TRAILS TRACT 1

TRAFFIC IMPACT ANALYSIS

REVISED SUBMITTAL

APRIL 1, 2021

Prepared For:

HT#C09D015
received 4/1/2021

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Date:

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I. INTRODUCTION AND SUMMARY

Price Land & Development proposes to develop approximately 13.76 acres, situated at the southwest corner of Paseo del Norte and Woodmont. The proposed development will include 333 multi-family residential units.

A. STUDY PURPOSE

The purpose of the traffic study is to determine the impacts of the proposed development on the surrounding roadway network, evaluate the operation of the proposed site entrances, and to recommend any mitigation measures that may be necessary to support additional traffic generated by the new development.

B. EXECUTIVE SUMMARY

1. SITE LOCATION AND STUDY AREA

The site is located southwest of Paseo del Norte and Woodmont in Albuquerque, New Mexico. A vicinity map and site plan are shown in Figure 1, and the proposed site plan of the future development is shown in Figure 2.

The study area consists of the following intersections:

- Paseo del Norte and Ventana West (existing 3-way unsignalized intersection, future 4-way intersection)
- Paseo del Norte and Rainbow (existing signalized intersection)
- Rainbow and Woodmont (existing signalized intersection)
- Woodmont and site entrances (future unsignalized intersections)

The intersection evaluations include analysis for the AM and PM peak hours for the following traffic conditions:

- Existing traffic (2019)
- 2022 Completion Year without proposed development (2022 No Build)
- 2022 Completion Year with buildout of the site (2022 Build)

2. PRINCIPAL FINDINGS

The traffic analysis found that all intersections operate overall acceptably in the Existing and No Build conditions.

The eastbound right movement at the Paseo del Norte and Rainbow signalized intersection experiences queuing beyond available storage in AM peak hour. This

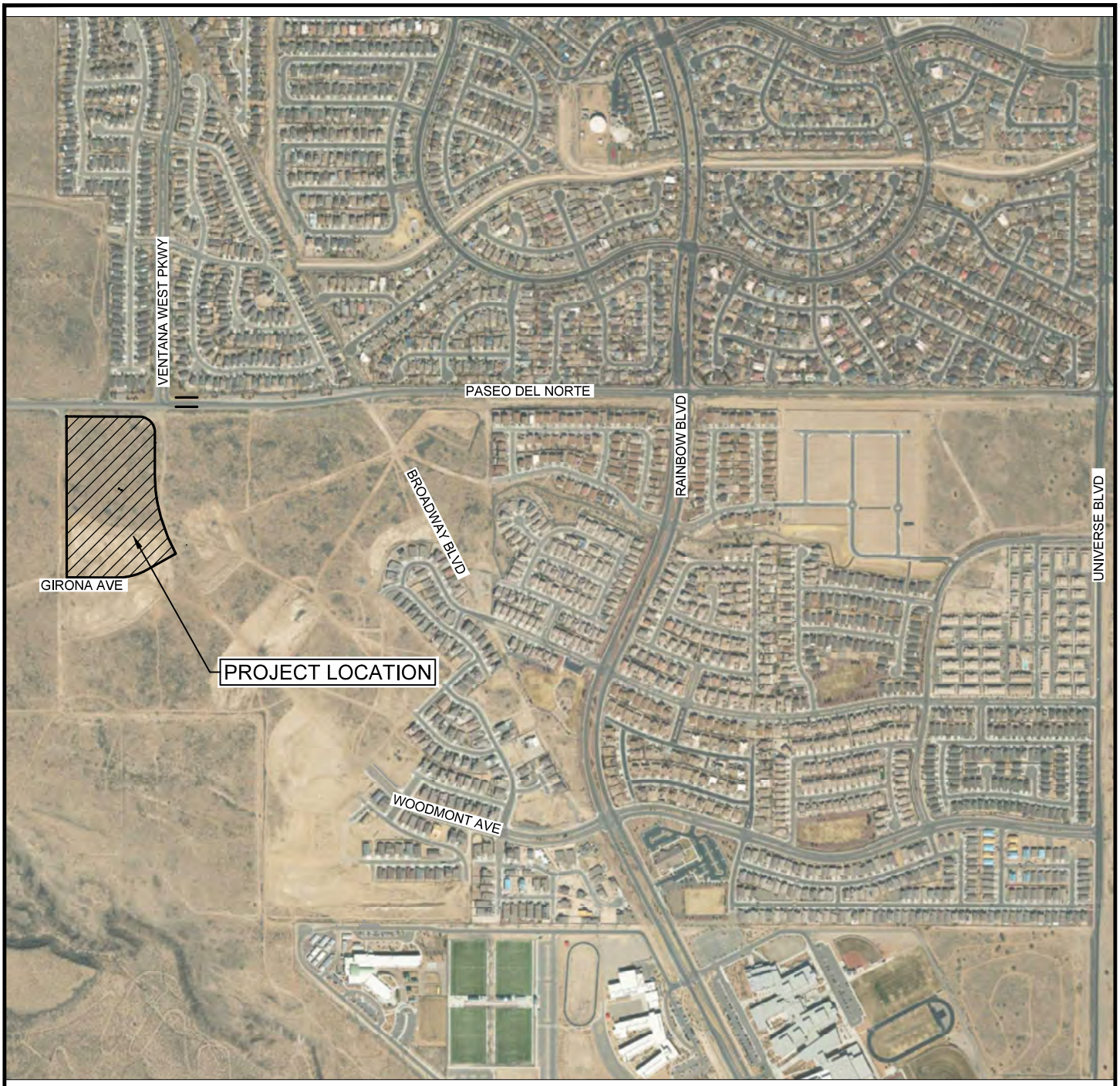
occurs in the Existing and No Build but is improved by the Woodmont connection in the Build.

In the Build the eastbound right movement at Rainbow and Woodmont does not operate acceptably and will require mitigation. Note, the Trails Tract 1 development contributes 6% of the total traffic to this movement in the AM, while the rerouted traffic from Ventana Ranch makes up 39% and the remaining 55% is from the residential developments being constructed in the vicinity.

The site driveways operate acceptably with interim 2-lane roadway and with the future 4 lanes on Woodmont.

3. RECOMMENDATIONS

- All designs shall satisfy the Manual on Uniform Traffic Control Devices (MUTCD) and City of Albuquerque requirements.
- An overlap phase is recommended at Rainbow and Woodmont to mitigate the failing eastbound right.
- The Paseo del Norte and Ventana West/Woodmont intersection performs acceptably with all-way stop control and does not warrant a traffic signal; however, the eastbound and westbound left turn volumes exceed the criteria defined in Table 7.5.62 of the Development Process Manual and left turn lanes are warranted. As the queues for these movements are minimal, the left turn lanes should be 250 feet in length with left turn lane transition lengths of 300'-150' reverse curve as defined in Table 7.5.65 of the DPM.
    - This development is expected to construct the full section of the 2-lane northbound approach. This will provide a northbound left turn lane, a northbound thorough lane and a northbound right turn lane. The southbound approach will also require restriping provide a single southbound through lane.
- The section of Woodmont along the site frontage should be constructed to include bicycles lanes and sidewalks to match the existing Woodmont typical section.



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SITE TRAFFIC ANALYSIS

FIGURE 1
VICINITY MAP

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FIGURE 2
SITE PLAN

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II. PROPOSED DEVELOPMENT

A. LAND USE AND INTENSITY

The proposed development is a 333-unit multi-family residential complex on approximately 13.76 acres.

The development is situated at the southwest corner of Paseo del Norte and Woodmont. The study area is partially undeveloped. The Catalonia residential development is actively under construction to the south of the Trails Tract 1 development. There is also established residential in the surrounding area.

B. DEVELOPMENT PHASING AND TIMING

The project is expected to be developed by 2022 and phasing is not anticipated.

III. STUDY AREA CONDITIONS

A. STUDY AREA

The study area consists of the following intersections:

- Paseo del Norte and Ventana West (existing 3-way unsignalized intersection, future 4-way intersection)
- Paseo del Norte and Rainbow (existing signalized intersection)
- Rainbow and Woodmont (existing signalized intersection)
- Woodmont and site entrances (future unsignalized intersections)

B. SITE ACCESSIBILITY

The development will have access via two future driveways. The primary driveway will be located on Woodmont and the secondary driveway is to be located on Girona. Both Woodmont and Girona are future proposed roadways.

C. DATA SOURCES

The data used in this report consist of the traffic volumes described below, aerial photography and mapping from Google Earth®, information provided by the Trails TIA dated 2016, and information provided by Price Land & Development Group.

IV. EXISTING CONDITIONS ANALYSIS

A. BACKGROUND

Roadway federal classification is updated approximately every four years. The classification process involves local governments, the Mid Region Council of Governments (MRCOG), New Mexico Department of Transportation (NMDOT), and the Federal Highway Administration (FHWA). The 2016 MRCOG Roadway Functional Classification Map classifies roadways based on their function. Roadways are subject to design guidance based on their functional classification, design speed, or based on Comprehensive Plan corridor designations.

1. ADJACENT ROADWAYS

The following are adjacent roadways:

- Paseo del Norte is a minor arterial west of Rainbow and a principal arterial east of Rainbow. Paseo del Norte provides regional connectivity within Albuquerque, serving as a river crossing east of the study area. To the west, Paseo del Norte turns into Atrisco Vista and heads south to connect with I-40. Within the study area, Paseo del Norte is 35 miles per hour (MPH) with one lane in each direction and an undivided median. Sidewalks and bicycle lanes are not present on Paseo del Norte in this area.
- Rainbow is a minor arterial with 2 lanes in each direction. Rainbow has a posted speed limit of 40 MPH and a divided median. Rainbow has paved, separated multi-use facilities on both sides of the roadway, in addition to on-street bicycle lanes in both directions south of Paseo del Norte.
- Woodmont is a local road with 2 lanes in each direction. Woodmont has a posted speed limit of 35 MPH and a divided median. Woodmont has bicycle lanes on both sides of the roadway, sidewalk on the south side, and a paved, separated multi-use facility on the north side. This typical section will continue to the north to Paseo del Norte as development proceeds. The subdivisions of Valle Vista, Valle Prado, and Durango, currently completing construction, have constructed a full-section of Woodmont along their frontage, as they are on opposite sides of Woodmont. The Catalonia subdivision is constructing a half-section of Woodmont (future southbound lanes) along their frontage, and this project will construct a half-section along their frontage as part of the off-site improvements. As part of the Trails Tract 1 off-site improvements, Woodmont will be extended north to Paseo del Norte, and the south leg of the ultimate configuration of the Paseo del Norte/Woodmont/Ventana West intersection will be constructed.

- Ventana West Parkway is a collector with 2 lanes in each direction. Ventana West has a posted speed limit of 40 MPH and a divided median. Ventana West has paved, separated multi-use facilities on both sides of the roadway.

2. Multi-Modal Conditions

Sidewalks and bicycle lanes are not present on Paseo del Norte in this area. The City of Albuquerque Bike Map identifies future bicycle lanes on Paseo del Norte and a future paved trail on the north side of Paseo del Norte west of Ventana West. The future section of Woodmont is also identified to have bicycle lanes and a paved trail to tie in with existing facilities.

Rainbow, Woodmont, and Ventana West have paved, separated multi-use trails.

This project will construct the multi-modal facilities along their Woodmont frontage.

B. EXISTING TRAFFIC CONDITIONS

The NMDOT has developed guidelines for *Alternative Means to Develop Base Turning Movements Volumes for Traffic Impact Studies During COVID-19 Times*, released October 5, 2020. These guidelines provide three (3) methods to develop traffic counts for use in traffic studies. This analysis utilized Method 2 as reliable link volume data from MRCOG is available in the study area.

Method 2 utilizes tube counts collected prior to COVID, with adjustments using Big Data sources, such as the StreetLight Data platform. Streetlight Data collects traffic data from location-based services, such as smartphones, and has data available pre- and post COVID. The ratio between the tube counts and the data in StreetLight is applied to the StreetLight data to estimate the turning movements.

The StreetLight source data is included in Appendix A.

1. Approved Development

The area surrounding Trails Tract 1 is under development as residential subdivisions. The Valle Vista, Valle Prado, Durango, and Catalonia single-family residential subdivisions are located on Woodmont west of Rainbow. These developments are currently under construction and utilize the section of Woodmont that is constructed. Woodmont is currently constructed to the extent of this development but is anticipated to be extended north and provide a connection to Paseo del Norte. The future section of Woodmont will serve the Trails Tract 1 development.

The total trips for the Valle Vista, Valle Prado, and Durango residential developments were included in the 2022 No Build volumes as approved development. The Catalonia development is assumed to be constructed by 2022 and the total trips were included in the 2022 Build volumes.

C. LEVEL OF SERVICE DEFINITIONS

The *Highway Capacity Manual Sixth Edition* (HCM) defines Level of Service (LOS) for un-signalized intersections in Table 1 as follows:

Table 1 | LOS Definitions

Level of Service	Definition	Signalized (sec/veh)	Unsignalized (sec/veh)
A	Most vehicles do not stop	<10	<10
B	Some vehicles stop	>10 and <20	>10 and <15
C	Significant numbers of vehicles stop	>20 and <35	>15 and <25
D	Many vehicles stop	>35 and <55	>25 and <35
E	Limit of acceptable delay	>55 and <80	>35 and <50
F	Unacceptable delay	>80	>50

The City of Albuquerque has established LOS D as the generally acceptable level of service in urban areas and when intersections operate below this level, improvements are considered, where feasible. Other critical movements are also desired to have LOS D or better if possible.

D. EXISTING INTERSECTION CAPACITY ANALYSIS

The existing intersections traffic volume were analyzed using Highway Capacity Software version 7 (HCS7), which uses the intersection methodology from the Sixth Edition of the Highway Capacity Manual (HCM). Individual intersection output for the existing conditions analysis is included in Appendix B. The results are summarized in Table 2 and Table 3.

The signalized intersections of Paseo del Norte and Rainbow and Rainbow and Woodmont both operate at acceptable levels of service in the AM and PM peak hours. The eastbound right at Paseo del Norte and Rainbow experiences a 95th percentile queue of 255 feet in the AM peak hour. The existing dedicated right turn lane is 150 feet in length, so the queue spills into the adjacent thru lane during periods of the peak hour.

Table 2 | Existing Signalized Intersection Results

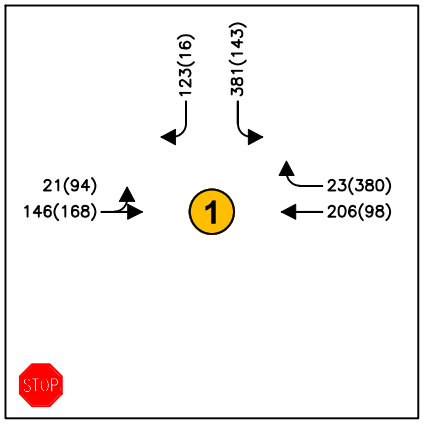
Intersection	2019 AM Peak			2019 PM Peak		
	Delay	LOS	Max V/C	Delay	LOS	Max V/C
Paseo & Rainbow	29.8	C	0.59	30.0	C	0.70
Rainbow & Woodmont	38.9	D	0.87	30.0	C	0.69

The all-way stop-controlled intersection of Paseo del Norte and Ventana West operates acceptably in both AM and PM peak hours.

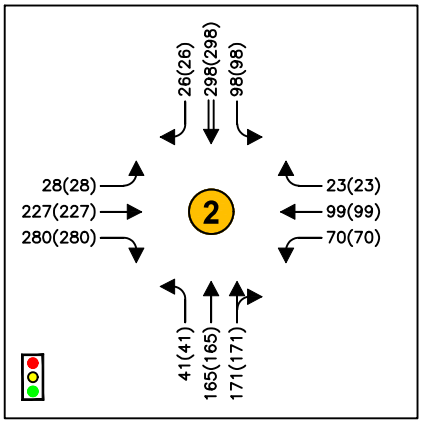
Table 3 | Existing Unsignalized Intersection Results

	2019 AM Peak				2019 PM Peak			
Intersection/Movement	Delay (sec)	V/C	Queue* (ft)	LOS	Delay (sec)	V/C	Queue* (ft)	LOS
Paseo & Ventana	17.2	-	-	C	12.5	-	-	B
Eastbound Left	12.4		50	B	13.0		75	B
Southbound Left	24.4		175	C	12.5		50	B
Southbound Right	9.1		25	A	8.6		25	A

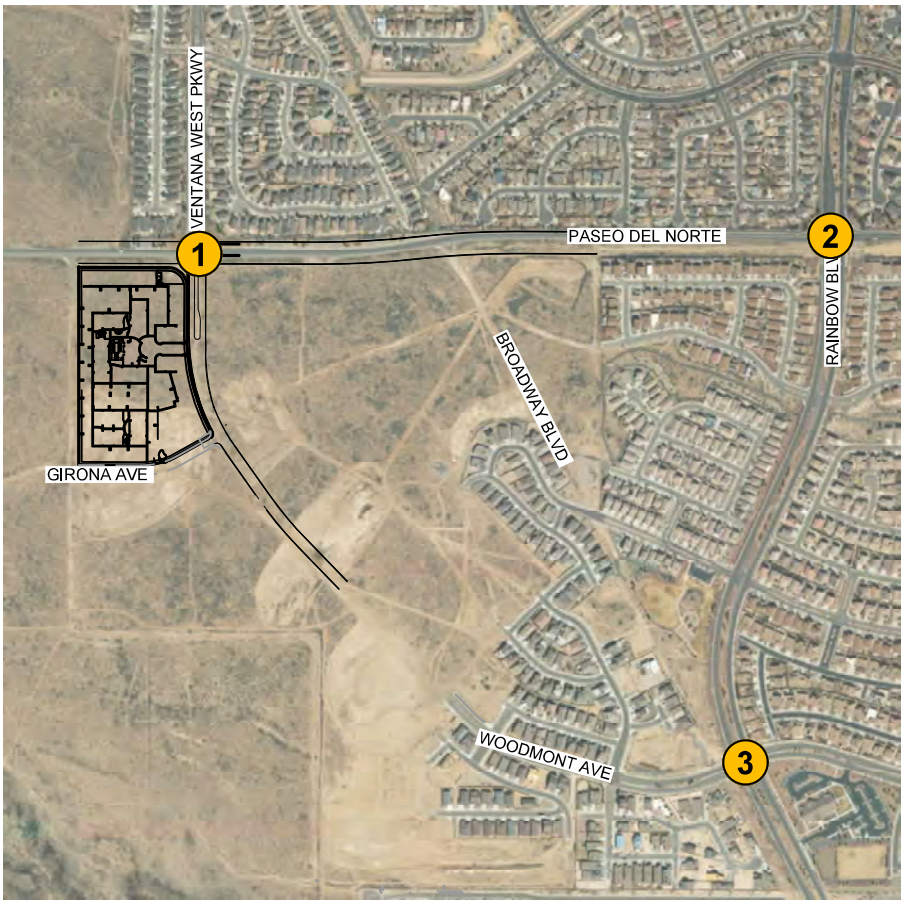
* – HCM 95th percentile queue rounded to next 25-foot increment



WOODMONT/VENTANA/PASEO DEL NORTE



RAINBOW/PASEO DEL NORTE

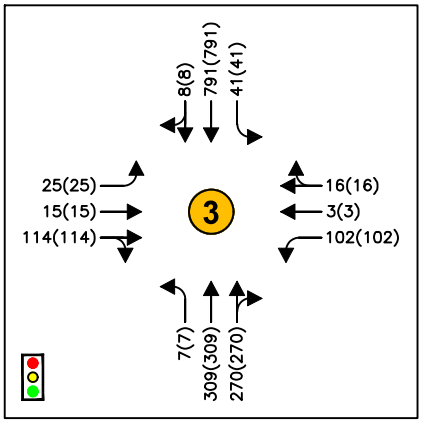


LEGEND

Thru Lanes (# as indicated)

Turning Lanes (# as indicated)

1234(1234) AM(PM) Traffic Counts



RAINBOW/WOODMONT

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FIGURE3
2019 AM(PM) PEAK HOUR TRAFFIC VOLUMES

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V. PROJECTED TRAFFIC

A. SITE TRAFFIC FORECASTING

1. TRIP GENERATION

Generated trips are broken down into three types; 1) primary, 2) pass-by trips, and 3) diverted link. The Trip Generation report defines these trips as follows:

- Primary Trips – These trips are made for the specific purpose of visiting the generator. The stop at that generator is the primary reason for the trip. For example, a home to shopping to home combination of trips is a primary trip set.
- Pass-by Trips – These trips are made as intermediate stops on the way from an origin to a primary trip generation. Pass-by trips are attracted from the traffic passing the site on an adjacent street that contains direct access to the generator site. These trips do not require a diversion from another roadway. For example, stopping at the store on the way home from work is an example of a pass-by trip. No pass-by trips we used in this analysis.
- Diverted Linked Trips – These trips are attracted from the traffic volume on the roadway within the vicinity of the generator, but which require a diversion from that roadway to another roadway to gain access to the site. The roadways could include streets or freeways adjacent to the generator, but without access to the generator. For this study, the diverted link trips have been included in with the primary trips.

This study evaluates primary trips only.

The trip generation based on the 10th Edition of the Institute of Transportation engineer's (ITE) Trip Generation Manual is shown in Table 4 below with the following considerations. The trip generation is based on the peak hour of the adjacent street traffic.

Table 4 | Trip Generation

Land Use	ITE Code	Size	Daily	AM Enter	AM Exit	PM Enter	PM Exit
Multi-Family Mid Rise	221	333	1,814	29	82	86	55

2. Trip Distribution and Assignment

The trip distribution was determined using a modified gravity model that considered a region-wide travel shed for employment trips. As the development is residential, standard traffic analysis assumes the trips in the peak hour to be primarily employment trips, so the destinations for the AM trips are employment locations, with the origins the site. In the PM peak hour, the destination is the site, and the origins are the employment locations.

The gravity model uses the locations of employment, which are weighted by the number of jobs in the Subareas in the Albuquerque Metropolitan area divided by their distance from the site. This means that employment locations closer to the site are considered more likely, with those farther away to be less likely, depending on how many jobs are in each Subarea.

The gravity model utilized socioeconomic data obtained from the Mid Region Council of Governments (MRCOG), which included population and employment estimates for each subarea within the Albuquerque Metropolitan Planning Area to develop the trip distribution.

The socioeconomic data for the year 2019 was estimated by interpolating between the 2015 and 2040 socioeconomic data available for MRCOG.

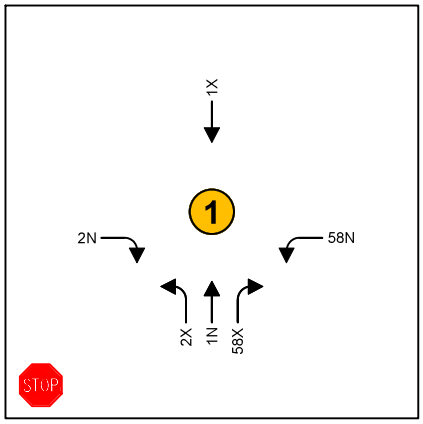
Spreadsheets showing the development of the trip distribution are included in Appendix C. The trip distribution percentages and assigned traffic volumes is shown in Figure 4 and Figure 5.

3. Travel Demand Adjustments

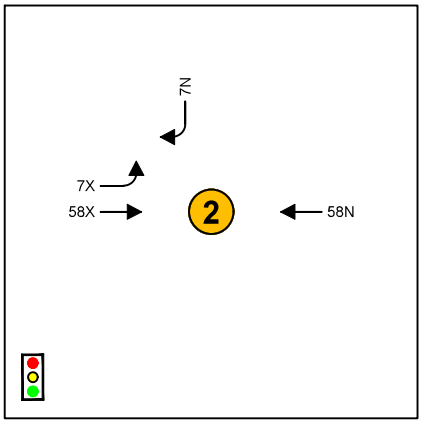
A section of Woodmont was constructed west of Rainbow to serve the Trails residential subdivision. As part of the off-site improvements for this project, Woodmont will be constructed northwest towards and connect with Paseo del Norte. When the connection is complete this will create an alternate route for trips going to and from the Ventana Ranch residential area. The change is travel demand was accounted for in this study using origin and destination estimates from the StreetLight Data platform.

4. Traffic Projections

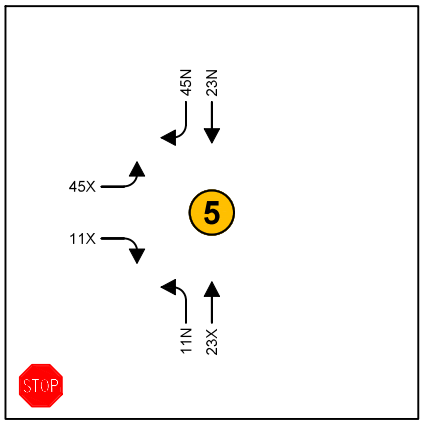
A background growth rate of 2% was applied to provide an estimate of potential future growth of traffic at all intersections evaluated. The growth rate determination and data are summarized in the spreadsheets included in Appendix C. Figure 6 on page 16 shows the 2022 No Build traffic volumes.



