



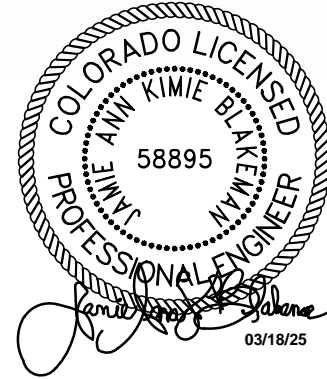
To: Samantha Villegas
Atwell

From: Jamie Blakeman, PE, PTOE

Job Number: 24.5743

RE: Black Rock Coffee Parker Road & Stroh Road
Traffic Impact Statement

Date: March 18, 2025



INTRODUCTION

Lōkahi, LLC (Lōkahi) has prepared a Traffic Impact Statement for the proposed Black Rock Coffee located on the east side of Parker Road, approximately 200 feet south of Stroh Road (curb to property line) in Parker, Colorado. See **Figure 1** for the vicinity map.

The proposed Black Rock Coffee is a 1,460 square foot (SF) drive-through coffee shop with approximately 210 feet of vehicle queuing. See **Attachment A** and **Figure 2** for the site plan.



Figure 1 - Vicinity Map

The proposed coffee shop land use is an allowed use within the Parker Pointe commercial/retail development, a 14 acre development on the SEC of Parker and Stroh Roads. A Master Transportation Impact Study for Parker Pointe was completed on August 1, 2024 and is provided in **Attachment B**.





The objective of this Traffic Impact Statement is to analyze the proposed development's traffic-related impacts on the adjacent roadway network and evaluate the on-site circulation and vehicle stacking.

EXISTING CONDITIONS

The proposed development is located on 0.60 acres of state parcel number 2349-031-04-021. According to the *Zoning Map Town of Parker, Colorado*, updated August 2020, provided by the Town of Parker, Colorado, the site is zoned for Modified Commercial. The site is currently an undeveloped lot. It is bordered to the north and south by vacant parcels of land, Declan Drive to the east, and Parker Road to the west. See **Attachment C** for the Douglas County Assessor's information.

PARKER ROAD is a north-south roadway that is part of Colorado State Highway 83 and generally provides three (3) lanes in each direction of travel separated by a landscaped median. The *Town of Parker Traffic Counts* map dated Spring 2022, reports that Parker Road had an ADT (Annual Daily Traffic) of 38,000 vpd (vehicles per day) south of Stroh Road. The *Colorado Functional Classification Map 2022* reports that Parker Road is classified as a principal arterial. There is a posted speed limit of 55 miles per hour (mph).

STROH ROAD is an east-west roadway that provides one (1) lane in each direction of travel, east of Parker Road and two (2) lanes in each direction of travel west of Parker Road. The *Town of Parker Traffic Counts* map reports Stroh Road had an ADT of 11,000 vpd west of Parker Road. Per the *Parker Pointe Master Transportation Impact Study*, Stroh Road has an ADT of 2,000 vpd east of Parker Road. The *Parker 2035 Master Plan* reports that Stroh Road is classified as a major collector and as an arterial, east and west of Parker Road, respectively. There is a posted speed limit of 30 mph and 40 mph, east and west of Parker Road, respectively.

DECLAN DRIVE is a north-south private access drive that provides access from Stroh Road through the Parker Pointe site.



PROPOSED DEVELOPMENT

The proposed development is located on the east side of Parker Road, approximately 200 feet south of Stroh Road (curb to property line) in Parker, Colorado. It includes a 1,460 SF coffee shop with a drive-through aisle. The drive-through aisle has two (2) lanes that merge into one (1) lane prior to the menu board. Approximately 210 feet of vehicle stacking will be provided on-site, which is anticipated to accommodate approximately ten (10) vehicles in the queue. See **Figure 2** for the site plan.

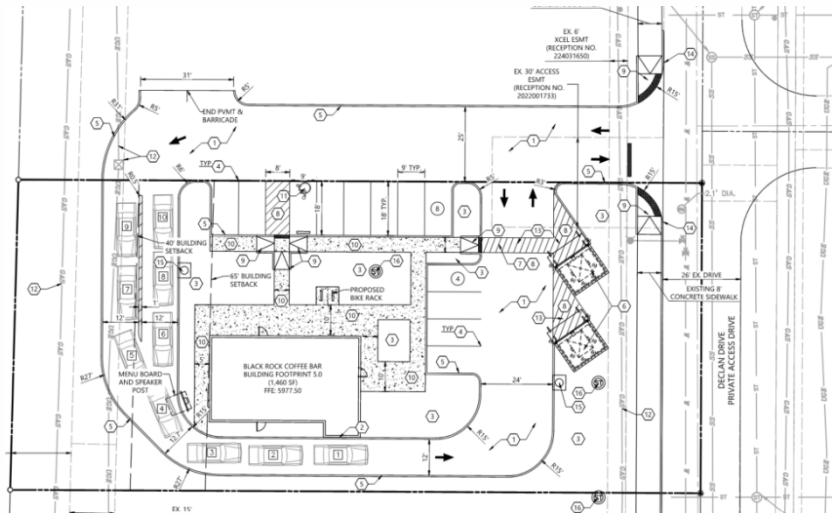


Figure 2 – Site Plan

There will be one (1) access point to the proposed development via Delcan Drive, located approximately 220’ south of Stroh Road. This access will be a full access allowing all movements into and out of the site.

