uniform Delay [s]	9.25	6.81	8.01	7.37	24.76	15.61	15.64	21.93	16.36	16.3
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.1
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
d2, Incremental Delay [s]	0.29	0.09	0.24	0.51	0.64	0.59	0.63	0.27	0.93	0.9
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
ne Group Results										
X, volume / capacity	0.09	0.04	0.09	0.18	0.26	0.46	0.47	0.15	0.58	0.5
d Delay for Lane Group [s/yeb]	0.54	6.00	9.26	7 9 9	25.41	16.20	16.27	22.10	17 20	17

Γ	d, Delay for Lane Group [s/veh]	9.54	6.90	8.26	7.88	25.41	16.20	16.27	22.19	17.29	17.35
Γ	Lane Group LOS	A	A	A	A	С	В	В	С	В	В
Γ	Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
	50th-Percentile Queue Length [veh/In]	0.45	0.20	0.46	0.92	0.73	2.72	2.61	0.46	3.57	3.46
	50th-Percentile Queue Length [ft/In]	11.17	4.91	11.38	23.03	18.32	67.95	65.36	11.38	89.31	86.40
Γ	95th-Percentile Queue Length [veh/In]	0.80	0.35	0.82	1.66	1.32	4.89	4.71	0.82	6.43	6.22
	95th-Percentile Queue Length [ft/In]	20.10	8.84	20.49	41.45	32.98	122.30	117.64	20.49	160.76	155.51

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Version 2021 (SP 0-4)

## Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.54	6.90	6.90	8.26	7.88	7.88	25.41	16.23	16.27	22.19	17.32	17.35
Movement LOS	A A A		A	А	A	С	В	В	С	В	В	
d_A, Approach Delay [s/veh]		8.60		8.00			17.10			17.59		
Approach LOS	A			A				В				
d_I, Intersection Delay [s/veh]						15	.59					
Intersection LOS	В											
Intersection V/C	0.292											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
I_p,int, Pedestrian LOS Score for Intersection	2.035	2.092	2.579	2.573
Crosswalk LOS	В	В	В	В
s_b, Saturation Flow Rate of the bicycle lane [bicycles/	ı] 2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	12.04	12.04	7.51	7.51
I_b,int, Bicycle LOS Score for Intersection	1.711	1.903	2.031	2.123
Bicycle LOS	А	A	В	В

## Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 2 26s	SG: 4 34s	
SG: 102 2 <mark>2</mark> 5	SG: 104 15s	8
SG:6 26s	SG: 8 34s	
SG: 106 22s	SG: 108 1 <mark>5</mark> s	8

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Version 2021 (S	P 0-4)	

			Level Of Servic 4: E Street/Proj					
Control Type: Analysis Method:	Two-way stop HCM 6th Edition	Intercoulon		Delay Level	(sec / veh): Of Service:		1.5 B	
Analysis Period:	15 minutes			Volume to	o Capacity (v/c):	0.	007	
ntersection Setup								
Nam	e	Projec	t Street	E SI	reet			
Approa	ach	North	bound	Eastb	ound	Westbound		
Lane Config	guration	1	<b>→</b>	l F	•	+	1	
Turning Mo	vement	Left	Right	Thru	Right	Left	Thru	
Lane Wid	lth [ft]	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in	Entry Pocket	0	0	0	0	0	0	
Entry Pocket	Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	
No. of Lanes in	Exit Pocket	0	0	0	0	0	0	
Exit Pocket Length [ft]		0.00	0.00	0.00	0.00	0.00	0.00	
Speed [mph]		25	.00	25.00		25.00		
Grade [%]		0.	00	0.00		0.00		
Crossw	alk	N	lo	N	0	N	lo	
olumes					·			
Nam	e	Projec	t Street	E SI	reet			
Base Volume I	nput [veh/h]	0	0	498	0	0	671	
Base Volume Adju	istment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Heavy Vehicles P	ercentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	
Growth F	actor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
In-Process Vol	ume [veh/h]	0	0	0	0	0	0	
Site-Generated	Trips [veh/h]	0	4	4	26	0	12	
Diverted Trip	s [veh/h]	0	0	0	0	0	0	
Pass-by Trip	s [veh/h]	0	0	0	0	0	0	
Existing Site Adjustme	ent Volume [veh/h]	0	0	0	0	0	0	
Other Volum	e [veh/h]	0	0	0	0	0	0	
Total Hourly Vo	ume [veh/h]	0	4	502	26	0	683	
Peak Hour	Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
	ent Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Other Adjustm				126	7	0	171	
Other Adjustm Total 15-Minute V	olume [veh/h]	0	1	120		0		
,		0	4	502	26	0	683	

Version 2021 (SP 0-4)

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

#### Movement, Approach, & Intersection Results

Valley Ranch Residential Subdivision TIS

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V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.01		
d_M, Delay for Movement [s/veh]	22.60	11.48	0.00	0.00	8.46	0.00		
Movement LOS	C B		A	A	A	A		
95th-Percentile Queue Length [veh/In]	0.02	0.02	0.00	0.00	0.00	0.00		
95th-Percentile Queue Length [ft/In]	0.54	0.54	0.00	0.00	0.00	0.00		
d_A, Approach Delay [s/veh]	11.48		0.00		0.00			
Approach LOS		В	1	4	A			
d_I, Intersection Delay [s/veh]	0.04							
Intersection LOS	В							

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