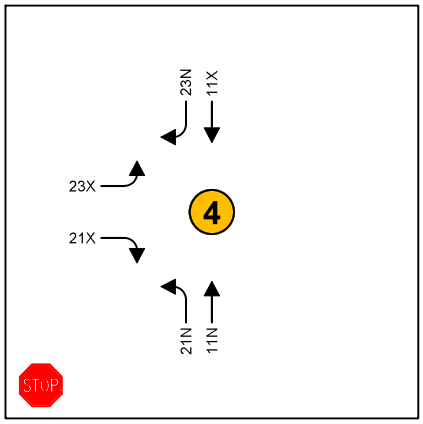
WOODMONT/VENTANA/PASEO DEL NORTE



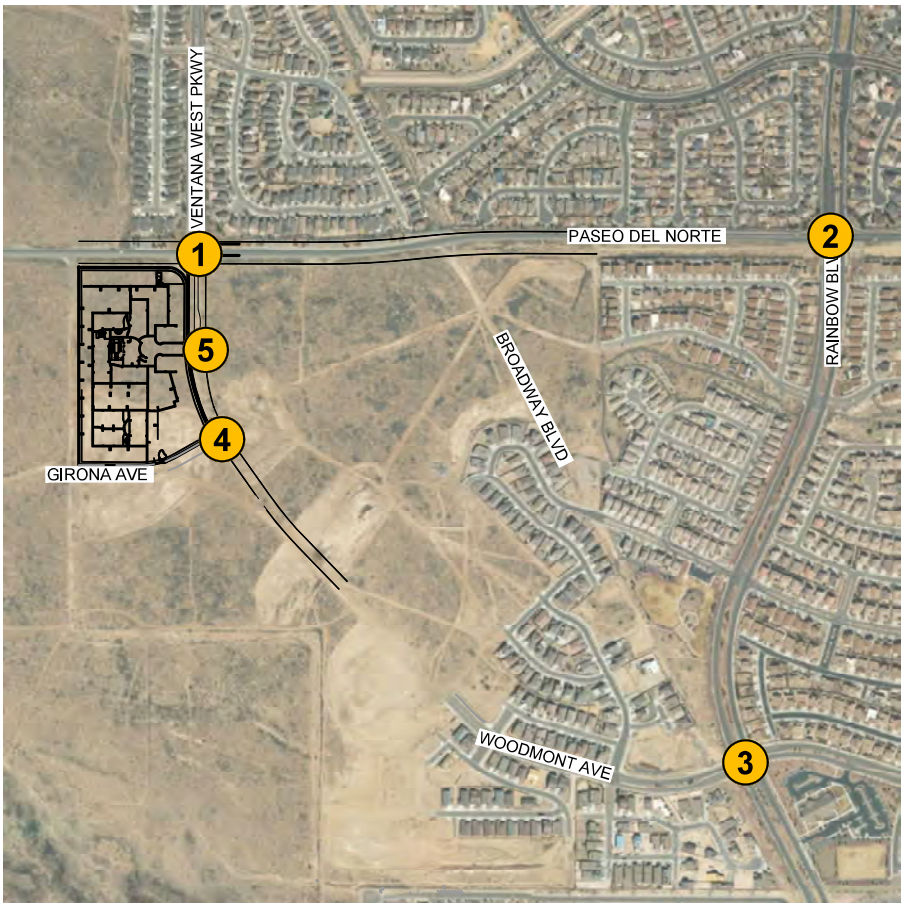
RAINBOW/PASEO DEL NORTE



WOODMONT/MAIN ENTRANCE

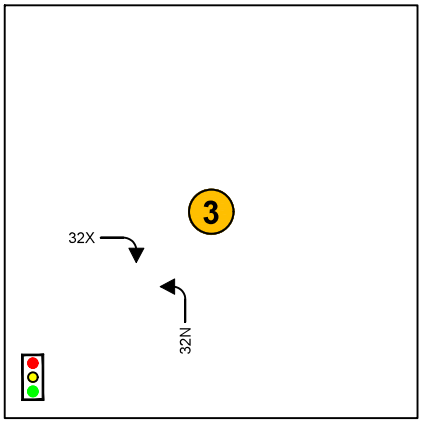


WOODMONT/GIRONA



LEGEND

- Thru Lanes (# as indicated)
- Turning Lanes (# as indicated)
- N — Entering
- X — Exiting



RAINBOW/WOODMONT

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FIGURE4
RESIDENTIAL TRIP DISTRIBUTION PERCENTAGES

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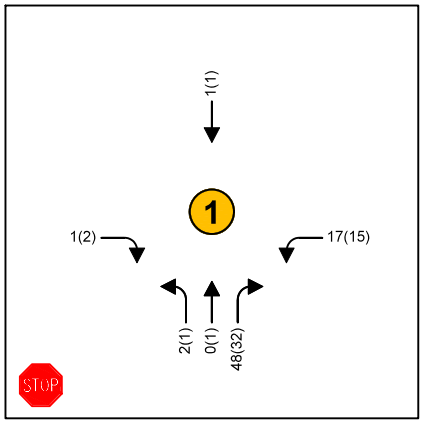
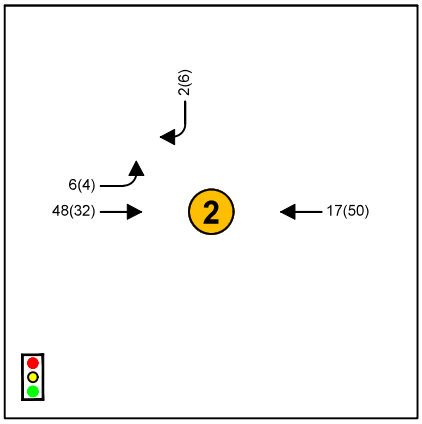
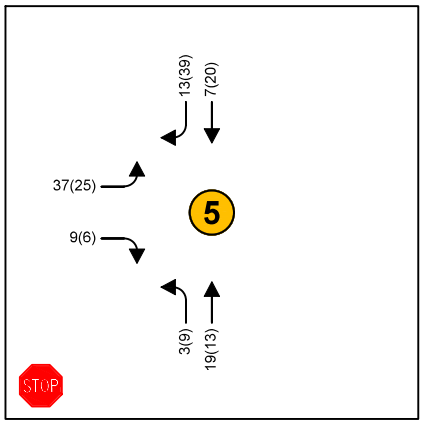
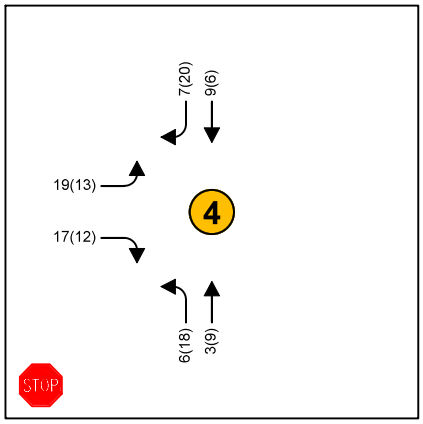




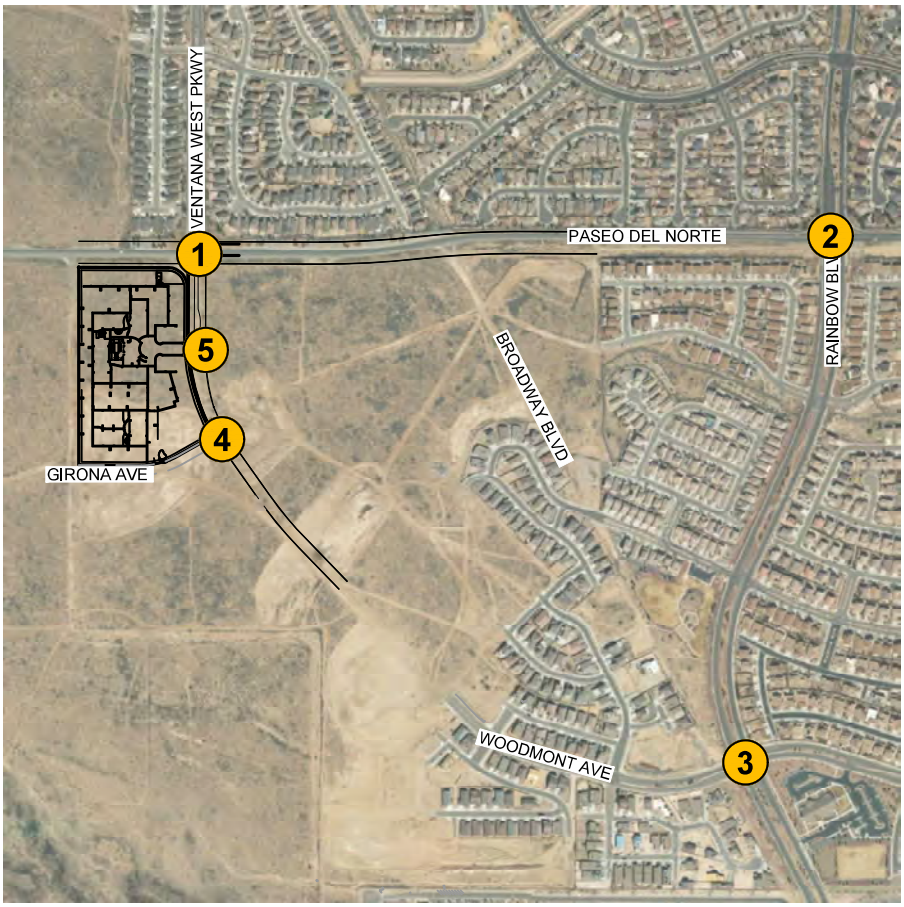
RAINBOW/PASEO DEL NORTE



WOODMONT/MAIN ENTRANCE



WOODMONT/GIRONA

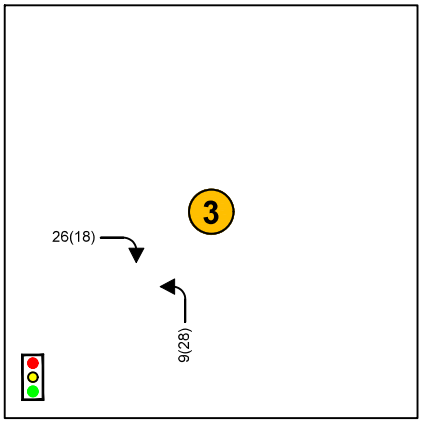


LEGEND

Thru Lanes (# as indicated)

Turning Lanes (# as indicated)

1234(1234) AM(PM) Trip assignment Volumes



RAINBOW/WOODMONT

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FIGURE 5
RESIDENTIAL TRIP ASSIGNMENT VOLUMES AM (PM)

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VI. TRAFFIC AND IMPROVEMENT ANALYSIS

The following section will discuss the results of the future year traffic analysis. The intersection capacity analysis was completed using HCS7 which implements the Highway Capacity Manual procedures.

1. NO BUILD INTERSECTION CAPACITY ANALYSIS

The 2022 No Build scenario assumed that the proposed development project is not completed. The extension of Woodmont to Paseo del Norte was not included in the No Build scenario. Table 5 and Table 6 shows the 2022 No Build results. The HCS output is included in Appendix D.

The analysis found that the signalized intersections of Paseo del Norte and Rainbow and Rainbow and Woodmont both operate at overall acceptable levels of service in the AM and PM peak hours.

The eastbound right at Paseo del Norte and Rainbow continues to experience queueing beyond available storage in the eastbound right turn lane.

The Rainbow and Woodmont intersection approaches capacity for the southbound thru and right movements in the AM with LOS E reported for each movement.

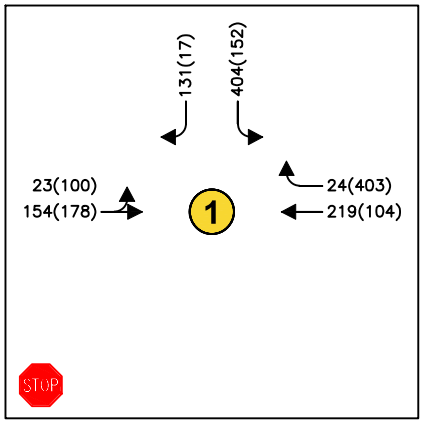
Table 5 | No Build Signalized Intersection Results

Intersection	2022 AM Peak			2022 PM Peak		
	Delay	LOS	Max V/C	Delay	LOS	Max V/C
Paseo & Rainbow	32.0	C	0.76	32.2	C	0.79
Rainbow & Woodmont	45.9	D*	0.96	30.2	C	0.74
* – Southbound thru and Southbound Right LOS E						

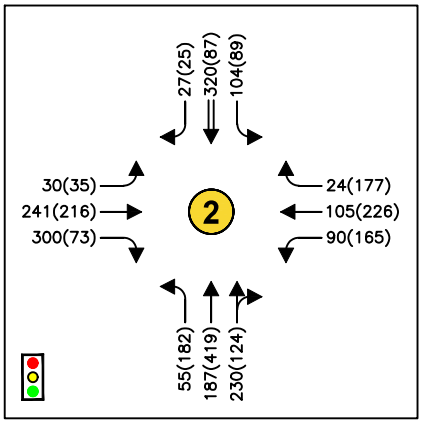
The unsignalized intersection of Paseo del Norte and Ventana West continues to operate acceptably in both AM and PM peak hours.

Table 6 | No Build Unsignalized Intersection Results

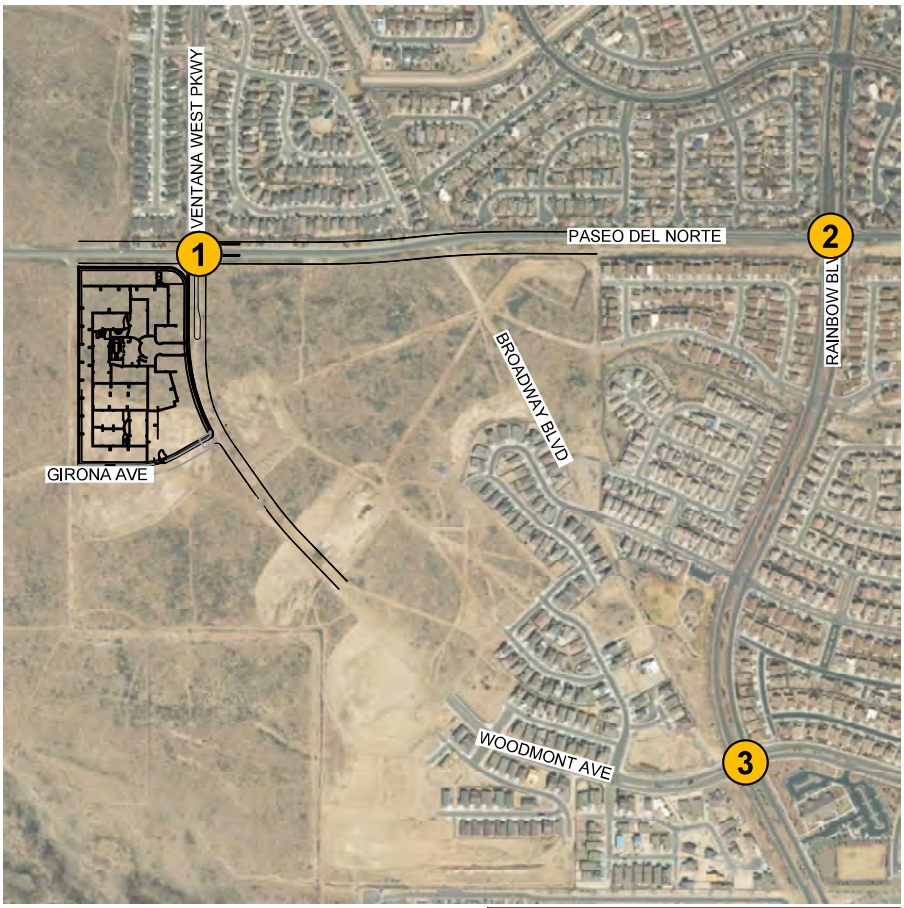
	2022 AM Peak				2022 PM Peak			
Intersection/Movement	Delay (sec)	V/C	Queue* (ft)	LOS	Delay (sec)	V/C	Queue* (ft)	LOS
Paseo & Ventana	19.5	-	-	C	13.4	-	-	B
Eastbound Left	13.0		50	B	13.8		75	B
Southbound Left	29.1		200	D	13.1		50	B
Southbound Right	9.3		25	A	8.7		25	A
* – HCM 95th percentile queue rounded to next 25-foot increment								



WOODMONT/VENTANA/PASEO DEL NORTE



RAINBOW/PASEO DEL NORTE

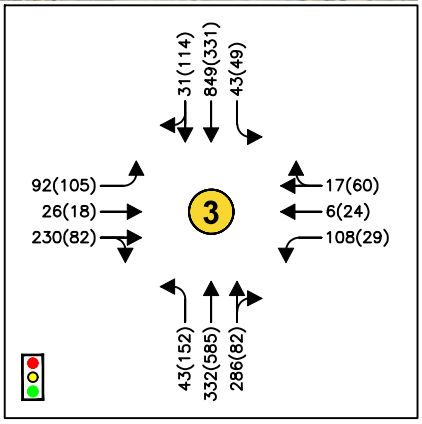


LEGEND

Thru Lanes (# as indicated)

Turning Lanes (# as indicated)

1234(1234) AM(PM) Traffic Counts



RAINBOW/WOODMONT

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ALBUQUERQUE, NEW MEXICO
SITE TRAFFIC ANALYSIS

FIGURE 6
2022 NO BUILD AM (PM) PEAK HOUR TRAFFIC VOLUMES

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2. BUILD INTERSECTION CAPACITY ANALYSIS

The trips generated by the site (Table 4) were assigned to the intersections using the trip percentages and associated volumes shown in Figure 4 and Figure 5. These trips were added to the 2022 No Build traffic projections shown in Appendix C. The 2022 Build capacity analysis is shown in Table 7 and Table 8. The individual intersection output is included in Appendix E.

The Build volumes included the adjustments for traffic originating in and destined to Ventana Ranch due to the connection of Woodmont to Paseo del Norte is discussed in Section V.A.3 Travel Demand Adjustments on page 12.

The signalized intersections of Paseo del Norte and Rainbow operates at acceptable levels of service in the AM and PM peak hours. The intersection of Rainbow and Woodmont will operate at LOS E in the AM peak hour due to the increased eastbound right turns from the completion of nearby residential subdivisions, as well as the Ventana West traffic that will now use Woodmont. This will be discussed in more detail below.

The eastbound right at Paseo del Norte and Rainbow continues to experience queueing beyond available storage in the eastbound right turn lane; however, the queueing at this movement is expected to improve from the No Build due to the new Woodmont connection and the reduction in eastbound right turns that result.

The Rainbow and Woodmont intersection is expected to perform poorly in the AM, particularly for eastbound traffic turning right onto Rainbow. This is largely due to the new Woodmont connection allowing traffic from Ventana Ranch to use Woodmont as a shortcut. The eastbound right turn with the existing lane configuration operates over capacity with a 240 second/vehicle delay.

The following mitigation scenarios were evaluating to improve performance of the eastbound right movement in the AM peak hour:

1. Converted Right Turn Lane

   In evaluating the possible mitigation of this failing movement, it was determined there is limited right-of-way available at the southwest quadrant of the intersection and construction of a viable dedicated eastbound right turn is not likely. The eastbound thru movement has low volumes, and the existing shared thru/right lane could be converted to a dedicated right turn lane without impacting performance of the eastbound thru traffic. However, does not significantly improve performance of the eastbound right, as the shared thru/right operates as a de facto right turn lane.

2. Overlap Phase + Converted Right Turn Lane

   In addition to converting the existing shared thru/right lane into a dedicated right turn lane, the intersection was evaluated with right turn overlap phasing. This phasing allows the eastbound right to operate with the northbound left. The overlap phase will increase overall efficiency of the intersection and improve the eastbound right movement to an acceptable level of service.

3. Right Turn on Red

   Right turns on red (RTOR) improves the performance of the eastbound right and is likely occurring at high rates at this time, improving performance. StreetLight Data does not provide information on RTOR volumes. The analysis results below show 200 vehicles turning RTOR, or 45% of the existing right turn volume. A sensitivity analysis of RTOR shows that 178 RTOR (40%) are needed to achieve acceptable LOS for this movement. Allowing RTOR at this intersection may not be desired due to the presence of nearby schools and high pedestrian volumes.

Table 7 | Build Signalized Intersection Results

Intersection	2022 AM Peak			2022 PM Peak		
	Delay	LOS	Max V/C	Delay	LOS	Max V/C
Paseo & Rainbow	31.7	C	0.76	33.5	C	0.80
Rainbow & Woodmont	77.0	E	1.42	29.7	C	0.79
Existing EBR	*238.8*	*F*	-	-	-	-
Rainbow & Woodmont	74.8	E	1.40	-	-	-
Converted EBR	*229.2*	*F*	-	-	-	-
Rainbow & Woodmont	34.5	C	0.83	-	-	-
Overlap + Converted EBR	*36.9*	*D*	-	-	-	-
Rainbow & Woodmont	35.8	D	0.78	-	-	-
RTOR EBR	*47.4*	*D*	-	-	-	-

In the build condition the unsignalized intersection of Paseo del Norte and Ventana West/Woodmont was evaluated which included the Woodmont leg to the south and with all-way stop control. Paseo del Norte is expected to be a 4-lane roadway in the future and was evaluated with the interim 2-lane condition and the future 4-lane condition. The intersection continues to operate acceptably in both the interim and future condition as an all-way stop controlled intersection.

A peak hour traffic signal warrant analysis was performed for the Paseo del Norte and Ventana West intersection and a traffic signal was not warranted. A copy of the peak hour traffic signal warrant analysis is included in Appendix E.

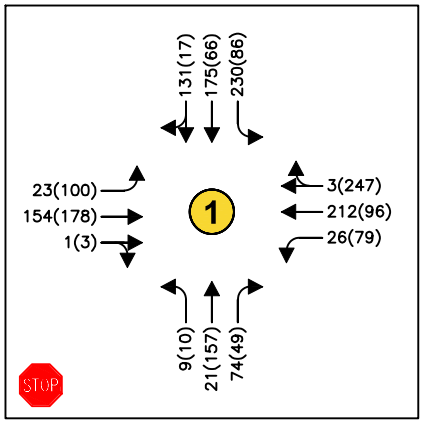
Note, the eastbound and westbound left turn volumes at Paseo del Norte and Ventana West Parkway/Woodmont exceed the criteria defined in Table 7.5.62 of the Development Process Manual and a left turn lane is warranted. The minimum left turn lane transition length is a 300'-150' reverse curve as defined in Table 7.5.65 of the DPM.

The site driveways on Woodmont were also evaluated as an interim 2-lane roadway (half-section of Woodmont) and with the future 4 lanes on Woodmont (future configuration). Both driveways operate acceptably with no movement operating worse than LOS B.

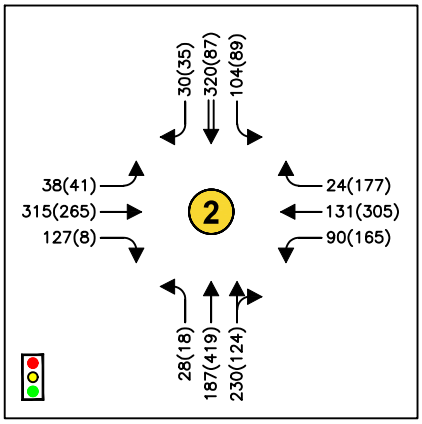
Table 8 | Build Unsignalized Intersection Results

	2022 AM Peak				2022 PM Peak			
Intersection/Movement	Delay (sec)	V/C	Queue* (ft)	LOS	Delay (sec)	V/C	Queue* (ft)	LOS
Paseo & Ventana West/Woodmont (2-lane)	12.3			B	15.3			B
Eastbound Left	10.0		25	A	12.2		25	A
Westbound Left	13.4		25	B	11.3		25	A
Westbound Thru/Right	9.9		50	A	19.7		125	B
Northbound Left	9.9		25	A	10.6		25	A
Southbound Left	14.6		75	B	14.5		50	B
Paseo & Ventana West/Woodmont (4-lane)	11.9		-	B	14.6		-	B
Eastbound Left	10.5		25	B	13.3		25	B
Westbound Left	10.4		25	B	12.1		25	B
Westbound Right	11.3		25	B	18.7		100	C
Northbound Left	10.4		25	B	11.2		25	B
Southbound Left	15.5		75	C	15.7		50	C
Woodmont & Site Entrance (2-lane)	-	-	-	-	-	-	-	-
Eastbound Approach	10.5	0.07	0	B	10.9	0.05	25	B
Northbound Left	7.7	0.00		A	7.6	0.01	25	A
Woodmont & Site Entrance (4-lane)	-	-	-	-	-	-	-	-
Eastbound Approach	10.3	0.07	25	B	10.3	0.05	25	B
Northbound Left	7.7	0.00	0	A	7.6	0.01	0	A
Woodmont & Girona (2-lane)	-	-	-	-	-	-	-	-
Eastbound Approach	10.1	0.05	25	B	10.1	0.04	25	B
Northbound Left	7.7	0.00	0	A	7.5	0.01	0	A
Woodmont & Girona (4-lane)	-	-	-	-	-	-	-	-
Eastbound Approach	9.8	0.05	25	A	9.7	0.03	25	A
Northbound Left	7.7	0.00	0	A	7.5	0.01	0	A

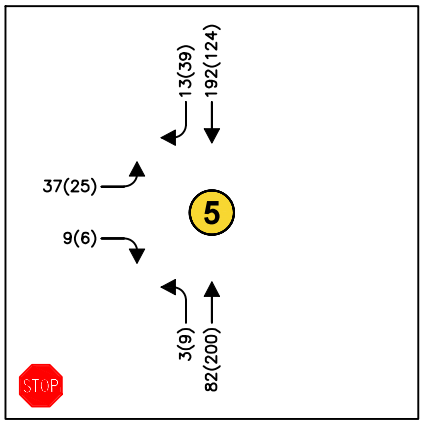
* – HCM 95th percentile queue rounded to next 25-foot increment



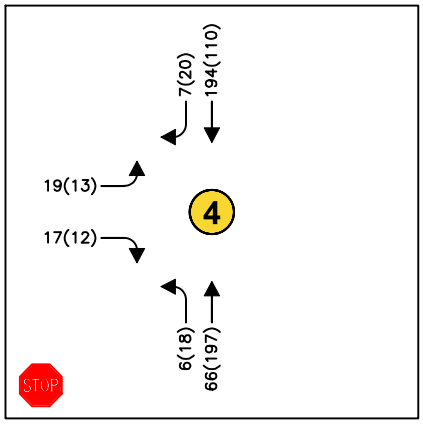
WOODMONT/VENTANA/PASEO DEL NORTE



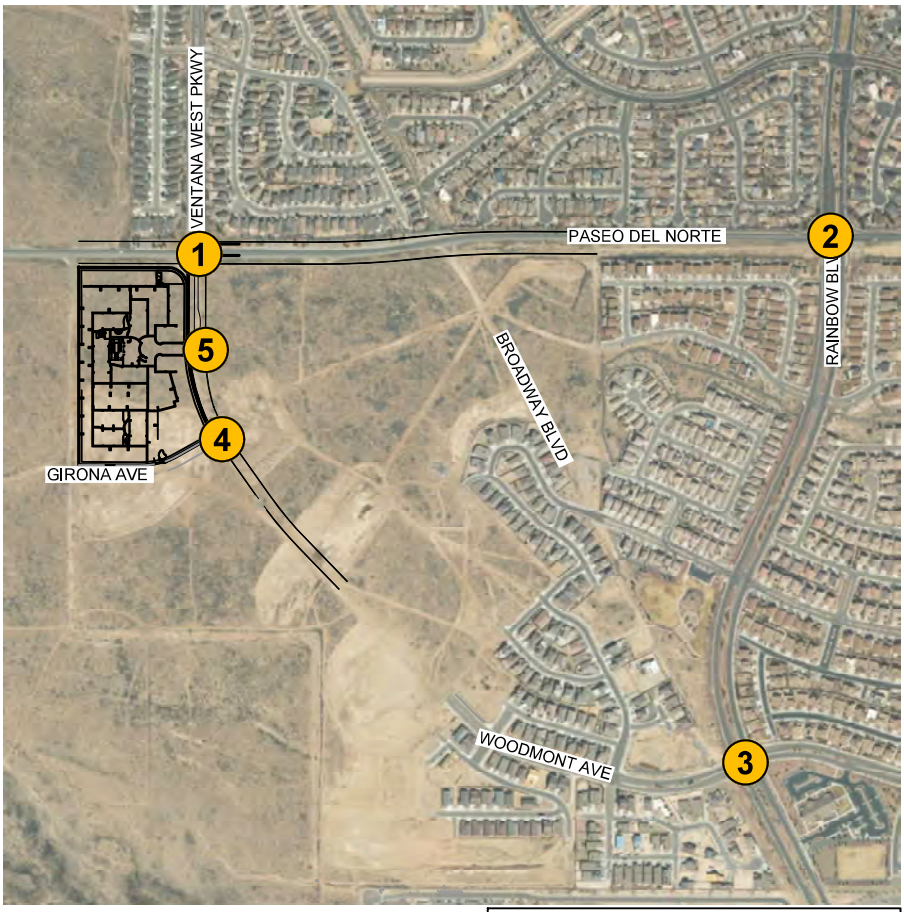
RAINBOW/PASEO DEL NORTE

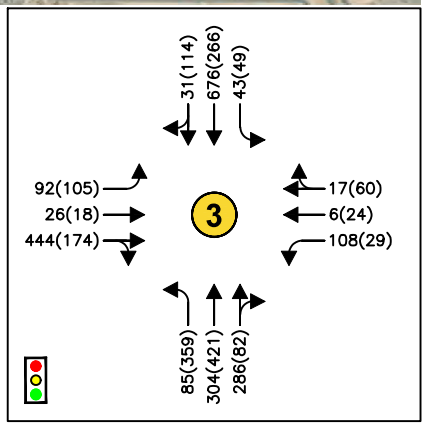


WOODMONT/MAIN ENTRANCE



WOODMONT/GIRONA





RAINBOW/WOODMONT

LEGEND

Thru Lanes (# as indicated)

Turning Lanes (# as indicated)

1234(1234) AM(PM) Traffic Counts

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Bohannan Huston www.bhinc.com 800.877.5332	TRAILS TRACT 1 ALBUQUERQUE, NEW MEXICO SITE TRAFFIC ANALYSIS	FIGURE 7 2022 BUILD AM (PM) PEAK HOUR TRAFFIC VOLUMES

VII. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The traffic analysis found that all intersections operate overall acceptably in the Existing and No Build conditions.

The eastbound right movement at the Paseo del Norte and Rainbow signalized intersection experiences queuing beyond available storage in AM peak hour. This occurs in the Existing and No Build but is improved by the Woodmont connection in the Build.

In the Build the eastbound right movement at Rainbow and Woodmont does not operate acceptably and will require mitigation. Note, the Trails Tract 1 development contributes 6% of the total traffic to this movement in the AM, while the rerouted traffic from Ventana Ranch makes up 39% and the remaining 55% is from the residential developments being constructed in the vicinity.

The site driveways operate acceptably with interim 2-lane roadway and with the future 4 lanes on Woodmont.

B. RECOMMENDATIONS

- All designs shall satisfy the Manual on Uniform Traffic Control Devices (MUTCD) and City of Albuquerque requirements.
- An overlap phase is recommended at Rainbow and Woodmont to mitigate the failing eastbound right.
- The Paseo del Norte and Ventana West/Woodmont intersection performs acceptably with all-way stop control and does not warrant a traffic signal; however, the eastbound and westbound left turn volumes exceed the criteria defined in Table 7.5.62 of the Development Process Manual and left turn lanes are warranted. As the queues for these movements are minimal, the left turn lanes should be 250 feet in length with left turn lane transition lengths of 300'-150' reverse curve as defined in Table 7.5.65 of the DPM.
    - This development is expected to construct the full section of the 2-lane northbound approach. This will provide a northbound left turn lane, a northbound thorough lane and a northbound right turn lane. The southbound approach will also require restriping provide a single southbound through lane.

- The section of Woodmont along the site frontage should be constructed to include bicycles lanes and sidewalks to match the existing Woodmont typical section.

APPENDIX A
EXISTING DATA

Day Type

1: Weekday (Tu-Th)

TURNING MOVEMENT COUNTS

Day Part	W - Leg - Paseo - In			E - Leg - Paseo - In			S - Leg - Rainbow - In			N - Leg - Rainbow -In			Total
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	
00: All Day (12am-12am)	301	2,374	1,178	1,298	2,600	1,806	1,279	2,341	1,455	1,796	2,164	332	18,924
01: 12am (12am-1am)	-	6	1	5	8	12	2	7	1	2	4	1	49
02: 1am (1am-2am)	-	3	1	2	12	27	1	3	3	1	-	-	53
03: 2am (2am-3am)	-	3	2	1	4	3	2	2	-	2	2	-	21
04: 3am (3am-4am)	-	6	8	1	3	-	1	2	-	8	7	-	36
05: 4am (4am-5am)	1	13	13	2	11	2	1	2	3	6	12	2	68
06: 5am (5am-6am)	5	44	23	2	54	7	2	8	3	41	72	15	276
07: 6am (6am-7am)	14	203	220	150	93	21	21	28	60	171	300	36	1,317
08: 7am (7am-8am)	31	253	311	137	194	44	21	85	88	191	582	50	1,987
09: 8am (8am-9am)	10	176	162	83	102	41	29	53	111	158	218	5	1,148
10: 9am (9am-10am)	4	105	51	37	87	53	20	43	53	103	72	9	637
11: 10am (10am-11am)	5	103	27	32	86	66	22	52	43	78	45	8	567
12: 11am (11am-12noon)	7	104	22	44	98	58	25	49	49	92	44	10	602
13: 12pm (12noon-1pm)	10	101	31	43	111	94	64	98	88	78	44	5	767
14: 1pm (1pm-2pm)	9	85	19	47	112	93	39	71	42	85	35	3	640
15: 2pm (2pm-3pm)	12	127	40	114	141	146	197	303	184	114	116	31	1,525
16: 3pm (3pm-4pm)	33	205	57	112	229	179	206	485	110	98	82	28	1,824
17: 4pm (4pm-5pm)	43	195	50	123	230	172	147	230	121	107	101	19	1,538
18: 5pm (5pm-6pm)	45	234	59	134	234	182	161	270	154	152	147	27	1,799
19: 6pm (6pm-7pm)	21	140	53	123	203	153	101	172	171	114	111	20	1,382
20: 7pm (7pm-8pm)	10	84	19	92	206	147	90	158	148	75	57	12	1,098
21: 8pm (8pm-9pm)	7	57	20	59	183	112	69	84	78	43	45	11	768
22: 9pm (9pm-10pm)	4	36	14	26	104	82	42	59	29	30	33	4	463
23: 10pm (10pm-11pm)	4	22	6	13	52	49	24	26	12	11	9	7	235
24: 11pm (11pm-12am)	3	20	2	8	11	37	9	25	3	7	8	4	137

Day Type

1: Weekday (Tu-Th)

TURNING MOVEMENT COUNTS

Day Part	W - Leg - Paseo - In			E - Leg - Paseo - In			0			N - Leg - Ventana - In			Total
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	
00: All Day (12am-12am)	400	1,082	-	-	1,283	2,559	-	-	-	2,372	-	388	8,084
01: 12am (12am-1am)	3	2	-	-	4	5	-	-	-	4	-	-	18
02: 1am (1am-2am)	3	2	-	-	15	-	-	-	-	2	-	-	22
03: 2am (2am-3am)	-	2	-	-	3	3	-	-	-	2	-	-	10
04: 3am (3am-4am)	1	3	-	-	-	2	-	-	-	12	-	-	18
05: 4am (4am-5am)	-	2	-	-	17	2	-	-	-	21	-	-	42
06: 5am (5am-6am)	-	4	-	-	82	6	-	-	-	62	-	-	154
07: 6am (6am-7am)	28	18	-	-	117	12	-	-	-	404	-	45	624
08: 7am (7am-8am)	9	61	-	-	220	24	-	-	-	482	-	156	952
09: 8am (8am-9am)	11	43	-	-	88	41	-	-	-	247	-	48	478
10: 9am (9am-10am)	5	26	-	-	58	48	-	-	-	112	-	19	268
11: 10am (10am-11am)	9	39	-	-	59	51	-	-	-	77	-	17	252
12: 11am (11am-12noon)	11	63	-	-	46	65	-	-	-	60	-	18	263
13: 12pm (12noon-1pm)	12	43	-	-	45	120	-	-	-	79	-	10	309
14: 1pm (1pm-2pm)	21	39	-	-	49	87	-	-	-	52	-	6	254
15: 2pm (2pm-3pm)	26	72	-	-	47	290	-	-	-	95	-	10	540
16: 3pm (3pm-4pm)	57	173	-	-	46	364	-	-	-	90	-	25	755
17: 4pm (4pm-5pm)	70	150	-	-	69	284	-	-	-	114	-	19	706
18: 5pm (5pm-6pm)	71	126	-	-	78	303	-	-	-	180	-	20	778
19: 6pm (6pm-7pm)	26	59	-	-	47	243	-	-	-	129	-	14	518
20: 7pm (7pm-8pm)	13	36	-	-	18	270	-	-	-	64	-	7	408
21: 8pm (8pm-9pm)	12	38	-	-	27	219	-	-	-	39	-	19	354
22: 9pm (9pm-10pm)	9	13	-	-	25	119	-	-	-	30	-	-	196
23: 10pm (10pm-11pm)	5	13	-	-	24	55	-	-	-	12	-	5	114
24: 11pm (11pm-12am)	7	13	-	-	3	16	-	-	-	9	-	-	48

Day Type

1: Weekday (Tu-Th)

TURNING MOVEMENT COUNTS

Day Part	W - Leg - Woodmont - In			E - Leg - Woodmont - In			S - Leg - Rainbow - In			N - Leg - Rainbow - In			Total
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	
00: All Day (12am-12am)	437	133	367	490	103	334	301	3,803	345	252	3,881	364	10,810
01: 12am (12am-1am)	-	-	1	-	-	-	5	9	-	-	4	-	19
02: 1am (1am-2am)	-	-	-	-	-	-	-	6	-	-	2	-	8
03: 2am (2am-3am)	-	-	-	-	-	-	-	3	-	-	3	-	6
06: 5am (5am-6am)	1	3	17	12	-	5	-	7	-	4	94	-	143
07: 6am (6am-7am)	6	3	59	76	3	9	2	27	7	21	611	2	826
08: 7am (7am-8am)	25	15	114	176	5	27	1	47	41	49	947	10	1,457
09: 8am (8am-9am)	32	7	53	70	3	12	7	77	18	14	521	9	823
10: 9am (9am-10am)	22	12	17	15	-	2	4	50	2	3	158	11	296
11: 10am (10am-11am)	18	6	12	10	7	4	6	70	8	2	89	10	242
12: 11am (11am-12noon)	12	6	7	9	7	3	13	73	3	6	74	17	230
13: 12pm (12noon-1pm)	18	9	18	7	14	8	20	192	14	5	81	19	405
14: 1pm (1pm-2pm)	20	5	17	8	4	6	12	101	5	1	60	15	254
15: 2pm (2pm-3pm)	16	6	13	46	11	82	26	541	83	27	191	40	1,082
16: 3pm (3pm-4pm)	59	10	11	22	10	46	37	648	93	28	184	24	1,172
17: 4pm (4pm-5pm)	34	4	16	18	4	25	49	408	22	12	204	29	825
18: 5pm (5pm-6pm)	41	12	21	23	8	25	38	477	16	14	258	31	964
19: 6pm (6pm-7pm)	32	12	13	16	7	14	43	346	18	21	209	38	769
20: 7pm (7pm-8pm)	28	7	13	8	3	18	26	320	23	10	77	28	561
21: 8pm (8pm-9pm)	16	3	2	5	4	8	18	202	10	6	44	21	339
22: 9pm (9pm-10pm)	6	3	5	-	5	2	15	115	4	5	28	10	198
23: 10pm (10pm-11pm)	2	2	1	-	-	3	8	53	1	2	12	6	90
24: 11pm (11pm-12am)	-	-	1	-	-	-	4	30	-	-	6	2	43
04: 3am (3am-4am)	-	-	-	-	-	-	-	2	-	-	14	-	16
05: 4am (4am-5am)	-	-	-	-	-	-	-	3	-	-	29	-	32

MRCOG Traffic Counts
Summary Statistics
See notes, bottom of report

12/11/2020 1:16:42 PM

					Direction 1		Direction 2		AM Peak Hour					PM Peak Hour						
COGID	Route Name	Location Description	Count Date	Total Volume	Daily Volume	Dir	Daily Volume	Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir	Count Quality	Count Type
203751	UNIVERSE	NORTH OF PASEO DEL NORTE	8/1/2003	7,797	3,772	S	4,025	N	645	737	9.45	0.60	S	1645	825	10.58	0.63	N	T	Vol
203751	UNIVERSE	NORTH OF PASEO DEL NORTE	9/1/2006	12,057	6,293	S	5,764	N	630	1,204	9.99	0.60	S	1630	1,102	9.14	0.56	N	T	VC
203751	UNIVERSE	NORTH OF PASEO DEL NORTE	9/1/2009	21,909	11,158	N	10,751	S	630	1,641	7.49	0.73	S	1700	2,022	9.23	0.63	N	T	Vol
203751	UNIVERSE	NORTH OF PASEO DEL NORTE	10/23/2012	17,476	8,694	N	8,782	S	645	1,304	7.46	0.73	S	1700	1,686	9.65	0.62	N	T	Vol
203751	UNIVERSE	NORTH OF PASEO DEL NORTE	6/2/2015	16,314	8,062	N	8,252	S	630	1,027	6.30	0.75	S	1700	1,481	9.08	0.60	N	T	Vol
203751	UNIVERSE	NORTH OF PASEO DEL NORTE	6/4/2018	17,012	8,228	N	8,784	S	645	1,148	6.75	0.74	S	1715	1,574	9.25	0.64	N	T	VC
205812	PASEO DEL NORTE	WEST OF UNIVERSE	2/1/2010	10,332	5,057	W	5,275	E	645	855	8.28	0.75	E	1700	941	9.11	0.60	W	T	VC
205812	PASEO DEL NORTE	WEST OF UNIVERSE	2/1/2001	3,566	2,107	E	1,459	W	645	352	9.87	0.93	E	1715	347	9.73	0.54	E	Q	Vol
205812	PASEO DEL NORTE	WEST OF UNIVERSE	2/1/2004	4,651	2,355	E	2,296	W	645	489	10.51	0.79	E	1700	484	10.41	0.68	W	T	VC
205812	PASEO DEL NORTE	WEST OF UNIVERSE	2/1/2007	6,664	3,976	E	2,688	W	630	732	10.98	0.71	E	1545	454	6.81	0.83	E	Q	Vol
205812	PASEO DEL NORTE	WEST OF UNIVERSE	2/6/2012	9,958	5,058	E	4,900	W	700	809	8.12	0.73	E	1730	895	8.99	0.62	W	T	VC
205812	PASEO DEL NORTE	WEST OF UNIVERSE	2/5/2013	9,837	4,991	E	4,846	W	715	796	8.09	0.71	E	1645	892	9.07	0.60	W	T	VC
205812	PASEO DEL NORTE	WEST OF UNIVERSE	3/15/2016	11,016	5,340	E	5,676	W	700	849	7.71	0.67	E	1715	895	8.12	0.64	W	T	VC
205812	PASEO DEL NORTE	WEST OF UNIVERSE	3/11/2019	9,750	4,912	E	4,838	W	700	640	6.56	0.70	E	1645	849	8.71	0.57	W	T	Vol
205702	PASEO DEL NORTE	WEST OF RAINBOW	11/1/2009	6,164	2,989	W	3,175	E	630	525	8.52	0.78	E	1730	635	10.30	0.67	W	T	VC
205702	PASEO DEL NORTE	WEST OF RAINBOW	11/1/2003	1,253	672	E	581	W	630	138	11.01	0.72	W	1700	125	9.98	0.78	E	T	Vol
205702	PASEO DEL NORTE	WEST OF RAINBOW	11/1/2006	2,743	1,450	W	1,293	E	645	281	10.24	0.85	E	1545	259	9.44	0.74	W	T	Vol
205702	PASEO DEL NORTE	WEST OF RAINBOW	11/26/2012	7,110	3,630	E	3,480	W	630	746	10.49	0.73	E	1700	729	10.25	0.57	W	T	Vol
205702	PASEO DEL NORTE	WEST OF RAINBOW	3/17/2015	8,542	4,330	E	4,212	W	630	856	10.02	0.72	E	1645	862	10.09	0.53	W	T	Vol
205702	PASEO DEL NORTE	WEST OF RAINBOW	3/5/2018	8,088	4,110	E	3,978	W	630	749	9.26	0.70	E	1630	756	9.35	0.62	W	T	VC
203701	RAINBOW	NORTH OF PASEO DEL NORTE	10/1/2009	7,790	4,252	S	3,538	N	630	909	11.67	0.84	S	1645	745	9.56	0.69	N	T	Vol
203701	RAINBOW	NORTH OF PASEO DEL NORTE	6/1/2004	4,158	2,049	N	2,109	S	630	416	10.00	0.86	S	1715	435	10.46	0.74	N	T	Vol
203701	RAINBOW	NORTH OF PASEO DEL NORTE	2/1/2001	2,949	1,431	N	1,518	S	630	286	9.70	0.85	S	1730	304	10.31	0.68	N	T	Vol
203701	RAINBOW	NORTH OF PASEO DEL NORTE	6/1/2001	3,834	887	N	2,947	S	645	529	13.80	0.90	S	1515	297	7.75	0.69	S	Q	Vol
203701	RAINBOW	NORTH OF PASEO DEL NORTE	6/1/2008	6,283	2,819	N	3,464	S	645	693	11.03	0.92	S	1715	568	9.04	0.72	N	T	Vol
203701	RAINBOW	NORTH OF PASEO DEL NORTE	10/23/2012	6,553	3,257	N	3,296	S	700	604	9.22	0.84	S	1700	670	10.22	0.69	N	T	Vol
203701	RAINBOW	NORTH OF PASEO DEL NORTE	6/2/2015	5,856	2,895	N	2,961	S	645	477	8.15	0.84	S	1645	526	8.98	0.67	N	T	Vol
203701	RAINBOW	NORTH OF PASEO DEL NORTE	6/4/2018	5,993	2,945	N	3,048	S	645	470	7.84	0.88	S	1715	583	9.73	0.70	N	T	Vol
203742	RAINBOW	SOUTH OF PASEO DEL NORTE	10/1/2009	15,353	7,387	S	7,966	N	630	1,934	12.60	0.70	S	1730	1,514	9.86	0.76	N	T	Vol
203742	RAINBOW	SOUTH OF PASEO DEL NORTE	11/26/2012	7,889	4,008	N	3,881	S	630	1,060	13.44	0.69	S	1645	719	9.11	0.69	N	T	Vol

MRCOG Traffic Counts
Summary Statistics
See notes, bottom of report

12/11/2020 1:16:43 PM

					Direction 1		Direction 2		AM Peak Hour					PM Peak Hour						
COGID	Route Name	Location Description	Count Date	Total Volume	Daily Volume	Dir	Daily Volume	Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir	Time Begin	Volume	% Daily	Dlr Split	Pk Dir	Count Quality	Count Type
203742	RAINBOW	SOUTH OF PASEO DEL NORTE	3/17/2015	8,669	4,360	N	4,309	S	645	1,140	13.15	0.72	S	1515	805	9.29	0.65	N	T	Vol
203742	RAINBOW	SOUTH OF PASEO DEL NORTE	3/5/2018	9,714	4,858	N	4,856	S	630	1,193	12.28	0.69	S	1715	1,012	10.42	0.62	N	T	Vol
234571	WOODMONT AVE.	EAST OF RAINBOW	1/3/2011	350	132	E	218	W	630	27	7.71	0.89	W	1715	63	18.00	0.70	W	Q	Vol
234571	WOODMONT AVE.	EAST OF RAINBOW	1/7/2014	1,367	598	E	769	W	630	339	24.80	0.56	W	1500	149	10.90	0.55	E	T	Vol
234571	WOODMONT AVE.	EAST OF RAINBOW	12/5/2017	1,561	828	E	733	W	630	313	20.05	0.63	E	1715	134	8.58	0.69	W	T	Vol
203572	UNIVERSE	SOUTH OF PASEO DEL NORTE	1/3/2011	11,488	5,482	N	6,006	S	645	1,064	9.26	0.74	S	1715	1,119	9.74	0.57	N	T	Vol
203572	UNIVERSE	SOUTH OF PASEO DEL NORTE	12/1/2002	3,610	1,828	S	1,782	N	645	504	13.96	0.81	S	1645	377	10.44	0.76	N	T	Vol
203572	UNIVERSE	SOUTH OF PASEO DEL NORTE	1/1/2004	5,448	2,903	S	2,545	N	645	747	13.71	0.85	S	1645	683	12.54	0.72	N	T	Vol
203572	UNIVERSE	SOUTH OF PASEO DEL NORTE	1/1/2008	15,612	7,855	N	7,757	S	645	1,510	9.67	0.73	S	1530	1,479	9.47	0.57	N	Q	Vol
203572	UNIVERSE	SOUTH OF PASEO DEL NORTE	1/7/2014	11,382	6,752	N	4,630	S	645	1,548	13.60	0.53	N	1715	978	8.59	0.73	N	T	Vol
203572	UNIVERSE	SOUTH OF PASEO DEL NORTE	1/30/2018	9,924	4,866	N	5,058	S	630	957	9.64	0.71	S	1630	947	9.54	0.64	N	T	VC
204811	VENTANA WEST PKWY	NORTH OF PASEO DEL NORTE	1/18/2011	5,399	2,699	N	2,700	S	630	507	9.39	0.87	S	1700	547	10.13	0.74	N	T	Vol
204811	VENTANA WEST PKWY	NORTH OF PASEO DEL NORTE	2/3/2014	5,561	2,752	N	2,809	S	630	506	9.10	0.90	S	1715	618	11.11	0.68	N	T	Vol
204811	VENTANA WEST PKWY	NORTH OF PASEO DEL NORTE	2/21/2017	5,877	2,809	N	3,068	S	630	613	10.43	0.85	S	1700	551	9.38	0.70	N	T	Vol
204811	VENTANA WEST PKWY	NORTH OF PASEO DEL NORTE	2/25/2020	6,022	3,002	N	3,020	S	630	598	9.93	0.86	S	1615	560	9.30	0.71	N	T	Vol
205792	PASEO DEL NORTE	WEST OF VENTANA RIDGE PKWY	2/28/2011	1,800	926	E	874	W	630	183	10.17	0.74	W	1645	220	12.22	0.69	E	T	Vol
205792	PASEO DEL NORTE	WEST OF VENTANA RIDGE PKWY	2/3/2014	2,002	1,104	E	898	W	645	231	11.54	0.81	W	1645	240	11.99	0.80	E	T	VC
205792	PASEO DEL NORTE	WEST OF VENTANA RIDGE PKWY	2/25/2020	3,147	1,604	E	1,543	W	645	282	8.96	0.81	W	1630	376	11.95	0.72	E	T	VC
205792	PASEO DEL NORTE	WEST OF VENTANA RIDGE PKWY	2/21/2017	2,791	1,868	E	923	W	815	282	10.10	0.57	E	1745	319	11.43	0.79	E	T	VC
206552	PASEO DEL NORTE	WEST OF UNSER	5/7/2013	12,549	6,107	E	6,442	W	630	1,151	9.17	0.74	E	1715	1,005	8.01	0.75	W	T	VC
206552	PASEO DEL NORTE	WEST OF UNSER	3/15/2016	14,263	7,202	E	7,061	W	630	1,078	7.56	0.78	E	1630	1,203	8.43	0.67	W	T	Vol
206552	PASEO DEL NORTE	WEST OF UNSER	4/27/2020	9,942	4,974	E	4,968	W	645	530	5.33	0.81	E	1645	896	9.01	0.65	W	T	Vol
206552	PASEO DEL NORTE	WEST OF UNSER	8/11/2020	13,250	6,692	E	6,558	W	700	823	6.21	0.76	E	1700	1,117	8.43	0.64	W	T	Vol
206552	PASEO DEL NORTE	WEST OF UNSER	11/3/2020	11,889	5,823	E	6,066	W	700	849	7.14	0.78	E	1700	1,074	9.03	0.65	W	T	Vol
206552	PASEO DEL NORTE	WEST OF UNSER	3/11/2019	12,922	6,678	E	6,244	W	645	815	6.31	0.83	E	1745	966	7.48	0.67	W	T	Vol
203792	RAINBOW	SOUTH OF WOODMONT	10/1/2009	7,612	3,894	N	3,718	S	630	1,186	15.58	0.72	S	1645	845	11.10	0.66	N	T	Vol
203792	RAINBOW	SOUTH OF WOODMONT	9/22/2014	9,495	4,865	N	4,630	S	630	1,645	17.32	0.67	S	1545	857	9.03	0.68	N	T	Vol
203792	RAINBOW	SOUTH OF WOODMONT	9/18/2017	9,976	4,898	N	5,078	S	630	1,707	17.11	0.67	S	1515	1,007	10.09	0.62	N	Q	Vol

Notes:

1. Daily volumes are averages for a 24 hour period.

2. AM Peak Period: 6 AM to 9 AM; PM Peak Period: 3 PM to 6 PM.

*3. Peak **hours** are defined by the maximum hourly 2-way volume occuring during the peak **period**.*

4. 'Time Begin' is the beginning time of the peak hour (24 hour military time)

5. Peak hour % is the percentage of 2-way volume appearing in the peak hour.

6. 'Dir Split' is the directional split: the percentage of the 2-way peak hour volume traveling in the peak direction.

7. 'Pk Dir' indicates the peak direction. E.g., 'E' means "Eastbound'.

8. 'Count Quality' is defined by NMDOT and MRCOG count standards. 'T' indicates a good count. 'Q' indicates a count that meets NMDOT standards but does not meet MRCOG standards. 'F' indicates a bad count.

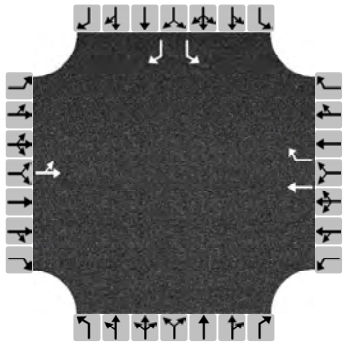
9. 'Count Type': 'Vol' refers to a regular volume tube count; 'VC' refers to a vehicle classification count.

APPENDIX B
2019 EXISTING INTERSECTION CAPACITY ANALYSIS

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	MB	Intersection	Paseo & Ventana/Woodmont
Agency/Co.	BHI	Jurisdiction	
Date Performed	3/3/2021	East/West Street	Paseo del Norte
Analysis Year	2019	North/South Street	Ventana/Woodmont
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing AM		
Project Description	Trails Tract 1		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	21	146			206	23				381		123
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			T	R					L	R	
Flow Rate, v (veh/h)	182			224	25					414	134	
Percent Heavy Vehicles	2			2	2					2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20					3.20	3.20	
Initial Degree of Utilization, x	0.161			0.199	0.022					0.368	0.119	
Final Departure Headway, hd (s)	6.37			6.48	5.77					6.36	5.16	
Final Degree of Utilization, x	0.321			0.403	0.040					0.732	0.191	
Move-Up Time, m (s)	2.0			2.3	2.3					2.3	2.3	
Service Time, ts (s)	4.37			4.18	3.47					4.06	2.86	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	182			224	25					414	134	
Capacity	565			556	624					566	698	
95% Queue Length, Q_{95} (veh)	1.4			1.9	0.1					6.2	0.7	
Control Delay (s/veh)	12.4			13.5	8.7					24.4	9.1	
Level of Service, LOS	B			B	A					C	A	
Approach Delay (s/veh)	12.4			13.0						20.7		
Approach LOS	B			B						C		
Intersection Delay, s/veh | LOS	17.2						C					

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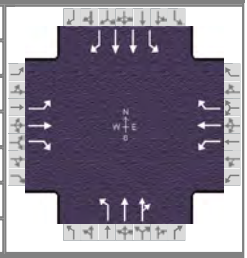
HCS7 Signalized Intersection Results Summary

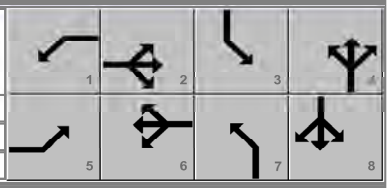
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	2/22/2021	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	EXAM Rainbow_Paseo.xus		
Project Description	Existing AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	28	227	280	70	99	23	41	165	171	98	298	26

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	1.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, (*Y+R c*), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.2	2.6	4.2	2.6	3.1	2.6	3.1
Queue Clearance Time (*g s*), s	2.9	16.7	4.2	5.8	3.6	11.7	5.8	9.3
Green Extension Time (*g e*), s	0.0	2.2	0.0	2.6	0.0	1.1	0.1	1.2
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.07	0.00	0.00	0.00	0.12	0.00	0.03

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	30	247	304	76	108	25	45	179	186	107	324	28
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (*g s*), s	0.9	9.4	14.7	2.2	3.8	1.0	1.6	7.7	9.7	3.8	7.3	1.3
Cycle Queue Clearance Time (*g c*), s	0.9	9.4	14.7	2.2	3.8	1.0	1.6	7.7	9.7	3.8	7.3	1.3
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	659	610	517	549	610	525	432	386	327	401	735	333
Volume-to-Capacity Ratio (*X*)	0.046	0.405	0.589	0.139	0.176	0.048	0.103	0.464	0.568	0.266	0.440	0.085
Back of Queue (*Q*), ft/ln (95 th percentile)	16.1	197.3	254.7	42.2	78.6	17.2	30.7	173	188.8	77.8	146.7	24
Back of Queue (*Q*), veh/ln (95 th percentile)	0.6	7.8	10.0	1.7	3.1	0.7	1.2	6.8	7.6	3.1	5.8	1.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.16	0.10	2.55	0.24	0.04	0.00	0.09	0.23	0.26	0.22	0.17	0.00
Uniform Delay (*d 1*), s/veh	13.7	24.1	25.9	14.7	22.2	21.2	20.9	32.0	32.8	22.0	31.9	29.5
Incremental Delay (*d 2*), s/veh	0.1	2.0	4.9	0.5	0.6	0.2	0.5	4.0	7.0	1.6	1.9	0.5
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	13.9	26.1	30.7	15.2	22.8	21.4	21.4	36.0	39.8	23.6	33.8	30.0
Level of Service (LOS)	B	C	C	B	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	27.9	C		19.9	B		36.1	D		31.2	C	
Intersection Delay, s/veh / LOS	29.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.45	A	0.83	A	0.83	A	0.87	A

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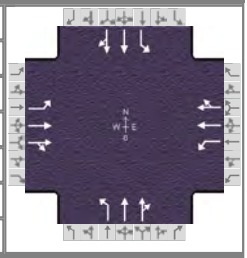
HCS7 Signalized Intersection Results Summary

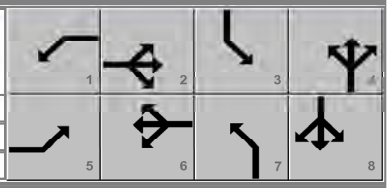
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	Mar 3, 2021	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	Rainbow and Woodmont	File Name	EXAM Rainbow_Woodmont.xus		
Project Description	Existing AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	25	15	114	102	3	16	7	309	270	41	791	8

Signal Information			
Cycle, s	84.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	18.0	12.5	22.5	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.0	24.0	16.0	24.0	16.0	28.0	16.0	28.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.5	3.5	5.5
Max Allow Headway (*MAH*), s	2.6	5.3	2.6	5.3	2.6	5.0	2.6	5.0
Queue Clearance Time (g_s), s	2.8	7.6	5.6	2.7	2.2	16.0	3.3	20.6
Green Extension Time (g_e), s	0.0	0.6	0.1	0.7	0.0	4.3	0.0	1.4
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.06	0.00	0.00	0.00	0.91	0.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	27	16	124	111	3	17	8	336	293	45	435	433
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1864
Queue Service Time (g_s), s	0.8	0.6	5.6	3.6	0.1	0.7	0.2	13.5	14.0	1.3	18.6	18.6
Cycle Queue Clearance Time (g_c), s	0.8	0.6	5.6	3.6	0.1	0.7	0.2	13.5	14.0	1.3	18.6	18.6
Green Ratio (*g/C*)	0.36	0.21	0.21	0.36	0.21	0.21	0.42	0.27	0.27	0.42	0.27	0.27
Capacity (*c*), veh/h	604	401	340	505	401	340	365	501	425	413	501	499
Volume-to-Capacity Ratio (*X*)	0.045	0.041	0.365	0.219	0.008	0.051	0.021	0.670	0.691	0.108	0.868	0.868
Back of Queue (*Q*), ft/ln (95 th percentile)	15.8	12.4	104.8	69.8	2.5	13.3	4.1	274.6	250.4	24.2	395.5	388.4
Back of Queue (*Q*), veh/ln (95 th percentile)	0.6	0.5	4.2	2.7	0.1	0.5	0.2	10.8	10.0	1.0	15.6	15.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.11	0.02	0.17	0.56	0.00	0.02	0.02	0.27	0.25	0.12	0.43	0.43
Uniform Delay (d_1), s/veh	17.3	26.2	28.1	18.5	26.0	26.2	16.9	27.4	27.6	16.3	29.3	29.3
Incremental Delay (d_2), s/veh	0.1	0.2	3.0	1.0	0.0	0.3	0.1	7.0	8.9	0.5	18.1	18.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	17.5	26.3	31.1	19.5	26.0	26.5	17.0	34.4	36.5	16.8	47.5	47.5
Level of Service (LOS)	B	C	C	B	C	C	B	C	D	B	D	D
Approach Delay, s/veh / LOS	28.5	C		20.6	C		35.2	D		46.0	D	
Intersection Delay, s/veh / LOS	38.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	0.63	A	0.60	A	1.01	A	1.24	A

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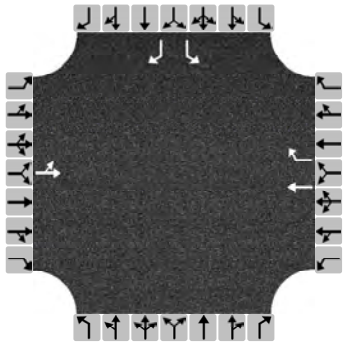
HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	MB	Intersection	Paseo & Ventana/Woodmont
Agency/Co.	BHI	Jurisdiction	
Date Performed	3/3/2021	East/West Street	Paseo del Norte
Analysis Year	2019	North/South Street	Ventana/Woodmont
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing PM		
Project Description	Trails Tract 1		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	94	168			98	380				143		16
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			T	R					L	R	
Flow Rate, v (veh/h)	285			107	413					155	17	
Percent Heavy Vehicles	2			2	2					2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20					3.20	3.20	
Initial Degree of Utilization, x	0.253			0.095	0.367					0.138	0.015	
Final Departure Headway, hd (s)	5.60			5.49	4.78					6.90	5.69	
Final Degree of Utilization, x	0.443			0.162	0.548					0.298	0.027	
Move-Up Time, m (s)	2.0			2.3	2.3					2.3	2.3	
Service Time, ts (s)	3.60			3.19	2.48					4.60	3.39	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	285			107	413					155	17	
Capacity	643			656	753					522	633	
95% Queue Length, Q_{95} (veh)	2.3			0.6	3.4					1.2	0.1	
Control Delay (s/veh)	13.0			9.2	13.1					12.5	8.6	
Level of Service, LOS	B			A	B					B	A	
Approach Delay (s/veh)	13.0			12.3						12.1		
Approach LOS	B			B						B		
Intersection Delay, s/veh | LOS	12.5			B								

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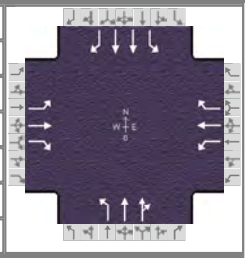
HCS7 Signalized Intersection Results Summary

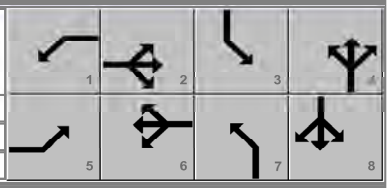
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	2/22/2021	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	EXPM Rainbow_Paseo.xus		
Project Description	Existing PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	33	204	57	104	213	167	165	388	88	84	70	24

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	1.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.0	2.6	3.0
Queue Clearance Time (g_s), s	3.0	10.3	5.4	10.8	8.8	14.3	5.3	3.6
Green Extension Time (g_e), s	0.0	2.5	0.1	2.5	0.1	0.6	0.0	1.1
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.01	0.00	0.01	0.22	0.39	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	36	222	62	113	232	182	179	265	252	91	76	26
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1751	1781	1781	1610
Queue Service Time (g_s), s	1.0	8.3	2.5	3.4	8.8	7.9	6.8	12.1	12.3	3.3	1.6	1.2
Cycle Queue Clearance Time (g_c), s	1.0	8.3	2.5	3.4	8.8	7.9	6.8	12.1	12.3	3.3	1.6	1.2
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	561	610	517	568	610	525	542	386	362	366	735	333
Volume-to-Capacity Ratio (*X*)	0.064	0.364	0.120	0.199	0.380	0.346	0.331	0.687	0.697	0.250	0.103	0.078
Back of Queue (*Q*), ft/ln (95 th percentile)	19.3	175.2	44.7	64.1	184.1	141.6	133.8	263.1	252.1	66.7	31.4	22.1
Back of Queue (*Q*), veh/ln (95 th percentile)	0.8	6.9	1.8	2.5	7.2	5.7	5.3	10.4	10.1	2.6	1.2	0.9
Queue Storage Ratio (*RQ*) (95 th percentile)	0.19	0.09	0.45	0.37	0.09	0.00	0.38	0.35	0.34	0.19	0.04	0.00
Uniform Delay (d_1), s/veh	14.2	23.7	21.7	14.9	23.8	23.5	22.2	33.8	33.8	22.2	29.6	29.4
Incremental Delay (d_2), s/veh	0.2	1.7	0.5	0.8	1.8	1.8	1.6	9.6	10.6	1.6	0.3	0.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	14.5	25.4	22.2	15.6	25.6	25.3	23.8	43.3	44.4	23.8	29.9	29.9
Level of Service (LOS)	B	C	C	B	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	23.5	C		23.4	C		38.7	D		27.0	C	
Intersection Delay, s/veh / LOS	30.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.01	A	1.36	A	1.06	A	0.65	A

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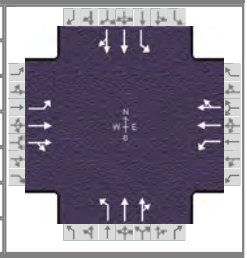
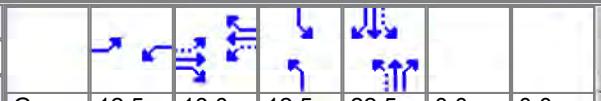
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	Mar 3, 2021	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	Rainbow and Woodmont	File Name	EXPM Rainbow_Woodmont.xus		
Project Description	Existing PM				

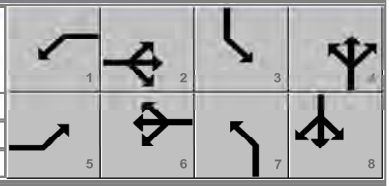


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	59	10	11	27	12	57	31	541	78	47	306	40

Signal Information			
Cycle, s	84.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	12.5	18.0	12.5	22.5	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.0	24.0	16.0	24.0	16.0	28.0	16.0	28.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.5	3.5	5.5
Max Allow Headway (*MAH*), s	2.6	5.3	2.6	5.3	2.6	5.0	2.6	5.0
Queue Clearance Time (g_s), s	4.0	2.5	2.9	4.7	2.9	15.9	3.4	9.1
Green Extension Time (g_e), s	0.0	0.4	0.0	0.3	0.0	3.2	0.0	5.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.83	0.00	0.36

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	64	11	12	29	13	62	34	343	330	51	190	186
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1788	1781	1870	1795
Queue Service Time (g_s), s	2.0	0.4	0.5	0.9	0.5	2.7	0.9	13.8	13.9	1.4	7.0	7.1
Cycle Queue Clearance Time (g_c), s	2.0	0.4	0.5	0.9	0.5	2.7	0.9	13.8	13.9	1.4	7.0	7.1
Green Ratio (*g/C*)	0.36	0.21	0.21	0.36	0.21	0.21	0.42	0.27	0.27	0.42	0.27	0.27
Capacity (*c*), veh/h	561	401	340	607	401	340	511	501	479	411	501	481
Volume-to-Capacity Ratio (*X*)	0.114	0.027	0.035	0.048	0.033	0.182	0.066	0.685	0.688	0.124	0.380	0.386
Back of Queue (*Q*), ft/ln (95 th percentile)	38.5	8.2	9.1	17.2	9.9	49.1	17.7	281.5	270.1	27.8	147	141.9
Back of Queue (*Q*), veh/ln (95 th percentile)	1.5	0.3	0.4	0.7	0.4	2.0	0.7	11.1	10.8	1.1	5.8	5.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.26	0.01	0.01	0.14	0.01	0.06	0.10	0.27	0.27	0.14	0.16	0.16
Uniform Delay (d_1), s/veh	17.8	26.1	26.1	17.4	26.1	27.0	15.1	27.6	27.6	16.3	25.1	25.1
Incremental Delay (d_2), s/veh	0.4	0.1	0.2	0.2	0.2	1.2	0.2	7.4	7.9	0.6	2.2	2.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	18.2	26.2	26.3	17.5	26.3	28.2	15.3	35.0	35.5	16.9	27.3	27.4
Level of Service (LOS)	B	C	C	B	C	C	B	D	D	B	C	C
Approach Delay, s/veh / LOS	20.3	C		24.9	C		34.3	C		26.1	C	
Intersection Delay, s/veh / LOS	30.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	0.56	A	0.57	A	1.07	A	0.84	A

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APPENDIX C
TURNING MOVEMENT DEVELOPMENT

INTERSECTION: PASEO & RAINBOW

AM Peak Hour

	Eastbound PASEO			Westbound PASEO			Northbound RAINBOW			Southbound RAINBOW		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
StreetLight TMC	31	253	311	137	194	44	21	85	88	191	582	50
TAQA		535			192			377			422	
Calibrated	28	227	280	70	99	23	41	165	171	98	298	26

PM Peak Hour

	Eastbound PASEO			Westbound PASEO			Northbound RAINBOW			Southbound RAINBOW		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
StreetLight TMC	33	205	57	112	229	179	206	485	110	98	82	28
TAQA		293			484			640			178	
Calibrated	33	204	57	104	213	167	165	388	88	84	70	24

INTERSECTION: WOODMONT & RAINBOW

AM Peak Hour

	Eastbound WOODMONT			Westbound WOODMONT			Northbound RAINBOW			Southbound RAINBOW		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
StreetLight TMC	25	15	114	176	5	27	1	47	41	49	947	10
TAQA					120			586			840	
Calibrated	0	0	0	102	3	16	7	309	270	41	791	8

PM Peak Hour

	Eastbound WOODMONT			Westbound WOODMONT			Northbound RAINBOW			Southbound RAINBOW		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
StreetLight TMC	59	10	11	22	10	46	37	648	93	28	184	24
TAQA					96			649			392	
Calibrated	0	0	0	27	12	57	31	541	78	47	306	40

INTERSECTION: PASEO & VENTANA

AM Peak Hour

	Eastbound PASEO			Westbound PASEO			Northbound VENTANA			Southbound VENTANA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
StreetLight TMC	9	61	0	0	220	24				482	0	156
TAQA		167			229						504	
Calibrated	21	146	0	0	206	23				381	0	123

PM Peak Hour

	Eastbound WOODMONT			Westbound WOODMONT			Northbound RAINBOW			Southbound RAINBOW		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
StreetLight TMC	71	126	0	0	78	303				180	0	20
TAQA		262			478						159	
Calibrated	94	168	0	0	98	380				143	0	16

Trails Tract 1 - Residential Trip Distribution
Employment by Subarea

Subarea	Employment* 2016	2040	2025	Distance	Employment / distance 2030	% Emp / Dist	Paseo to/from East % Emp/ Dist.			Paseo to/from West % Emp/ Dist.		
							% Utililizing	Utilizing	Emp	% Utililizing	Utilizing	Emp
1	8,373	11,695	9,619	6.86	1,402	3.10%	90%	2.79%	8,657		0.00%	0
2	16,177	19,251	17,330	1.49	11,609	25.65%	90%	23.08%	15,597		0.00%	0
3	1,579	1,775	1,653	6.84	242	0.53%	90%	0.48%	1,487		0.00%	0
4	3,725	4,083	3,859	15.40	251	0.55%	90%	0.50%	3,473		0.00%	0
5	14,923	16,730	15,601	4.39	3,553	7.85%	35%	2.75%	5,460		0.00%	0
6	2,051	5,205	3,234	12.35	262	0.58%	25%	0.14%	808	25%	0.14%	808
7	9,234	11,922	10,242	7.20	1,422	3.14%	35%	1.10%	3,585	25%	0.79%	2,561
8	9,101	12,837	10,502	11.87	885	1.95%	10%	0.20%	1,050	25%	0.49%	2,626
9	671	970	783	20.51	38	0.08%		0.00%	0	75%	0.06%	587
10	3,409	5,486	4,188	16.63	252	0.56%	5%	0.03%	209	30%	0.17%	1,256
11	5,699	6,882	6,143	16.79	366	0.81%	5%	0.04%	307	30%	0.24%	1,843
12	6,287	7,474	6,732	7.90	852	1.88%	66%	1.24%	4,443		0.00%	0
13	38,387	42,986	40,112	9.47	4,233	9.35%	66%	6.17%	26,474		0.00%	0
14	37,516	41,146	38,877	14.35	2,708	5.98%	66%	3.95%	25,659		0.00%	0
15	17,358	20,784	18,643	10.03	1,858	4.10%	50%	2.05%	9,321		0.00%	0
16	54,135	60,416	56,490	15.10	3,742	8.27%	40%	3.31%	22,596		0.00%	0
17	39,647	47,495	42,590	12.01	3,546	7.83%	40%	3.13%	17,036		0.00%	0
18	47,403	53,720	49,772	13.67	3,641	8.04%	40%	3.22%	19,909		0.00%	0
19	26,057	30,705	27,800	18.26	1,522	3.36%	40%	1.35%	11,120		0.00%	0
20	5,978	8,831	7,048	17.50	403	0.89%	40%	0.36%	2,819		0.00%	0
21	1,755	4,714	2,865	20.06	143	0.32%	40%	0.13%	1,146		0.00%	0
22	28,349	31,083	29,374	20.64	1,423	3.14%	40%	1.26%	11,750		0.00%	0
23	2,923	3,349	3,083	27.58	112	0.25%	40%	0.10%	1,233		0.00%	0
24	1,271	1,266	1,269	23.41	54	0.12%	50%	0.06%	635		0.00%	0
25	112	112	112	28.66	4	0.01%	50%	0.00%	56		0.00%	0
26	18,011	21,494	19,317	38.75	499	1.10%	35%	0.39%	6,761	10%	0.11%	1,932
27	5,846	6,024	5,913	34.25	173	0.38%	80%	0.31%	4,730		0.00%	0
28	4,322	5,118	4,621	65.66	70	0.16%	50%	0.08%	2,310		0.00%	0
29	1,784	2,111	1,907	42.78	45	0.10%	50%	0.05%	953		0.00%	0
Total	412,083	485,664			45,266	100.00%		58.24%			2.00%	
								58.00%			**2.00%**	

* - Subarea Population from MRCOG 2040 Socioeconomic Forecasts from MRCOG website

Trails Tract 1 - Residential Trip Distribution
Employment by Subarea

Subarea	Employment* 2016	2040	2025	Distance	Employment / distance 2030	% Emp / Dist	Woodmont to/from North % Emp/ Dist.			Woodmont to/from South % Emp/ Dist.		
							% Utililizing	Utilizing	Emp	% Utililizing	Utilizing	Emp
1	8,373	11,695	9,619	6.86	1,402	3.10%		0.00%	0		0.00%	0
2	16,177	19,251	17,330	1.49	11,609	25.65%		0.00%	0		0.00%	0
3	1,579	1,775	1,653	6.84	242	0.53%		0.00%	0		0.00%	0
4	3,725	4,083	3,859	15.40	251	0.55%		0.00%	0		0.00%	0
5	14,923	16,730	15,601	4.39	3,553	7.85%	5%	0.39%	780	10%	0.78%	1,560
6	2,051	5,205	3,234	12.35	262	0.58%	5%	0.03%	162	45%	0.26%	1,455
7	9,234	11,922	10,242	7.20	1,422	3.14%		0.00%	0	40%	1.26%	4,097
8	9,101	12,837	10,502	11.87	885	1.95%		0.00%	0	65%	1.27%	6,826
9	671	970	783	20.51	38	0.08%		0.00%	0	25%	0.02%	196
10	3,409	5,486	4,188	16.63	252	0.56%		0.00%	0	65%	0.36%	2,722
11	5,699	6,882	6,143	16.79	366	0.81%		0.00%	0	65%	0.53%	3,993
12	6,287	7,474	6,732	7.90	852	1.88%		0.00%	0	34%	0.64%	2,289
13	38,387	42,986	40,112	9.47	4,233	9.35%		0.00%	0	34%	3.18%	13,638
14	37,516	41,146	38,877	14.35	2,708	5.98%		0.00%	0	34%	2.03%	13,218
15	17,358	20,784	18,643	10.03	1,858	4.10%		0.00%	0	50%	2.05%	9,321
16	54,135	60,416	56,490	15.10	3,742	8.27%		0.00%	0	60%	4.96%	33,894
17	39,647	47,495	42,590	12.01	3,546	7.83%		0.00%	0	60%	4.70%	25,554
18	47,403	53,720	49,772	13.67	3,641	8.04%		0.00%	0	60%	4.83%	29,863
19	26,057	30,705	27,800	18.26	1,522	3.36%		0.00%	0	60%	2.02%	16,680
20	5,978	8,831	7,048	17.50	403	0.89%		0.00%	0	60%	0.53%	4,229
21	1,755	4,714	2,865	20.06	143	0.32%		0.00%	0	60%	0.19%	1,719
22	28,349	31,083	29,374	20.64	1,423	3.14%		0.00%	0	60%	1.89%	17,625
23	2,923	3,349	3,083	27.58	112	0.25%		0.00%	0	60%	0.15%	1,850
24	1,271	1,266	1,269	23.41	54	0.12%		0.00%	0	50%	0.06%	635
25	112	112	112	28.66	4	0.01%		0.00%	0	50%	0.00%	56
26	18,011	21,494	19,317	38.75	499	1.10%		0.00%	0	55%	0.61%	10,624
27	5,846	6,024	5,913	34.25	173	0.38%		0.00%	0		0.00%	0
28	4,322	5,118	4,621	65.66	70	0.16%		0.00%	0	50%	0.08%	2,310
29	1,784	2,111	1,907	42.78	45	0.10%		0.00%	0	50%	0.05%	953
Total	412,083	485,664			45,266	100.00%		0.42%			32.45%	
								1.00%			**32.00%**	

* - Subarea Population from MRCOG 2040 Socioeconomic Forecasts from MRCOG website

Trails Tract 1 - Residential Trip Distribution
Employment by Subarea

Subarea	Employment* 2016	2040	2025	Distance	Employment / distance 2030	% Emp / Dist	Rainbow to/from North % Emp/ Dist. % Utililizing	Utilizing	Emp	zone	% utilizing sum
1	8,373	11,695	9,619	6.86	1,402	3.10%	10%	0.31%	962	1	100.0000%
2	16,177	19,251	17,330	1.49	11,609	25.65%	10%	2.56%	1,733	2	100.0000%
3	1,579	1,775	1,653	6.84	242	0.53%	10%	0.05%	165	3	100.0000%
4	3,725	4,083	3,859	15.40	251	0.55%	10%	0.06%	386	4	100.0000%
5	14,923	16,730	15,601	4.39	3,553	7.85%	50%	3.92%	7,800	5	100.0000%
6	2,051	5,205	3,234	12.35	262	0.58%		0.00%	0	6	100.0000%
7	9,234	11,922	10,242	7.20	1,422	3.14%		0.00%	0	7	100.0000%
8	9,101	12,837	10,502	11.87	885	1.95%		0.00%	0	8	100.0000%
9	671	970	783	20.51	38	0.08%		0.00%	0	9	100.0000%
10	3,409	5,486	4,188	16.63	252	0.56%		0.00%	0	10	100.0000%
11	5,699	6,882	6,143	16.79	366	0.81%		0.00%	0	11	100.0000%
12	6,287	7,474	6,732	7.90	852	1.88%		0.00%	0	12	100.0000%
13	38,387	42,986	40,112	9.47	4,233	9.35%		0.00%	0	13	100.0000%
14	37,516	41,146	38,877	14.35	2,708	5.98%		0.00%	0	14	100.0000%
15	17,358	20,784	18,643	10.03	1,858	4.10%		0.00%	0	15	100.0000%
16	54,135	60,416	56,490	15.10	3,742	8.27%		0.00%	0	16	100.0000%
17	39,647	47,495	42,590	12.01	3,546	7.83%		0.00%	0	17	100.0000%
18	47,403	53,720	49,772	13.67	3,641	8.04%		0.00%	0	18	100.0000%
19	26,057	30,705	27,800	18.26	1,522	3.36%		0.00%	0	19	100.0000%
20	5,978	8,831	7,048	17.50	403	0.89%		0.00%	0	20	100.0000%
21	1,755	4,714	2,865	20.06	143	0.32%		0.00%	0	21	100.0000%
22	28,349	31,083	29,374	20.64	1,423	3.14%		0.00%	0	22	100.0000%
23	2,923	3,349	3,083	27.58	112	0.25%		0.00%	0	23	100.0000%
24	1,271	1,266	1,269	23.41	54	0.12%		0.00%	0	24	100.0000%
25	112	112	112	28.66	4	0.01%		0.00%	0	25	100.0000%
26	18,011	21,494	19,317	38.75	499	1.10%		0.00%	0	26	100.0000%
27	5,846	6,024	5,913	34.25	173	0.38%	20%	0.08%	1,183	27	100.0000%
28	4,322	5,118	4,621	65.66	70	0.16%		0.00%	0	28	100.0000%
29	1,784	2,111	1,907	42.78	45	0.10%		0.00%	0	29	100.0000%
Total	412,083	485,664			45,266	100.00%		6.98%			100.10%
								7.00%			**100.00%**

* - Subarea Population from MRCOG 2040 Socioeconomic Forecasts from MRCOG website

Scenario - 1

Scenario Name: AM
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 1
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
221 - Multifamily Housing (Mid-Rise) [Private]	General Urban/Suburban	Dwelling Units	333	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	29	82	111
Data Source: Trip Gen Manual, 10th Ed +					Ln(T) =0.98Ln(X) - 0.98	26%	74%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
221 - Multifamily Housing (Mid-Rise) [Private]	100	100	1	1	26	74

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
221 - Multifamily Housing (Mid-Rise) [Private]	29	82	0	0	29	82
	111		0		111	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
221 - Multifamily Housing (Mid-Rise) [Private]	29	82	111

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	29	82	111
External Vehicle Trips	29	82	111
New Vehicle Trips	29	82	111

Scenario - 2

Scenario Name: PM
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 1
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
221 - Multifamily Housing (Mid-Rise) [Private]	General Urban/Suburban	Dwelling Units	333	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	86	55	141
Data Source: Trip Gen Manual, 10th Ed +					Ln(T) =0.96Ln(X) - 0.63	61%	39%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
221 - Multifamily Housing (Mid-Rise) [Private]	100	100	1	1	61	39

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
221 - Multifamily Housing (Mid-Rise) [Private]	86	55	0	0	86	55
	141		0		141	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
221 - Multifamily Housing (Mid-Rise) [Private]	86	55	141

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	86	55	141
External Vehicle Trips	86	55	141
New Vehicle Trips	86	55	141

Scenario - 3

Scenario Name: Daily
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 1
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
221 - Multifamily Housing (Mid-Rise) [Private]	General Urban/Suburban	Dwelling Units	333	Weekday	Best Fit (LIN)	907	907	1814
Data Source: Trip Gen Manual, 10th Ed +					T = 5.45(X) - 1.75	50%	50%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
221 - Multifamily Housing (Mid-Rise) [Private]	100	100	1	1	50	50

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
221 - Multifamily Housing (Mid-Rise) [Private]	907	907	0	0	907	907
	1814		0		1814	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
221 - Multifamily Housing (Mid-Rise) [Private]	907	907	1814

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	907	907	1814
External Vehicle Trips	907	907	1814
New Vehicle Trips	907	907	1814

TRAILS TRACT 1
Growth Rate Determination

AWDT on Paseo
(East of Rainbow)

Year	AWDT
2014	9,570
2015	9,723
2016	10,380
2017	10,613
2018	10,792

Linear Growth Rate = {[(10,792 - 9,570)/4]/10,792}x100= 2.83%

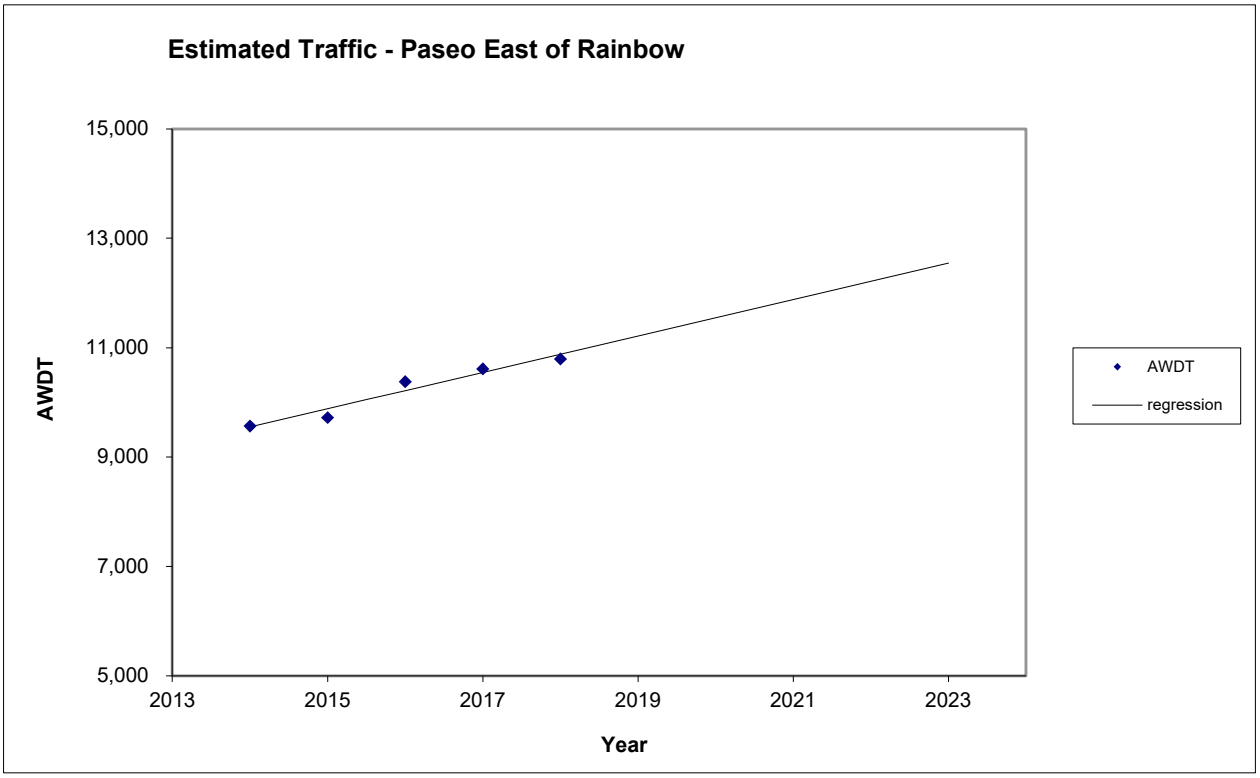
Regression Output	
R Square	0.94
Standard Error	1.47E+02
Observations	5
Intercept	-661,919
Std Err of Intercept	9.E+04
Coefficient	333
Std Err of Coefficient	47

Projected AWDT	
2014	9,549
2015	9,882
2016	10,216
2017	10,549
2018	10,882
2019	11,216
2020	11,549
2021	11,883
2022	12,216
2023	12,549

Regression Equation
AWDT = 333 x Year - 661,919

Coefficient Growth Rate 3.09%

Estimated Annual Growth Rate
[(12,549 - 10,792)/10,792) x 100% = 16.28%
16.28%/4= 4.07%



TRAILS TRACT 1
Growth Rate Determination

AWDT on Paseo
(West of Rainbow)

Year	AWDT
2014	7,187
2015	8,047
2016	8,184
2017	8,368
2018	8,110

Linear Growth Rate = {[(8,110 -7,187)/4]/8,110}x100= 2.85%

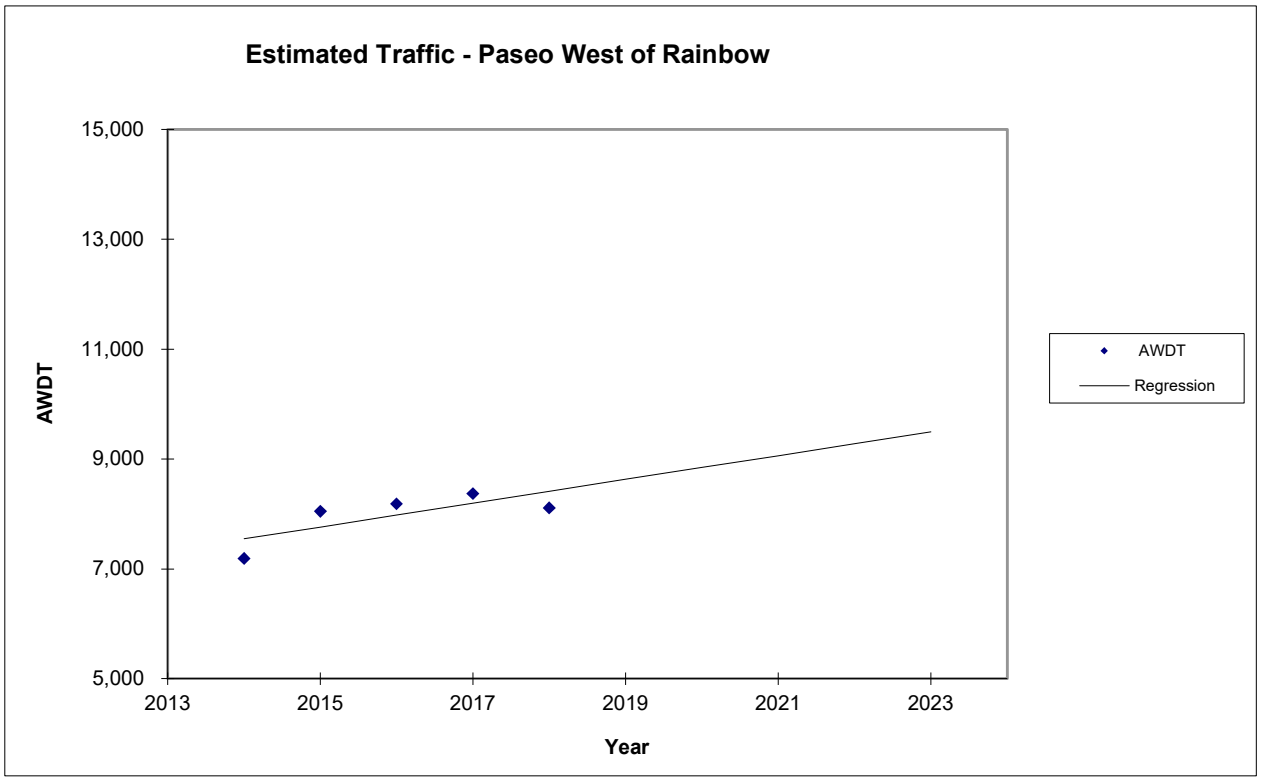
Regression Output	
R Square	0.557
Standard Error	3.53E+02
Observations	5
Intercept	-428,888
Std Err of Intercept	2.25E+05
Coefficient	217
Std Err of Coefficient	111

Projected AWDT	
2014	7,546
2015	7,763
2016	7,979
2017	8,196
2018	8,413
2019	8,629
2020	8,846
2021	9,063
2022	9,279
2023	9,496

Regression Equation
AWDT = 217 x Year - 428,888

Coefficient Growth Rate 2.67%

Estimated Annual Growth Rate
((9,496 - 8,110))/8,110) x 100% = 17.09%
17.09%/4 = 4.27%



TRAILS TRACT 1
Growth Rate Determination

AWDT on Rainbow
(North of Paseo)

Year	AWDT
2014	6,094
2015	5,450
2016	5,543
2017	5,667
2018	5,640

Linear Growth Rate = {[(5,640 - 6,094)/4]/5,640}x100= -2.01%

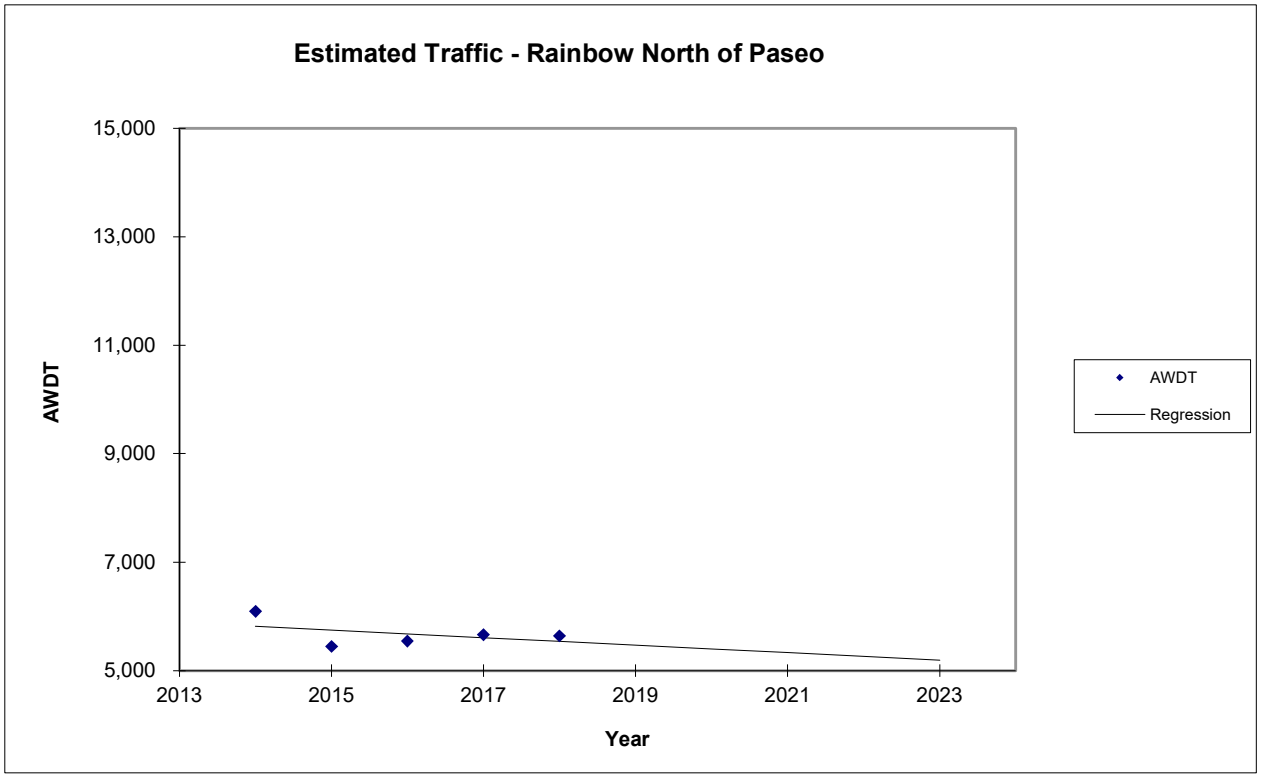
Regression Output	
R Square	0.20
Standard Error	2.56E+02
Observations	5
Intercept	144,984
Std Err of Intercept	163,399
Coefficient	-69
Std Err of Coefficient	8.11E+01

Projected AWDT	
2014	5,817
2015	5,748
2016	5,679
2017	5,610
2018	5,541
2019	5,471
2020	5,402
2021	5,333
2022	5,264
2023	5,195

Regression Equation
AWDT = -69 x Year + 144,984

Coefficient Growth Rate -1.23%

Estimated Annual Growth Rate
[(5,195 - 5,640)/5,640) x 100% = -7.89%
-7.89%/4 = -1.97%



TRAILS TRACT 1
Growth Rate Determination

AWDT on Rainbow
(South of Paseo)

Year	AWDT
2014	7,976
2015	8,167
2016	8,306
2017	8,492
2018	9,659

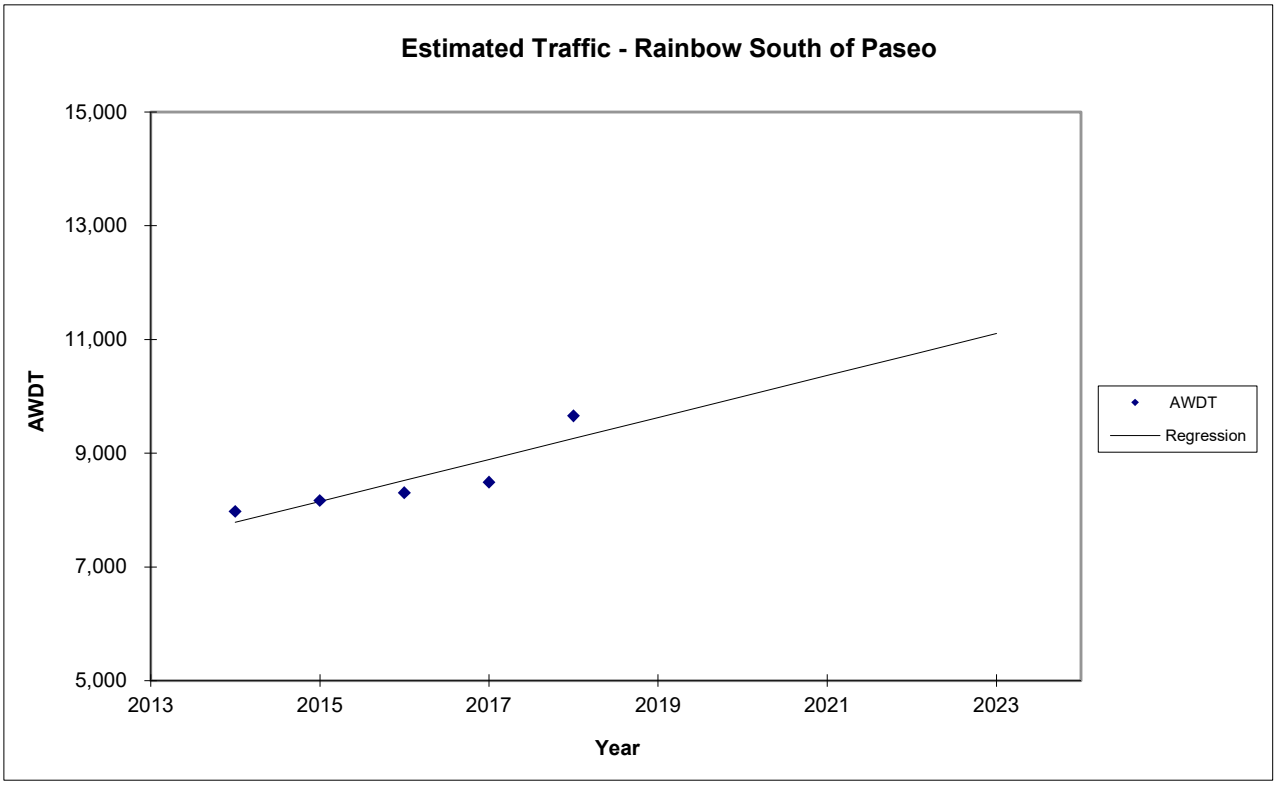
Linear Growth Rate = {[(9,659 - 7,976)/4]/9,659}x100= 4.36%

Regression Output	
R Square	0.772
Standard Error	3.66E+02
Observations	5
Intercept	-735,586
Std Err of Intercept	233,397
Coefficient	369
Std Err of Coefficient	1.16E+02

Projected AWDT	
2014	7,782
2015	8,151
2016	8,520
2017	8,889
2018	9,258
2019	9,627
2020	9,996
2021	10,366
2022	10,735
2023	11,104

Regression Equation
AWDT = 369 x Year - 735,586 Coefficient Growth Rate 3.82%

Estimated Annual Growth Rate
[(11,104 - 9,659)/9,659) x 100% = 14.96%
14.96%/4 = 3.74%



TRAILS TRACT 1
Growth Rate Determination

AWDT
ALL

Year	AWDT
2014	30,827
2015	31,387
2016	32,413
2017	33,140
2018	34,201

Linear Growth Rate = {[34,201 - 30,827)/4]/34,201}x100= 1.97%

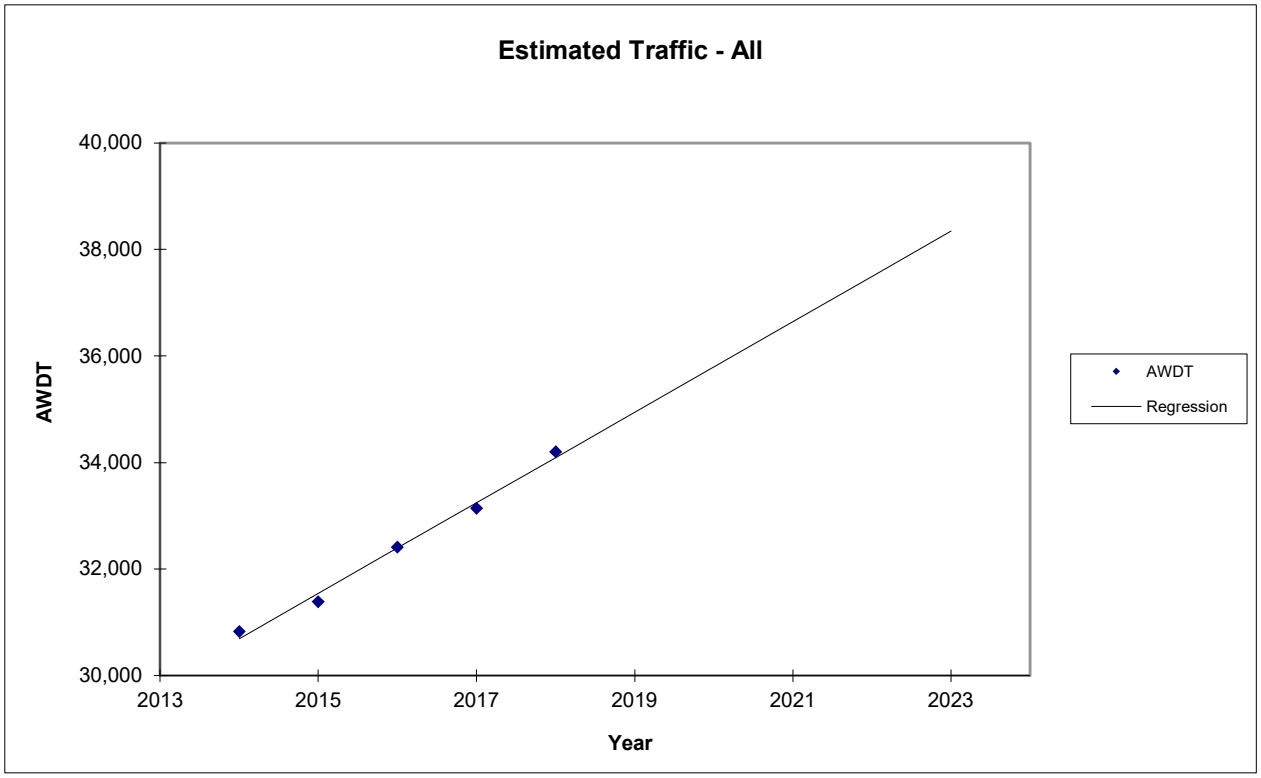
Regression Output	
R Square	0.99
Standard Error	1.47E+02
Observations	5
Intercept	-1,681,408
Std Err of Intercept	93,813
Coefficient	850
Std Err of Coefficient	4.65E+01

Projected AWDT	
2014	30,693
2015	31,544
2016	32,394
2017	33,244
2018	34,094
2019	34,944
2020	35,794
2021	36,644
2022	37,494
2023	38,344

Regression Equation
AWDT = -2,073 x Year + 4,279,718

Coefficient Growth Rate 2.49%

Estimated Annual Growth Rate
[(38,344 - 34,201)/34,201) x 100% = 12.11%
12.11%/4 = 2.42%

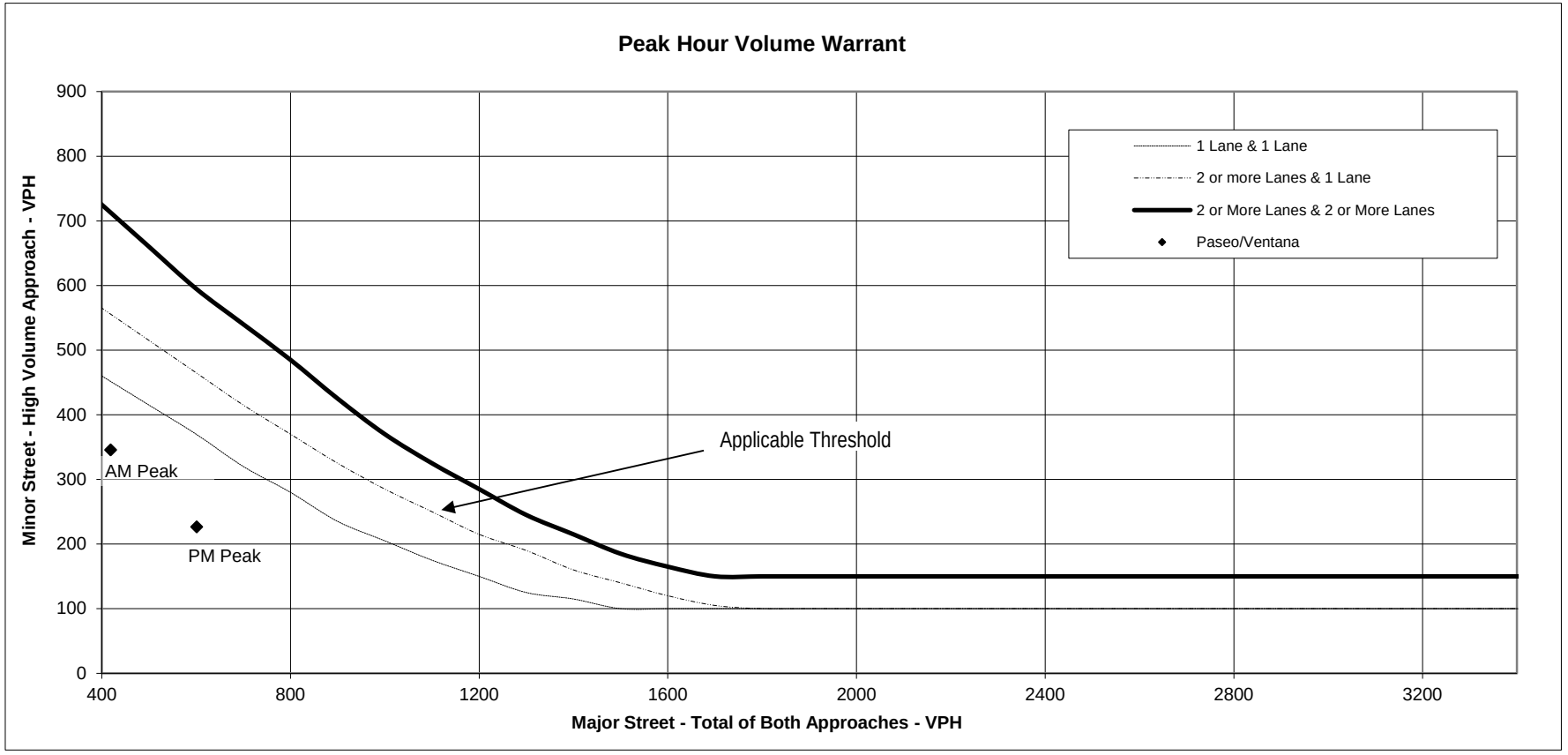


PEAK HOUR VOLUME SIGNAL WARRANT ANALYSIS

Scenario:	2022 Build
Intersection:	Paseo/Ventana
Type:	1 Lane/2 Lane
Major Street (Orientation):	Paseo (E/W)
Minor Street (Orientation):	Ventana (N/S)

	Satisfies Warrant 3A	NO
Peak Hour Delay (Criteria 4 Hours)	Intersection Voume > 800	Minor Approach > 100
1.28 Hours in AM NO	YES	YES
1.04 Hours in PM NO	YES	YES

	Minor Street Approach Volume			Major Street Approach Volume			Satisfies Warrant 3B
Time	NB	SB	High Vol	EB	WB	EB + WB	
AM Peak	67	346	346	178	241	419	NO
PM Peak	192	227	227	281	320	601	NO



Note: 150 VPH applies as the lower threshold for minor street approach with 2 or more lanes & 100 VPH as the threshold for a minor street approach with one lane

TRAILS TRACT 1
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: PASEO & VENTANA

AM Peak Hour

	Eastbound PASEO			Westbound PASEO			Northbound WOODMONT			Southbound VENTANA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)	21	146	0	0	206	23				381	0	123
Background Growth	1	9	0	0	12	1	0	0	0	23	0	7
Approved Development												
No Build (2022)	23	154	0	0	219	24	0	0	0	404	0	131
Woodmont Rerouting					-7	-21	7	21		-174	174	
Catalonia Entering			0	9				0				
Catalonia Exiting	0	0	0	0	0	0	1	0	26	0	0	0
Entering			1	17				0				
Exiting	0	0	0	0	0	0	2	0	48	0	1	0
Build (2022)	23	154	1	26	212	3	9	21	74	230	175	131
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Eastbound PASEO			Westbound PASEO			Northbound WOODMONT			Southbound VENTANA		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)	94	168	0	0	98	380				143	0	16
Background Growth	6	10	0	0	6	23	0	0	0	9	0	1
Approved Development												
No Build (2022)	100	178	0	0	104	403	0	0	0	152	0	17
Woodmont Rerouting					-8	-156	8	156		-65	65	
Catalonia Entering			1	29				1				
Catalonia Exiting	0	0	0	0	0	0	1	0	17	0	0	0
Entering			2	50				1				
Exiting	0	0	0	0	0	0	1	0	32	0	1	0
Build (2022)	100	178	3	79	96	247	10	157	49	86	66	17
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

growth rates	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Trip Distribution % Enter			2.0%	58.0%				1.0%					Residential
Trip Distribution % Exit	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	58.0%	0.0%	1.0%	0.0%	

TRAILS TRACT 1
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: PASEO & RAINBOW

AM Peak Hour

	Eastbound PASEO			Westbound PASEO			Northbound RAINBOW			Southbound RAINBOW		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)	28	227	280	70	99	23	41	165	171	98	298	26
Background Growth	2	14	17	4	6	1	2	10	10	6	18	2
Approved Development			4	16			12	12	49		4	
No Build (2022)	30	241	300	90	105	24	55	187	230	104	320	27
Woodmont Rerouting			-174				-28					
Catalonia Entering					9							1
Catalonia Exiting	3	26	0	0	0	0	0	0	0	0	0	0
Entering					17							2
Exiting	6	48	0	0	0	0	0	0	0	0	0	0
Build (2022)	38	315	127	90	131	24	28	187	230	104	320	30
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Eastbound PASEO			Westbound PASEO			Northbound RAINBOW			Southbound RAINBOW		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)	33	204	57	104	213	167	165	388	88	84	70	24
Background Growth	2	12	3	6	13	10	10	23	5	5	4	1
Approved Development			13	54			8	8	31		13	
No Build (2022)	35	216	73	165	226	177	182	419	124	89	87	25
Woodmont Rerouting			-65				-164					
Catalonia Entering					29							4
Catalonia Exiting	2	17	0	0	0	0	0	0	0	0	0	0
Entering					50							6
Exiting	4	32	0	0	0	0	0	0	0	0	0	0
Build (2022)	41	265	8	165	305	177	18	419	124	89	87	35
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

growth rates	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Trip Distribution % Enter					58.0%							7.0%	Residential
Trip Distribution % Exit	7.0%	58.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

TRAILS TRACT 1
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: WOODMONT & RAINBOW

AM Peak Hour

	Eastbound WOODMONT			Westbound WOODMONT			Northbound RAINBOW			Southbound RAINBOW		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)	25	15	114	102	3	16	7	309	270	41	791	8
Background Growth	2	1	7	6	0	1	0	19	16	2	47	1
Approved Development	65	10	109		3		36	4			11	22
No Build (2022)	92	26	230	108	6	17	43	332	286	43	849	31
Woodmont Rerouting			174				28	-28			-174	
Catalonia Entering							5					
Catalonia Exiting	0	0	14	0	0	0	0	0	0	0	0	0
Entering							9					
Exiting	0	0	26	0	0	0	0	0	0	0	0	0
Build (2022)	92	26	444	108	6	17	85	304	286	43	676	31
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Eastbound WOODMONT			Westbound WOODMONT			Northbound RAINBOW			Southbound RAINBOW		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)	59	10	11	27	12	57	31	541	78	47	306	40
Background Growth	4	1	1	2	1	3	2	32	5	3	18	2
Approved Development	42	7	70		11		119	12			7	72
No Build (2022)	105	18	82	29	24	60	152	585	82	49	331	114
Woodmont Rerouting			65				164	-164			-65	
Catalonia Entering							16					
Catalonia Exiting	0	0	10	0	0	0	0	0	0	0	0	0
Entering							28					
Exiting	0	0	18	0	0	0	0	0	0	0	0	0
Build (2022)	105	18	174	29	24	60	359	421	82	49	266	114
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

growth rates	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Trip Distribution % Enter							32.0%						Residential
Trip Distribution % Exit	0.0%	0.0%	32.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

TRAILS TRACT 1
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: WOODMONT & MAIN ENTRANCE

AM Peak Hour

	Eastbound MAIN ENTRANCE			Westbound MAIN ENTRANCE			Northbound WOODMONT			Southbound WOODMONT		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)												
Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development												
No Build (2022)	0	0	0	0	0	0	0	0	0	0	0	0
Woodmont Rerouting								28			174	
Catalonia Entering											12	
Catalonia Exiting	0	0	0	0	0	0	0	35	0	0	0	0
Entering							3				7	13
Exiting	37	0	9	0	0	0	0	19	0	0	0	0
Build (2022)	37	0	9	0	0	0	3	82	0	0	192	13
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Eastbound MAIN ENTRANCE			Westbound MAIN ENTRANCE			Northbound WOODMONT			Southbound WOODMONT		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)												
Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development												
No Build (2022)	0	0	0	0	0	0	0	0	0	0	0	0
Woodmont Rerouting								164			65	
Catalonia Entering											39	
Catalonia Exiting	0	0	0	0	0	0	0	23	0	0	0	0
Entering							9				20	39
Exiting	25	0	6	0	0	0	0	13	0	0	0	0
Build (2022)	25	0	6	0	0	0	9	200	0	0	124	39
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

growth rates	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Trip Distribution % Enter							11.0%				23.0%	45.0%	Residential
Trip Distribution % Exit	45.0%	0.0%	11.0%	0.0%	0.0%	0.0%	0.0%	23.0%	0.0%	0.0%	0.0%	0.0%	

TRAILS TRACT 1
EXISTING & PROJECTED TURNING MOVEMENTS

INTERSECTION: WOODMONT & GIRONA

AM Peak Hour

	Eastbound GIRONA			Westbound GIRONA			Northbound WOODMONT			Southbound WOODMONT		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)												
Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development												
No Build (2022)	0	0	0	0	0	0	0	0	0	0	0	0
Woodmont Rerouting								28			174	
Catalonia Entering											12	
Catalonia Exiting	0	0	0	0	0	0	0	35	0	0	0	0
Entering							6	3				7
Exiting	19	0	17	0	0	0	0	0	0	0	9	0
Build (2022)	19	0	17	0	0	0	6	66	0	0	194	7
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

PM Peak Hour

	Eastbound GIRONA			Westbound GIRONA			Northbound WOODMONT			Southbound WOODMONT		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2019)												
Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development												
No Build (2022)	0	0	0	0	0	0	0	0	0	0	0	0
Woodmont Rerouting								164			65	
Catalonia Entering											39	
Catalonia Exiting	0	0	0	0	0	0	0	23	0	0	0	0
Entering							18	9				20
Exiting	13	0	12	0	0	0	0	0	0	0	6	0
Build (2022)	13	0	12	0	0	0	18	197	0	0	110	20
PHF	*0.94*			*0.94*			*0.94*			*0.94*		
HV %		*2*			*2*			*2*			*2*	

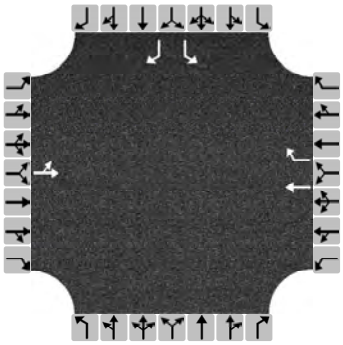
growth rates	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
Trip Distribution % Enter							21.0%	11.0%				23.0%	Residential
Trip Distribution % Exit	23.0%	0.0%	21.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.0%	0.0%	

APPENDIX D
2022 NO BUILD INTERSECTION CAPACITY ANALYSIS

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	MB	Intersection	Paseo & Ventana/Woodmont
Agency/Co.	BHI	Jurisdiction	
Date Performed	3/3/2021	East/West Street	Paseo del Norte
Analysis Year	2022	North/South Street	Ventana/Woodmont
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	No Build AM		
Project Description	Trails Tract 1		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	23	154			219	24				404		131
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			T	R					L	R	
Flow Rate, v (veh/h)	192			238	26					439	142	
Percent Heavy Vehicles	2			2	2					2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20					3.20	3.20	
Initial Degree of Utilization, x	0.171			0.212	0.023					0.390	0.127	
Final Departure Headway, hd (s)	6.52			6.63	5.92					6.46	5.26	
Final Degree of Utilization, x	0.348			0.438	0.043					0.789	0.208	
Move-Up Time, m (s)	2.0			2.3	2.3					2.3	2.3	
Service Time, ts (s)	4.52			4.33	3.62					4.16	2.96	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	192			238	26					439	142	
Capacity	552			543	609					557	685	
95% Queue Length, Q_{95} (veh)	1.5			2.2	0.1					7.4	0.8	
Control Delay (s/veh)	13.0			14.4	8.9					29.1	9.3	
Level of Service, LOS	B			B	A					D	A	
Approach Delay (s/veh)	13.0			13.8						24.3		
Approach LOS	B			B						C		
Intersection Delay, s/veh | LOS	19.5						C					

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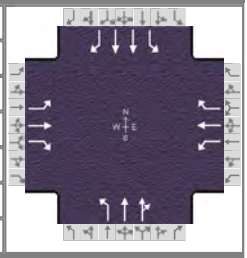
HCS7 Signalized Intersection Results Summary

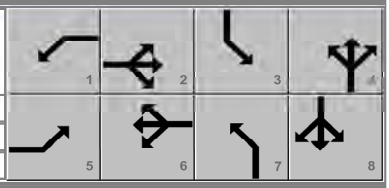
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	2/22/2021	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	NBAM Rainbow_Paseo.xus		
Project Description	No Build AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	30	241	300	90	105	24	55	187	230	104	320	27

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	1.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, (*Y+R c*), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.2	2.6	4.2	2.6	3.1	2.6	3.1
Queue Clearance Time (*g s*), s	2.9	18.1	4.9	6.0	4.1	15.7	6.1	9.9
Green Extension Time (*g e*), s	0.0	2.3	0.1	2.8	0.0	0.8	0.1	1.4
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.12	0.00	0.00	0.00	0.90	0.00	0.07

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	33	262	326	98	114	26	60	203	250	113	348	29
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (*g s*), s	0.9	10.1	16.1	2.9	4.0	1.0	2.1	8.9	13.7	4.1	7.9	1.4
Cycle Queue Clearance Time (*g c*), s	0.9	10.1	16.1	2.9	4.0	1.0	2.1	8.9	13.7	4.1	7.9	1.4
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	653	610	517	538	610	525	422	386	327	354	735	333
Volume-to-Capacity Ratio (*X*)	0.050	0.430	0.631	0.182	0.187	0.050	0.142	0.526	0.764	0.319	0.473	0.088
Back of Queue (*Q*), ft/ln (95 th percentile)	17.3	208.5	275.1	55.3	83.7	18	41.7	199.1	264.7	84.7	159.5	25
Back of Queue (*Q*), veh/ln (95 th percentile)	0.7	8.2	10.8	2.2	3.3	0.7	1.6	7.8	10.6	3.3	6.3	1.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.17	0.10	2.75	0.32	0.04	0.00	0.12	0.27	0.36	0.24	0.19	0.00
Uniform Delay (*d 1*), s/veh	13.8	24.3	26.3	15.0	22.2	21.2	21.1	32.5	34.4	22.8	32.1	29.5
Incremental Delay (*d 2*), s/veh	0.1	2.2	5.8	0.7	0.7	0.2	0.7	5.1	15.5	2.4	2.2	0.5
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	13.9	26.5	32.1	15.7	22.9	21.4	21.9	37.5	49.9	25.1	34.3	30.0
Level of Service (LOS)	B	C	C	B	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	28.8	C		19.8	B		41.7	D		31.9	C	
Intersection Delay, s/veh / LOS	32.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.51	B	0.88	A	0.91	A	0.89	A

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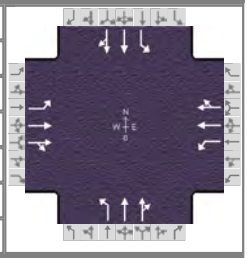
HCS7 Signalized Intersection Results Summary

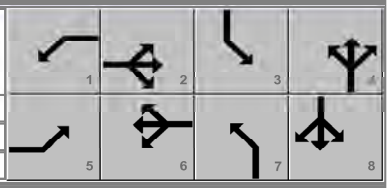
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	Mar 3, 2021	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Woodmont	File Name	NBAM Rainbow_Woodmont.xus		
Project Description	No Build AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	92	26	230	108	6	17	43	332	286	43	849	31

Signal Information			
Cycle, s	84.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	18.0	12.5	22.5	0.0	0.0	
Yellow	3.0	4.0	3.0	3.5	0.0	0.0	
Red	0.5	2.0	0.5	2.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.0	24.0	16.0	24.0	16.0	28.0	16.0	28.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.5	3.5	5.5
Max Allow Headway (*MAH*), s	2.6	5.3	2.6	5.3	2.6	5.0	2.6	5.0
Queue Clearance Time (g_s), s	5.2	14.4	5.8	2.8	3.3	17.0	3.3	23.3
Green Extension Time (g_e), s	0.1	0.6	0.1	1.5	0.0	3.9	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	1.00	0.00	0.03	0.00	0.98	0.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	100	28	250	117	7	18	47	361	311	47	481	475
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1847
Queue Service Time (g_s), s	3.2	1.0	12.4	3.8	0.2	0.8	1.3	14.7	15.0	1.3	21.3	21.3
Cycle Queue Clearance Time (g_c), s	3.2	1.0	12.4	3.8	0.2	0.8	1.3	14.7	15.0	1.3	21.3	21.3
Green Ratio (*g/C*)	0.36	0.21	0.21	0.36	0.21	0.21	0.42	0.27	0.27	0.42	0.27	0.27
Capacity (*c*), veh/h	602	401	340	399	401	340	351	501	425	401	501	495
Volume-to-Capacity Ratio (*X*)	0.166	0.071	0.736	0.295	0.016	0.054	0.133	0.720	0.732	0.117	0.961	0.961
Back of Queue (*Q*), ft/ln (95 th percentile)	61.3	21.7	242.7	76.7	4.9	14.1	25.9	299.6	268.9	25.4	489.1	477.3
Back of Queue (*Q*), veh/ln (95 th percentile)	2.4	0.9	9.7	3.0	0.2	0.6	1.0	11.8	10.8	1.0	19.3	19.1
Queue Storage Ratio (*RQ*) (95 th percentile)	0.41	0.03	0.39	0.61	0.01	0.02	0.15	0.29	0.27	0.13	0.53	0.52
Uniform Delay (d_1), s/veh	18.1	26.3	30.8	19.6	26.0	26.2	17.7	27.9	28.0	16.5	30.3	30.3
Incremental Delay (d_2), s/veh	0.6	0.3	13.3	1.9	0.1	0.3	0.8	8.7	10.6	0.6	31.5	31.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	18.7	26.7	44.1	21.5	26.1	26.5	18.5	36.6	38.7	17.1	61.9	62.1
Level of Service (LOS)	B	C	D	C	C	C	B	D	D	B	E	E
Approach Delay, s/veh / LOS	36.1	D		22.4	C		36.3	D		59.9	E	
Intersection Delay, s/veh / LOS	45.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	0.80	A	0.61	A	1.08	A	1.32	A

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HCS7 All-Way Stop Control Report

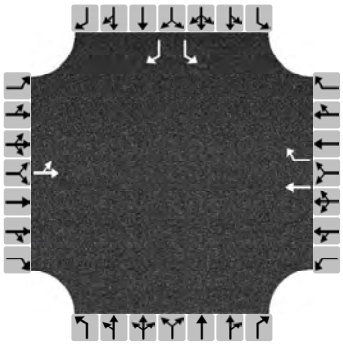
General Information

Analyst	MB
Agency/Co.	BHI
Date Performed	3/3/2021
Analysis Year	2022
Analysis Time Period (hrs)	0.25
Time Analyzed	No Build PM
Project Description	Trails Tract 1

Site Information

Intersection	Paseo & Ventana/Woodmont
Jurisdiction	
East/West Street	Paseo del Norte
North/South Street	Ventana/Woodmont
Peak Hour Factor	0.92

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	100	178			104	403				152		17
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			T	R					L	R	
Flow Rate, v (veh/h)	302			113	438					165	18	
Percent Heavy Vehicles	2			2	2					2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20	3.20					3.20	3.20	
Initial Degree of Utilization, x	0.269			0.100	0.389					0.147	0.016	
Final Departure Headway, hd (s)	5.71			5.58	4.87					7.06	5.85	
Final Degree of Utilization, x	0.479			0.175	0.593					0.324	0.030	
Move-Up Time, m (s)	2.0			2.3	2.3					2.3	2.3	
Service Time, ts (s)	3.71			3.28	2.57					4.76	3.55	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	302			113	438					165	18	
Capacity	631			645	739					510	616	
95% Queue Length, Q_{95} (veh)	2.6			0.6	4.0					1.4	0.1	
Control Delay (s/veh)	13.8			9.5	14.4					13.1	8.7	
Level of Service, LOS	B			A	B					B	A	
Approach Delay (s/veh)	13.8			13.4						12.7		
Approach LOS	B			B						B		
Intersection Delay, s/veh | LOS	13.4						B					

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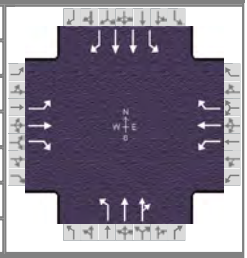
HCS7 Signalized Intersection Results Summary

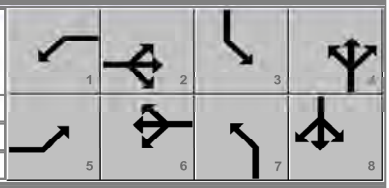
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	2/22/2021	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	NBPM Rainbow_Paseo.xus		
Project Description	No Build PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	35	216	73	165	226	177	182	419	124	89	87	25

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	1.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.0	2.6	3.0
Queue Clearance Time (g_s), s	3.1	10.9	7.5	11.4	9.6	16.5	5.5	4.0
Green Extension Time (g_e), s	0.0	2.7	0.1	2.7	0.1	0.5	0.0	1.3
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.02	0.05	0.02	0.62	1.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	38	235	79	179	246	192	198	305	285	97	95	27
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1724	1781	1781	1610
Queue Service Time (g_s), s	1.1	8.9	3.3	5.5	9.4	8.4	7.6	14.2	14.5	3.5	2.0	1.3
Cycle Queue Clearance Time (g_c), s	1.1	8.9	3.3	5.5	9.4	8.4	7.6	14.2	14.5	3.5	2.0	1.3
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	550	610	517	558	610	525	533	386	356	343	735	333
Volume-to-Capacity Ratio (*X*)	0.069	0.385	0.154	0.321	0.403	0.366	0.371	0.791	0.800	0.282	0.129	0.082
Back of Queue (*Q*), ft/ln (95 th percentile)	20.5	187.2	58	107.3	196.3	151.4	150.1	314.8	298.5	71.7	39.2	23.1
Back of Queue (*Q*), veh/ln (95 th percentile)	0.8	7.4	2.3	4.2	7.7	6.1	5.9	12.4	11.9	2.8	1.5	0.9
Queue Storage Ratio (*RQ*) (95 th percentile)	0.21	0.09	0.58	0.61	0.10	0.00	0.43	0.42	0.40	0.20	0.05	0.00
Uniform Delay (d_1), s/veh	14.3	23.9	22.0	15.6	24.1	23.7	22.5	34.6	34.7	22.7	29.8	29.5
Incremental Delay (d_2), s/veh	0.2	1.8	0.6	1.5	2.0	2.0	2.0	15.2	17.0	2.0	0.4	0.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	14.6	25.7	22.6	17.1	26.0	25.7	24.5	49.8	51.7	24.7	30.1	29.9
Level of Service (LOS)	B	C	C	B	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	23.8	C		23.3	C		44.1	D		27.7	C	
Intersection Delay, s/veh / LOS	32.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.07	A	1.51	B	1.14	A	0.67	A

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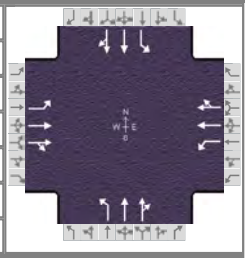
HCS7 Signalized Intersection Results Summary

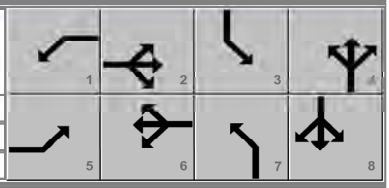
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	Mar 3, 2021	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Woodmont	File Name	NBPM Rainbow_Woodmont.xus		
Project Description	No Build PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	105	18	82	29	24	60	152	585	82	49	331	114

Signal Information			
Cycle, s	84.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	18.0	12.5	22.5	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.0	24.0	16.0	24.0	16.0	28.0	16.0	28.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.5	3.5	5.5
Max Allow Headway (*MAH*), s	2.6	5.3	2.6	5.3	2.6	5.0	2.6	5.0
Queue Clearance Time (g_s), s	5.7	5.9	3.0	4.8	7.0	17.2	3.5	11.7
Green Extension Time (g_e), s	0.1	0.8	0.0	0.8	0.1	3.0	0.0	5.1
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.03	0.00	0.02	0.02	0.98	0.00	0.58

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	114	20	89	32	26	65	165	370	355	53	250	234
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1789	1781	1870	1707
Queue Service Time (g_s), s	3.7	0.7	3.9	1.0	0.9	2.8	5.0	15.2	15.2	1.5	9.5	9.7
Cycle Queue Clearance Time (g_c), s	3.7	0.7	3.9	1.0	0.9	2.8	5.0	15.2	15.2	1.5	9.5	9.7
Green Ratio (*g/C*)	0.36	0.21	0.21	0.36	0.21	0.21	0.42	0.27	0.27	0.42	0.27	0.27
Capacity (*c*), veh/h	555	401	340	535	401	340	468	501	479	397	501	457
Volume-to-Capacity Ratio (*X*)	0.205	0.049	0.262	0.059	0.065	0.192	0.353	0.739	0.741	0.134	0.499	0.511
Back of Queue (*Q*), ft/ln (95 th percentile)	71.1	14.9	72.6	18.6	20	51.9	97.6	309.5	296.5	29.2	201.2	190
Back of Queue (*Q*), veh/ln (95 th percentile)	2.8	0.6	2.9	0.7	0.8	2.1	3.8	12.2	11.9	1.2	7.9	7.6
Queue Storage Ratio (*RQ*) (95 th percentile)	0.47	0.02	0.12	0.15	0.02	0.07	0.56	0.30	0.29	0.15	0.22	0.21
Uniform Delay (d_1), s/veh	18.4	26.2	27.5	17.6	26.3	27.0	16.8	28.1	28.1	16.6	26.0	26.1
Incremental Delay (d_2), s/veh	0.8	0.2	1.9	0.2	0.3	1.3	2.1	9.4	9.9	0.7	3.5	4.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	19.2	26.4	29.3	17.8	26.6	28.3	18.8	37.5	38.0	17.3	29.5	30.1
Level of Service (LOS)	B	C	C	B	C	C	B	D	D	B	C	C
Approach Delay, s/veh / LOS	23.9	C		25.2	C		34.2	C		28.6	C	
Intersection Delay, s/veh / LOS	30.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	0.67	A	0.59	A	1.22	A	0.93	A

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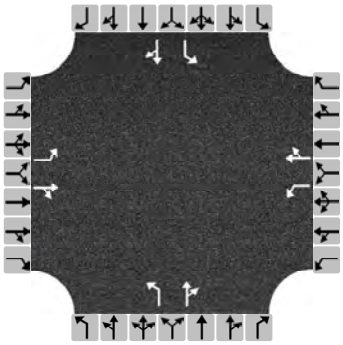
APPENDIX E
2022 BUILD INTERSECTION CAPACITY ANALYSIS

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	MB	Intersection	Paseo & Ventana/Woodmont
Agency/Co.	BHI	Jurisdiction	
Date Performed	3/3/2021	East/West Street	Paseo del Norte
Analysis Year	2022	North/South Street	Ventana/Woodmont
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Build AM		
Project Description	Trails Tract 1 - 2 Lane		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	23	154	1	26	212	3	9	21	74	230	50	131
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	25	168		28	234		10	103		250	197	
Percent Heavy Vehicles	2	2		2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.022	0.150		0.025	0.208		0.009	0.092		0.222	0.175	
Final Departure Headway, hd (s)	6.94	6.44		6.84	6.33		7.04	5.99		6.55	5.54	
Final Degree of Utilization, x	0.048	0.301		0.054	0.411		0.019	0.172		0.455	0.303	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	4.64	4.14		4.54	4.03		4.74	3.69		4.25	3.24	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	25	168		28	234		10	103		250	197	
Capacity	519	559		526	569		511	601		550	649	
95% Queue Length, Q_{95} (veh)	0.2	1.3		0.2	2.0		0.1	0.6		2.4	1.3	
Control Delay (s/veh)	10.0	11.9		9.9	13.4		9.9	9.9		14.6	10.6	
Level of Service, LOS	A	B		A	B		A	A		B	B	
Approach Delay (s/veh)	11.6			13.0			9.9			12.9		
Approach LOS	B			B			A			B		
Intersection Delay, s/veh | LOS	12.3						B					

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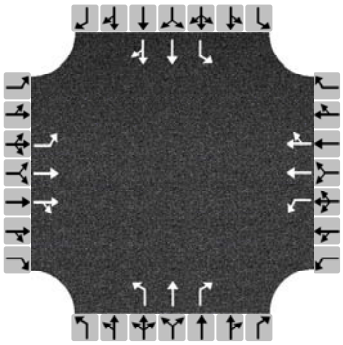
HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	MB	Intersection	Paseo & Ventana/Woodmont
Agency/Co.	BHI	Jurisdiction	
Date Performed	3/3/2021	East/West Street	Paseo del Norte
Analysis Year	2022	North/South Street	Ventana/Woodmont
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Build AM		
Project Description	Trails Tract 1		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	23	154	1	26	212	3	9	21	74	230	50	131
% Thrus in Shared Lane			50			50						50
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	TR	L	T	R	L	T	TR
Flow Rate, v (veh/h)	25	84	85	28	115	118	10	23	80	250	27	170
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.022	0.074	0.075	0.025	0.102	0.105	0.009	0.020	0.071	0.222	0.024	0.151
Final Departure Headway, hd (s)	7.39	6.89	6.88	7.24	6.74	6.72	7.56	7.06	6.36	6.83	6.33	5.74
Final Degree of Utilization, x	0.051	0.160	0.162	0.057	0.216	0.221	0.021	0.045	0.142	0.474	0.048	0.270
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, ts (s)	5.09	4.59	4.58	4.94	4.44	4.42	5.26	4.76	4.06	4.53	4.03	3.44

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	25	84	85	28	115	118	10	23	80	250	27	170
Capacity	487	523	523	497	534	536	476	510	566	527	569	627
95% Queue Length, Q_{95} (veh)	0.2	0.6	0.6	0.2	0.8	0.8	0.1	0.1	0.5	2.5	0.2	1.1
Control Delay (s/veh)	10.5	10.9	10.9	10.4	11.3	11.3	10.4	10.1	10.1	15.5	9.3	10.6
Level of Service, LOS	B	B	B	B	B	B	B	B	B	C	A	B
Approach Delay (s/veh)	10.8			11.2			10.1			13.3		
Approach LOS	B			B			B			B		
Intersection Delay, s/veh | LOS	11.9						B					

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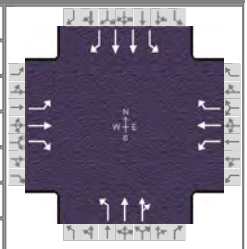
HCS7 Signalized Intersection Results Summary

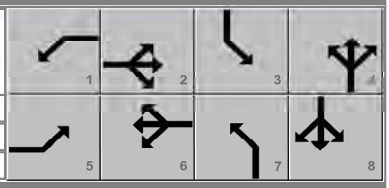
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	2/22/2021	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	BAM Rainbow_Paseo.xus		
Project Description	Build AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	38	315	127	90	131	24	28	187	230	104	320	30

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	1.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	3.2	15.9	4.9	7.1	3.1	15.7	6.1	9.9
Green Extension Time (g_e), s	0.0	2.1	0.1	2.4	0.0	0.8	0.1	1.4
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.04	0.00	0.00	0.00	0.90	0.00	0.07

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	41	342	138	98	142	26	30	203	250	113	348	33
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1585	1781	1781	1610
Queue Service Time (g_s), s	1.2	13.9	5.9	2.9	5.1	1.0	1.1	8.9	13.7	4.1	7.9	1.5
Cycle Queue Clearance Time (g_c), s	1.2	13.9	5.9	2.9	5.1	1.0	1.1	8.9	13.7	4.1	7.9	1.5
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	630	610	517	479	610	525	422	386	327	354	735	333
Volume-to-Capacity Ratio (*X*)	0.066	0.561	0.267	0.204	0.233	0.050	0.072	0.526	0.764	0.319	0.473	0.098
Back of Queue (*Q*), ft/ln (95 th percentile)	22.1	272.5	105.8	56	106.2	18	20.8	199.1	264.7	84.7	159.5	27.8
Back of Queue (*Q*), veh/ln (95 th percentile)	0.9	10.7	4.2	2.2	4.2	0.7	0.8	7.8	10.6	3.3	6.3	1.1
Queue Storage Ratio (*RQ*) (95 th percentile)	0.22	0.14	1.06	0.32	0.05	0.00	0.06	0.27	0.36	0.24	0.19	0.00
Uniform Delay (d_1), s/veh	13.9	25.6	22.9	15.6	22.6	21.2	20.8	32.5	34.4	22.8	32.1	29.6
Incremental Delay (d_2), s/veh	0.2	3.7	1.3	1.0	0.9	0.2	0.3	5.1	15.5	2.4	2.2	0.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	14.1	29.3	24.1	16.6	23.5	21.4	21.1	37.5	49.9	25.1	34.3	30.1
Level of Service (LOS)	B	C	C	B	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	26.7	C		20.8	C		42.9	D		31.9	C	
Intersection Delay, s/veh / LOS	31.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.35	A	0.93	A	0.89	A	0.89	A

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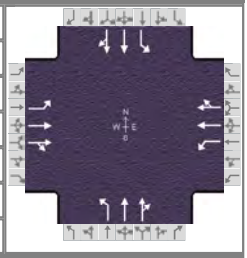
HCS7 Signalized Intersection Results Summary

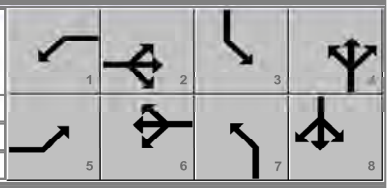
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	Mar 3, 2021	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Woodmont	File Name	BAM Rainbow_Woodmont.xus		
Project Description	Build AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	92	26	444	108	6	17	85	304	286	43	676	31

Signal Information			
Cycle, s	84.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	18.0	12.5	22.5	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.0	24.0	16.0	24.0	16.0	28.0	16.0	28.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.5	3.5	5.5
Max Allow Headway (*MAH*), s	2.6	5.3	2.6	5.3	2.6	5.1	2.6	5.1
Queue Clearance Time (g_s), s	5.2	20.0	5.8	2.8	4.7	17.0	3.3	18.1
Green Extension Time (g_e), s	0.1	0.0	0.1	3.1	0.0	3.5	0.0	3.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	1.00	0.00	0.11	0.00	0.97	0.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	100	28	483	117	7	18	92	330	311	47	387	381
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1841
Queue Service Time (g_s), s	3.2	1.0	18.0	3.8	0.2	0.8	2.7	13.2	15.0	1.3	16.1	16.1
Cycle Queue Clearance Time (g_c), s	3.2	1.0	18.0	3.8	0.2	0.8	2.7	13.2	15.0	1.3	16.1	16.1
Green Ratio (*g/C*)	0.36	0.21	0.21	0.36	0.21	0.21	0.42	0.27	0.27	0.42	0.27	0.27
Capacity (*c*), veh/h	602	401	340	351	401	340	388	501	425	402	501	493
Volume-to-Capacity Ratio (*X*)	0.166	0.071	1.421	0.335	0.016	0.054	0.238	0.660	0.732	0.116	0.773	0.773
Back of Queue (*Q*), ft/ln (95 th percentile)	61.3	21.7	1009.3	78.6	4.9	14.1	52.8	269.1	268.9	25.4	328.7	320.7
Back of Queue (*Q*), veh/ln (95 th percentile)	2.4	0.9	40.4	3.1	0.2	0.6	2.1	10.6	10.8	1.0	12.9	12.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.41	0.03	1.64	0.63	0.01	0.02	0.30	0.26	0.27	0.13	0.36	0.35
Uniform Delay (d_1), s/veh	18.1	26.3	33.0	20.2	26.0	26.2	17.3	27.3	28.0	16.5	28.4	28.4
Incremental Delay (d_2), s/veh	0.6	0.3	205.8	2.6	0.1	0.3	1.4	6.7	10.6	0.6	11.0	11.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	18.7	26.7	238.8	22.7	26.1	26.5	18.8	34.0	38.7	17.1	39.4	39.6
Level of Service (LOS)	B	C	F	C	C	C	B	C	D	B	D	D
Approach Delay, s/veh / LOS	193.0	F		23.4	C		34.1	C		38.2	D	
Intersection Delay, s/veh / LOS	77.0						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	0.99	A	0.61	A	1.09	A	1.16	A

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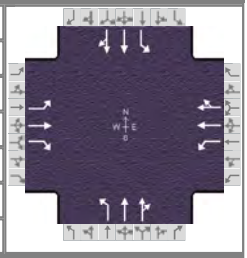
HCS7 Signalized Intersection Results Summary

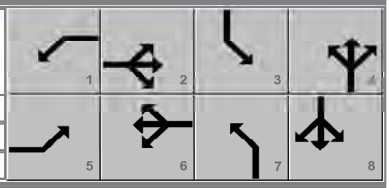
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	Mar 3, 2021	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Woodmont	File Name	BAM Rainbow_Woodmont Converted Right.xus		
Project Description	Build AM - Converted Right				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	92	26	444	108	6	17	85	304	286	43	676	31

Signal Information			
Cycle, s	84.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	18.0	12.5	22.5	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.0	24.0	16.0	24.0	16.0	28.0	16.0	28.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.5	3.5	5.5
Max Allow Headway (*MAH*), s	2.6	5.3	2.6	5.3	2.6	5.1	2.6	5.1
Queue Clearance Time (g_s), s	5.2	20.0	5.8	2.8	4.7	17.0	3.3	18.1
Green Extension Time (g_e), s	0.1	0.0	0.1	3.1	0.0	3.5	0.0	3.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	1.00	0.00	0.11	0.00	0.97	0.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	100	28	483	117	7	18	92	330	311	47	387	381
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1610	1781	1870	1585	1781	1870	1585	1781	1870	1841
Queue Service Time (g_s), s	3.2	1.0	18.0	3.8	0.2	0.8	2.7	13.2	15.0	1.3	16.1	16.1
Cycle Queue Clearance Time (g_c), s	3.2	1.0	18.0	3.8	0.2	0.8	2.7	13.2	15.0	1.3	16.1	16.1
Green Ratio (*g/C*)	0.36	0.21	0.21	0.36	0.21	0.21	0.42	0.27	0.27	0.42	0.27	0.27
Capacity (*c*), veh/h	602	401	345	597	401	340	388	501	425	402	501	493
Volume-to-Capacity Ratio (*X*)	0.166	0.071	1.399	0.197	0.016	0.054	0.238	0.660	0.732	0.116	0.773	0.773
Back of Queue (*Q*), ft/ln (95 th percentile)	61.3	21.7	986.3	72.8	4.9	14.1	52.8	269.1	268.9	25.4	328.7	320.7
Back of Queue (*Q*), veh/ln (95 th percentile)	2.4	0.9	39.5	2.9	0.2	0.6	2.1	10.6	10.8	1.0	12.9	12.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.41	0.03	1.58	0.58	0.01	0.02	0.30	0.26	0.27	0.13	0.36	0.35
Uniform Delay (d_1), s/veh	18.1	26.3	33.0	18.3	26.0	26.2	17.3	27.3	28.0	16.5	28.4	28.4
Incremental Delay (d_2), s/veh	0.6	0.3	196.2	0.7	0.1	0.3	1.4	6.7	10.6	0.6	11.0	11.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	18.7	26.7	229.2	19.0	26.1	26.5	18.8	34.0	38.7	17.1	39.4	39.6
Level of Service (LOS)	B	C	F	B	C	C	B	C	D	B	D	D
Approach Delay, s/veh / LOS	185.3	F		20.3	C		34.1	C		38.2	D	
Intersection Delay, s/veh / LOS	74.8						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.11	B	2.28	B
Bicycle LOS Score / LOS	1.50	A	0.61	A	1.09	A	1.16	A

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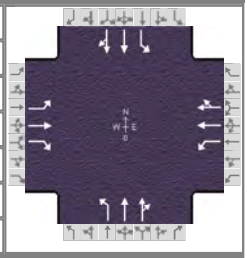
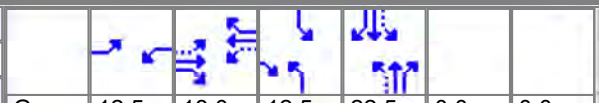
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	Mar 3, 2021	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Woodmont	File Name	BAM Rainbow_Woodmont Overlap and Converte…		
Project Description	Build AM - Overlap and Converted Right				

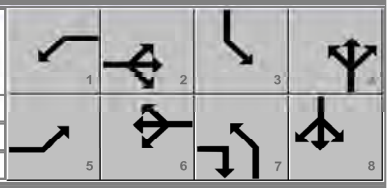


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	92	26	444	108	6	17	85	304	286	43	676	31

Signal Information			
Cycle, s	84.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	12.5	18.0	12.5	22.5	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.0	24.0	16.0	24.0	16.0	28.0	16.0	28.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.5	3.5	5.5
Max Allow Headway (*MAH*), s	2.6	5.3	2.6	5.3	2.6	5.1	2.6	5.1
Queue Clearance Time (g_s), s	5.2	20.0	5.8	2.8	4.7	17.0	3.3	18.1
Green Extension Time (g_e), s	0.1	0.0	0.1	3.1	0.0	3.5	0.0	3.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	1.00	0.00	0.11	0.00	0.97	0.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	100	28	483	117	7	18	92	330	311	47	387	381
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1610	1781	1870	1585	1781	1870	1585	1781	1870	1841
Queue Service Time (g_s), s	3.2	1.0	18.0	3.8	0.2	0.8	2.7	13.2	15.0	1.3	16.1	16.1
Cycle Queue Clearance Time (g_c), s	3.2	1.0	18.0	3.8	0.2	0.8	2.7	13.2	15.0	1.3	16.1	16.1
Green Ratio (*g/C*)	0.36	0.21	0.36	0.36	0.21	0.21	0.42	0.27	0.27	0.42	0.27	0.27
Capacity (*c*), veh/h	602	401	585	597	401	340	388	501	425	402	501	493
Volume-to-Capacity Ratio (*X*)	0.166	0.071	0.825	0.197	0.016	0.054	0.238	0.660	0.732	0.116	0.773	0.773
Back of Queue (*Q*), ft/ln (95 th percentile)	61.3	21.7	383.9	72.8	4.9	14.1	52.8	269.1	268.9	25.4	328.7	320.7
Back of Queue (*Q*), veh/ln (95 th percentile)	2.4	0.9	15.4	2.9	0.2	0.6	2.1	10.6	10.8	1.0	12.9	12.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.41	0.03	0.61	0.58	0.01	0.02	0.30	0.26	0.27	0.13	0.36	0.35
Uniform Delay (d_1), s/veh	18.1	26.3	24.3	18.3	26.0	26.2	17.3	27.3	28.0	16.5	28.4	28.4
Incremental Delay (d_2), s/veh	0.6	0.3	12.6	0.7	0.1	0.3	1.4	6.7	10.6	0.6	11.0	11.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	18.7	26.7	36.9	19.0	26.1	26.5	18.8	34.0	38.7	17.1	39.4	39.6
Level of Service (LOS)	B	C	D	B	C	C	B	C	D	B	D	D
Approach Delay, s/veh / LOS	33.4	C		20.3	C		34.1	C		38.2	D	
Intersection Delay, s/veh / LOS	34.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.11	B	2.28	B
Bicycle LOS Score / LOS	1.50	A	0.61	A	1.09	A	1.16	A

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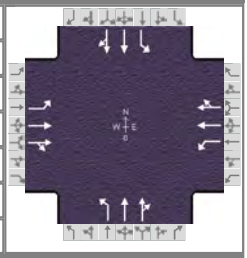
HCS7 Signalized Intersection Results Summary

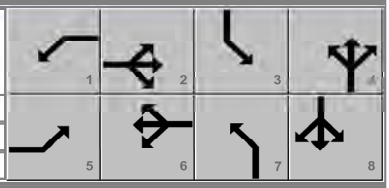
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	Mar 3, 2021	Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Woodmont	File Name	BAM Rainbow_Woodmont RTOR.xus		
Project Description	Build AM - RTOR				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	92	26	444	108	6	17	85	304	286	43	676	31

Signal Information			
Cycle, s	84.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	18.0	12.5	22.5	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.0	24.0	16.0	24.0	16.0	28.0	16.0	28.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.5	3.5	5.5
Max Allow Headway (*MAH*), s	2.6	5.3	2.6	5.3	2.6	5.1	2.6	5.1
Queue Clearance Time (g_s), s	5.2	15.3	5.8	2.8	4.7	17.0	3.3	18.1
Green Extension Time (g_e), s	0.1	0.5	0.1	1.6	0.0	3.5	0.0	3.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	1.00	0.00	0.03	0.00	0.97	0.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	100	28	265	117	7	18	92	330	311	47	387	381
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1841
Queue Service Time (g_s), s	3.2	1.0	13.3	3.8	0.2	0.8	2.7	13.2	15.0	1.3	16.1	16.1
Cycle Queue Clearance Time (g_c), s	3.2	1.0	13.3	3.8	0.2	0.8	2.7	13.2	15.0	1.3	16.1	16.1
Green Ratio (*g/C*)	0.36	0.21	0.21	0.36	0.21	0.21	0.42	0.27	0.27	0.42	0.27	0.27
Capacity (*c*), veh/h	602	401	340	386	401	340	388	501	425	402	501	493
Volume-to-Capacity Ratio (*X*)	0.166	0.071	0.781	0.304	0.016	0.054	0.238	0.660	0.732	0.116	0.773	0.773
Back of Queue (*Q*), ft/ln (95 th percentile)	61.3	21.7	263	77.2	4.9	14.1	52.8	269.1	268.9	25.4	328.7	320.7
Back of Queue (*Q*), veh/ln (95 th percentile)	2.4	0.9	10.5	3.0	0.2	0.6	2.1	10.6	10.8	1.0	12.9	12.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.41	0.03	0.43	0.62	0.01	0.02	0.30	0.26	0.27	0.13	0.36	0.35
Uniform Delay (d_1), s/veh	18.1	26.3	31.1	19.8	26.0	26.2	17.3	27.3	28.0	16.5	28.4	28.4
Incremental Delay (d_2), s/veh	0.6	0.3	16.2	2.0	0.1	0.3	1.4	6.7	10.6	0.6	11.0	11.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	18.7	26.7	47.4	21.8	26.1	26.5	18.8	34.0	38.7	17.1	39.4	39.6
Level of Service (LOS)	B	C	D	C	C	C	B	C	D	B	D	D
Approach Delay, s/veh / LOS	38.6	D		22.6	C		34.1	C		38.2	D	
Intersection Delay, s/veh / LOS	35.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.28	B	2.57	C
Bicycle LOS Score / LOS	0.81	A	0.61	A	1.09	A	1.16	A

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HCS7 Two-Way Stop-Control Report

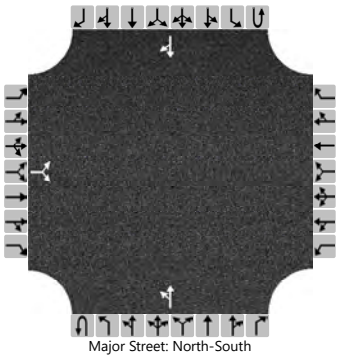
General Information

Analyst	MB
Agency/Co.	BHI
Date Performed	3/8/2021
Analysis Year	2022
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	Trails Tract 1 - 2 Lane

Site Information

Intersection	Woodmont & Site Entrance
Jurisdiction	
East/West Street	Site Entrance
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		37		9						3	82				192	13
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			50							3						
Capacity, c (veh/h)			704							1346						
v/c Ratio			0.07							0.00						
95% Queue Length, Q_{95} (veh)			0.2							0.0						
Control Delay (s/veh)			10.5							7.7						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.5								0.3						
Approach LOS		B														

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HCS7 Two-Way Stop-Control Report

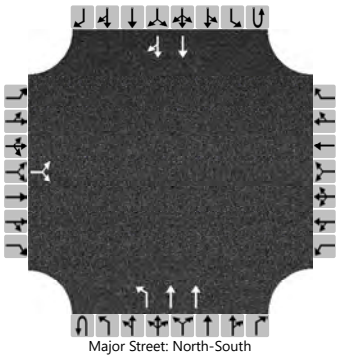
General Information

Analyst	MB
Agency/Co.	BHI
Date Performed	3/8/2021
Analysis Year	2022
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	Trails Tract 1 - 4 Lane

Site Information

Intersection	Woodmont & Site Entrance
Jurisdiction	
East/West Street	Site Entrance
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	T				T	TR
Volume (veh/h)		37		9					0	3	82				192	13
Percent Heavy Vehicles (%)		2		2					3	2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		6.84		6.94						4.14						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			50							3						
Capacity, c (veh/h)			733							1343						
v/c Ratio			0.07							0.00						
95% Queue Length, Q_{95} (veh)			0.2							0.0						
Control Delay (s/veh)			10.3							7.7						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.3								0.3						
Approach LOS		B														

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HCS7 Two-Way Stop-Control Report

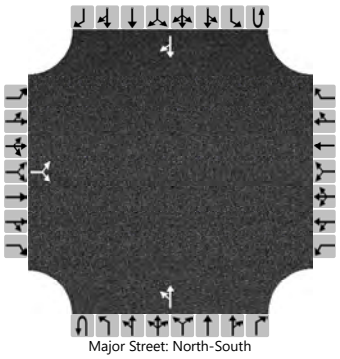
General Information

Analyst	MB
Agency/Co.	BHI
Date Performed	3/8/2021
Analysis Year	2022
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	Trails Tract 1 - 2 Lane

Site Information

Intersection	Woodmont & Girona
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		19		17						6	66				194	7
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			39							7						
Capacity, c (veh/h)			747							1351						
v/c Ratio			0.05							0.00						
95% Queue Length, Q_{95} (veh)			0.2							0.0						
Control Delay (s/veh)			10.1							7.7						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.1								0.7						
Approach LOS		B														

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HCS7 Two-Way Stop-Control Report

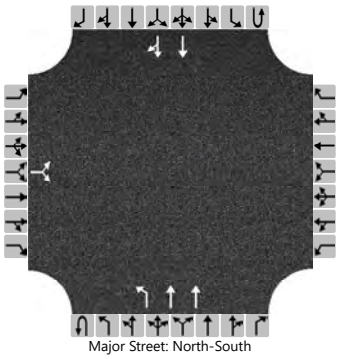
General Information

Analyst	MB
Agency/Co.	BHI
Date Performed	3/8/2021
Analysis Year	2022
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	Trails Tract 1 - 4 Lane

Site Information

Intersection	Woodmont & Girona
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	T				T	TR
Volume (veh/h)		19		17					0	6	66				194	7
Percent Heavy Vehicles (%)		2		2					3	2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		6.84		6.94						4.14						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			39							7						
Capacity, c (veh/h)			790							1348						
v/c Ratio			0.05							0.00						
95% Queue Length, Q_{95} (veh)			0.2							0.0						
Control Delay (s/veh)			9.8							7.7						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)		9.8								0.6						
Approach LOS		A														

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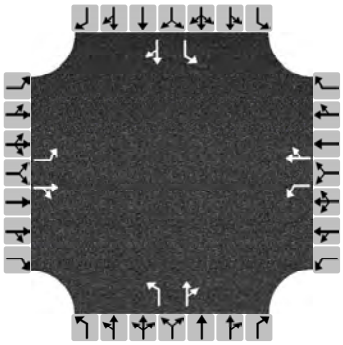
HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	MB	Intersection	Paseo & Ventana/Woodmont
Agency/Co.	BHI	Jurisdiction	
Date Performed	3/3/2021	East/West Street	Paseo del Norte
Analysis Year	2022	North/South Street	Ventana/Woodmont
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Build PM		
Project Description	Trails Tract 1 - 2 Lane		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	100	178	3	79	104	247	10	157	49	152	66	17
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		L	TR		L	TR		L	TR	
Flow Rate, v (veh/h)	109	197		86	382		11	224		165	90	
Percent Heavy Vehicles	2	2		2	2		2	2		2	2	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.097	0.175		0.076	0.339		0.010	0.199		0.147	0.080	
Final Departure Headway, hd (s)	7.38	6.87		7.16	6.17		7.68	7.01		7.66	7.02	
Final Degree of Utilization, x	0.223	0.375		0.171	0.654		0.023	0.436		0.352	0.176	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, ts (s)	5.08	4.57		4.86	3.87		5.38	4.71		5.36	4.72	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	109	197		86	382		11	224		165	90	
Capacity	488	524		503	584		469	514		470	513	
95% Queue Length, Q_{95} (veh)	0.8	1.7		0.6	4.8		0.1	2.2		1.6	0.6	
Control Delay (s/veh)	12.2	13.6		11.3	19.7		10.6	15.0		14.5	11.2	
Level of Service, LOS	B	B		B	C		B	C		B	B	
Approach Delay (s/veh)	13.1			18.2			14.8			13.3		
Approach LOS	B			C			B			B		
Intersection Delay, s/veh | LOS	15.3						C					

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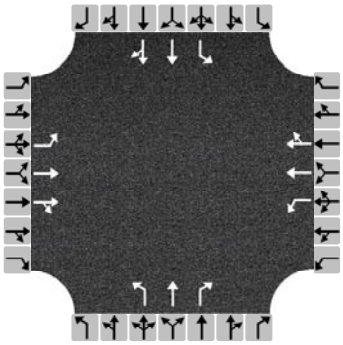
HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	MB	Intersection	Paseo & Ventana/Woodmont
Agency/Co.	BHI	Jurisdiction	
Date Performed	3/3/2021	East/West Street	Paseo del Norte
Analysis Year	2022	North/South Street	Ventana/Woodmont
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Build PM		
Project Description	Trails Tract 1		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	100	178	3	79	104	247	10	157	49	152	66	17
% Thrus in Shared Lane			50			50						50
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T	TR	L	T	TR	L	T	R	L	T	TR
Flow Rate, v (veh/h)	109	97	100	86	57	325	11	171	53	165	36	54
Percent Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.097	0.086	0.089	0.076	0.050	0.289	0.010	0.152	0.047	0.147	0.032	0.048
Final Departure Headway, hd (s)	8.02	7.52	7.50	7.71	7.21	6.63	8.27	7.77	7.07	8.19	7.69	7.45
Final Degree of Utilization, x	0.242	0.202	0.208	0.184	0.113	0.599	0.025	0.368	0.105	0.376	0.077	0.112
Move-Up Time, m (s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Service Time, ts (s)	5.72	5.22	5.20	5.41	4.91	4.33	5.97	5.47	4.77	5.89	5.39	5.15

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	109	97	100	86	57	325	11	171	53	165	36	54
Capacity	449	479	480	467	499	543	435	463	509	440	468	483
95% Queue Length, Q_{95} (veh)	0.9	0.7	0.8	0.7	0.4	3.9	0.1	1.7	0.3	1.7	0.2	0.4
Control Delay (s/veh)	13.3	12.1	12.2	12.1	10.8	18.7	11.2	14.9	10.6	15.7	11.0	11.1
Level of Service, LOS	B	B	B	B	B	C	B	B	B	C	B	B
Approach Delay (s/veh)	12.5			16.6			13.8			14.1		
Approach LOS	B			C			B			B		
Intersection Delay, s/veh | LOS	14.6						B					

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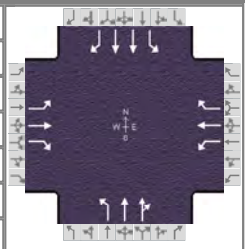
HCS7 Signalized Intersection Results Summary

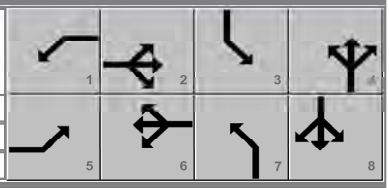
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	2/22/2021	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Paseo del…	File Name	BPM Rainbow_Paseo.xus		
Project Description	Build PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	41	265	8	165	305	177	18	419	124	89	87	35

Signal Information			
Cycle, s	92.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	30.0	12.5	19.0	0.0	0.0	
Yellow	3.0	4.0	3.0	3.5	0.0	0.0	
Red	0.5	2.0	0.5	1.5	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	36.0	16.0	36.0	16.0	24.0	16.0	24.0
Change Period, ($Y+R_c$), s	3.5	6.0	3.5	6.0	3.5	5.0	3.5	5.0
Max Allow Headway (*MAH*), s	2.6	4.1	2.6	4.1	2.6	3.1	2.6	3.1
Queue Clearance Time (g_s), s	3.3	13.3	7.5	15.4	2.7	16.5	5.5	4.0
Green Extension Time (g_e), s	0.0	2.9	0.1	2.7	0.0	0.5	0.0	1.3
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.04	0.05	0.07	0.00	1.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	45	288	9	179	332	192	20	305	285	97	95	38
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1610	1781	1870	1724	1781	1781	1610
Queue Service Time (g_s), s	1.3	11.3	0.3	5.5	13.4	8.4	0.7	14.2	14.5	3.5	2.0	1.8
Cycle Queue Clearance Time (g_c), s	1.3	11.3	0.3	5.5	13.4	8.4	0.7	14.2	14.5	3.5	2.0	1.8
Green Ratio (*g/C*)	0.46	0.33	0.33	0.46	0.33	0.33	0.34	0.21	0.21	0.34	0.21	0.21
Capacity (*c*), veh/h	487	610	517	519	610	525	533	386	356	343	735	333
Volume-to-Capacity Ratio (*X*)	0.091	0.472	0.017	0.346	0.544	0.366	0.037	0.791	0.800	0.282	0.129	0.114
Back of Queue (*Q*), ft/ln (95 th percentile)	24.4	228.6	6	108.6	263.5	151.4	13	314.8	298.5	71.7	39.2	32.6
Back of Queue (*Q*), veh/ln (95 th percentile)	1.0	9.0	0.2	4.3	10.4	6.1	0.5	12.4	11.9	2.8	1.5	1.3
Queue Storage Ratio (*RQ*) (95 th percentile)	0.24	0.11	0.06	0.62	0.13	0.00	0.04	0.42	0.40	0.20	0.05	0.00
Uniform Delay (d_1), s/veh	15.0	24.7	21.0	16.0	25.4	23.7	20.2	34.6	34.7	22.7	29.8	29.7
Incremental Delay (d_2), s/veh	0.4	2.6	0.1	1.8	3.5	2.0	0.1	15.2	17.0	2.0	0.4	0.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	15.4	27.3	21.1	17.8	28.8	25.7	20.3	49.8	51.7	24.7	30.1	30.4
Level of Service (LOS)	B	C	C	B	C	C	C	D	D	C	C	C
Approach Delay, s/veh / LOS	25.6	C		25.2	C		49.7	D		27.9	C	
Intersection Delay, s/veh / LOS	33.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.12	B	2.12	B
Bicycle LOS Score / LOS	1.05	A	1.65	B	0.99	A	0.68	A

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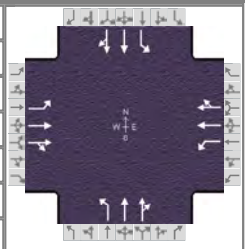
HCS7 Signalized Intersection Results Summary

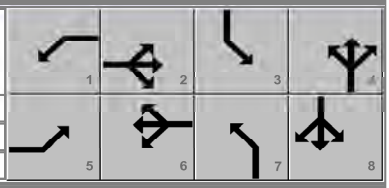
General Information				Intersection Information	
Agency	BHI			Duration, h	0.250
Analyst	MB	Analysis Date	Mar 3, 2021	Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.92
Urban Street	Rainbow	Analysis Year	2022	Analysis Period	1> 7:00
Intersection	Rainbow and Woodmont	File Name	BPM Rainbow_Woodmont.xus		
Project Description	Build PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	105	18	174	29	24	60	359	421	82	49	266	114

Signal Information			
Cycle, s	84.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	18.0	12.5	22.5	0.0	0.0
Yellow	3.0	4.0	3.0	3.5	0.0	0.0
Red	0.5	2.0	0.5	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.0	24.0	16.0	24.0	16.0	28.0	16.0	28.0
Change Period, (*Y+R c*), s	3.5	6.0	3.5	6.0	3.5	5.5	3.5	5.5
Max Allow Headway (*MAH*), s	2.6	5.3	2.6	5.3	2.6	5.0	2.6	5.0
Queue Clearance Time (*g s*), s	5.7	10.9	3.0	4.8	14.5	13.0	3.5	10.3
Green Extension Time (*g e*), s	0.1	0.9	0.0	1.4	0.0	3.8	0.0	4.4
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.52	0.00	0.05	1.00	0.54	0.00	0.38

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	114	20	189	32	26	65	390	280	267	53	214	199
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1764	1781	1870	1682
Queue Service Time (*g s*), s	3.7	0.7	8.9	1.0	0.9	2.8	12.5	10.8	11.0	1.5	7.9	8.3
Cycle Queue Clearance Time (*g c*), s	3.7	0.7	8.9	1.0	0.9	2.8	12.5	10.8	11.0	1.5	7.9	8.3
Green Ratio (*g/C*)	0.36	0.21	0.21	0.36	0.21	0.21	0.42	0.27	0.27	0.42	0.27	0.27
Capacity (*c*), veh/h	555	401	340	449	401	340	493	501	473	448	501	451
Volume-to-Capacity Ratio (*X*)	0.205	0.049	0.557	0.070	0.065	0.192	0.792	0.559	0.565	0.119	0.427	0.442
Back of Queue (*Q*), ft/ln (95 th percentile)	71.1	14.9	174.4	18.9	20	51.9	281.3	225.1	214.9	28.8	168.5	157.2
Back of Queue (*Q*), veh/ln (95 th percentile)	2.8	0.6	7.0	0.7	0.8	2.1	11.1	8.9	8.6	1.1	6.6	6.3
Queue Storage Ratio (*RQ*) (95 th percentile)	0.47	0.02	0.28	0.15	0.02	0.07	1.61	0.22	0.21	0.14	0.18	0.17
Uniform Delay (*d 1*), s/veh	18.4	26.2	29.4	18.1	26.3	27.0	20.3	26.5	26.5	15.8	25.4	25.5
Incremental Delay (*d 2*), s/veh	0.8	0.2	6.4	0.3	0.3	1.3	12.3	4.4	4.8	0.5	2.7	3.1
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	19.2	26.4	35.9	18.4	26.6	28.3	32.6	30.9	31.3	16.3	28.1	28.7
Level of Service (LOS)	B	C	D	B	C	C	C	C	C	B	C	C
Approach Delay, s/veh / LOS	29.4	C		25.4	C		31.7	C		27.0	C	
Intersection Delay, s/veh / LOS	29.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	0.75	A	0.59	A	1.26	A	0.87	A

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HCS7 Two-Way Stop-Control Report

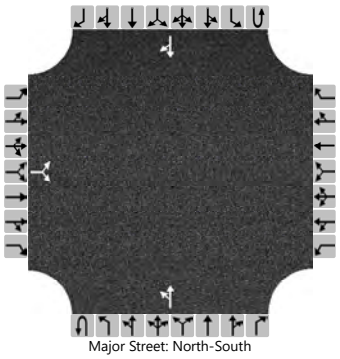
General Information

Analyst	MB
Agency/Co.	BHI
Date Performed	3/8/2021
Analysis Year	2022
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	Trails Tract 1 - 2 Lane

Site Information

Intersection	Woodmont & Site Entrance
Jurisdiction	
East/West Street	Site Entrance
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		25		6						9	200				124	39
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			34							10						
Capacity, c (veh/h)			646							1399						
v/c Ratio			0.05							0.01						
95% Queue Length, Q_{95} (veh)			0.2							0.0						
Control Delay (s/veh)			10.9							7.6						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.9								0.4						
Approach LOS		B														

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HCS7 Two-Way Stop-Control Report

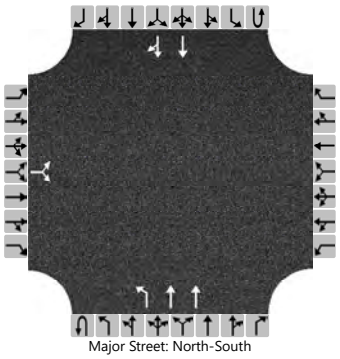
General Information

Analyst	MB
Agency/Co.	BHI
Date Performed	3/8/2021
Analysis Year	2022
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	Trails Tract 1 - 4 Lane

Site Information

Intersection	Woodmont & Site Entrance
Jurisdiction	
East/West Street	Site Entrance
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	T				T	TR
Volume (veh/h)		25		6					0	9	200				124	39
Percent Heavy Vehicles (%)		2		2					3	2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		6.84		6.94						4.14						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			34							10						
Capacity, c (veh/h)			718							1396						
v/c Ratio			0.05							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			10.3							7.6						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.3								0.3						
Approach LOS		B														

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HCS7 Two-Way Stop-Control Report

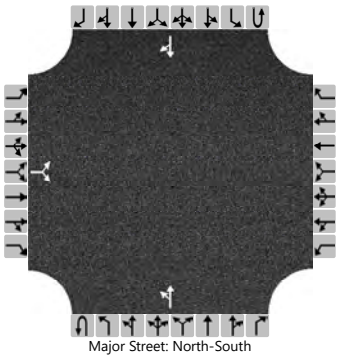
General Information

Analyst	MB
Agency/Co.	BHI
Date Performed	3/8/2021
Analysis Year	2022
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	Trails Tract 1 - 2 Lane

Site Information

Intersection	Woodmont & Girona
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		13		12						18	197				110	20
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			27							20						
Capacity, c (veh/h)			727							1442						
v/c Ratio			0.04							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			10.1							7.5						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.1								0.7						
Approach LOS		B														

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HCS7 Two-Way Stop-Control Report

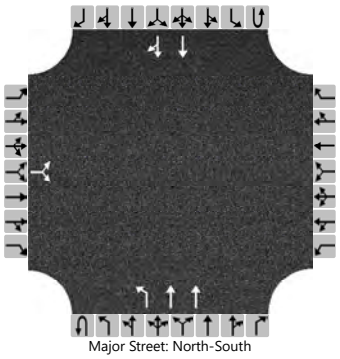
General Information

Analyst	MB
Agency/Co.	BHI
Date Performed	3/8/2021
Analysis Year	2022
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	Trails Tract 1 - 4 Lane

Site Information

Intersection	Woodmont & Girona
Jurisdiction	
East/West Street	Girona
North/South Street	Woodmont
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	T				T	TR
Volume (veh/h)		13		12					0	18	197				110	20
Percent Heavy Vehicles (%)		2		2					3	2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		6.84		6.94						4.14						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			27							20						
Capacity, c (veh/h)			797							1439						
v/c Ratio			0.03							0.01						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			9.7							7.5						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)		9.7								0.6						
Approach LOS		A														

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