PREVIOUS STUDIES

THE MASTER IMPACT STUDY

A master traffic impact study, dated August 21, 2024, and entitled *Parker Pointe Master Transportation Impact Study* (“Master Study”), was completed by Aldrige Transportation Consultants, LLC and approved by the Town of Parker. The Master Study is the traffic impact study of the entire 14-acre Parker Pointe mixed-use development.

The Master Study included the following land uses:

- **Coffee/Donut Shop w/ Drive Thru** 2,000 square feet
- **Medical Office** 30,000 square feet
- **Gas Station w/ Convenience Store** 8 fueling positions
- **Bank** 5,000 square feet
- **Day Care** 5,000 square feet
- **Quick Lube Vehicle Service** 2 service positions
- **Fast-Food** 8,800 square feet
- **Carwash** 1 tunnel





The trip generation methodology used in the Master Study was based on the *Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition*.

See **Table 1** below for the trip generation of the Coffee/Donut Shop w/ Drive-Thru as reported in the Master Study.

Table 1 – Trip Generation – As Reported in the Master Study

Land Use	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour		
			Total	Total	In	Out	Total	In	Out
Coffee/Donut Shop with Drive-Through Window	2	1000 SF GFA	1,067	172	88	84	78	39	39
Total Trips			1,067	172	88	84	78	39	39

The trip generation for the coffee/donut shop land use shown in the Master Study resulted in 1,067 weekday trips, with 172 occurring during the AM peak hour and 78 occurring during the PM peak hour. This is consistent with the trip generation rates for the ITE Code 937 – Coffee/Donut Shop with Drive-Through Window.

The Master Study calculated the trips generated by the proposed Coffee/Donut Shop with Drive-Through Window correctly, however it listed an incorrect ITE Code 945 – Convenience Store/Gas Station (instead of ITE Code 937).

TRIP GENERATION

The trip generation for the proposed development was calculated utilizing the Institute of Transportation Engineers (ITE) publication entitled *Trip Generation, 11th Edition*. The ITE rates are based on studies that measured the trip generation characteristics for various types of land uses. The rates are expressed in terms of trips per unit of land use type. This publication is the standard for the transportation engineering profession.

ITE Code 937—Coffee/Donut Shop with Drive-Through Window was used to calculate the proposed Black Rock Coffee’s trip generation.

PASS-BY TRIPS

Pass-by trips are intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from the existing traffic passing the site on an adjacent street or roadway that offers direct access to the generator. These trips are not considered to add new traffic to the adjacent street network and may be reduced from the total external trips generated by the proposed development. Pass-by rates are based on the Trip Generation Manual, 11th Edition data.





Data provided by the ITE supports that 94% of the site trips for a coffee/donut shop are pass-by trips, with an AM peak hour pass-by rate of 90% and a PM peak hour pass-by rate of 98%, see **Attachment D**.

Per request from the Town of Parker, daily pass-by rates were determined based on the Town of Parker Roadway Design and Construction Criteria Manual Section 5.6.3.1, which states the pass-by rates shall not exceed 15%.

The total trip generation calculations are shown in **Table 2**. See **Attachment E** for detailed trip generation calculations.

Table 2 – Trip Generation (Proposed Black Rock Coffee)

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Coffee/Donut Shop with Drive-Through Window	937	1.460	1000 SF GFA	779	125	64	61	57	28	29
Pass-By Trips				117	19	10	9	8	4	4
Total New Trips				662	106	54	52	49	24	25

The proposed development is anticipated to generate 779 weekday daily trips, with 125 vph occurring during the AM peak hour and 57 vph during the PM peak hour.

The proposed Black Rock Coffee is expected to add 662 new daily trips, with 106 vph occurring during the AM peak hour and 49 vph during the PM peak hour.

TRIP GENERATION COMPARISON – PREVIOUS (MASTER) STUDY

As previously mentioned, a master traffic impact study was conducted for the site in 2024. The anticipated trip generation of the proposed development and the land use in the Master Plan have been compared, shown in **Table 3** below.

Table 3 – Trip Generation – Proposed Development vs. Master Study Development

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Coffee/Donut Shop with Drive-Through Window	937	1.46	1000 SF GFA	779	125	64	61	57	28	29
Pass-By Trips Proposed Development				117	19	10	9	8	4	4
Total New Trips Proposed Development				662	106	54	52	49	24	25
Coffee/Donut Shop with Drive-Through Window	937	2	1000 SF GFA	1,067	172	88	84	78	39	39
Total Trips Master Plan				1,067	172	88	84	78	39	39
Difference				-405	-66	-34	-32	-29	-15	-14





Compared to the previous proposed development included in the Master Study, this proposed development will generate 405 fewer weekday trips with 66 fewer AM peak hour trips and 29 fewer PM peak hour trips. This reduction is due to the reduced square footage of the proposed land use.

ON-SITE CIRCULATION AND QUEUE ANALYSIS

Vehicles will enter the site and circulate in a counterclockwise direction. The drive-through will provide two (2) lanes that merge into one (1) lane prior to the menu board.

Approximately 210 feet will be provided for vehicle queuing, which is anticipated to accommodate ten (10) vehicles in the queue. Additionally, approximately 195 feet of queue is available along the drive isle as shown (not included in 10 vehicle queuing capacity). See **Figure 3**.

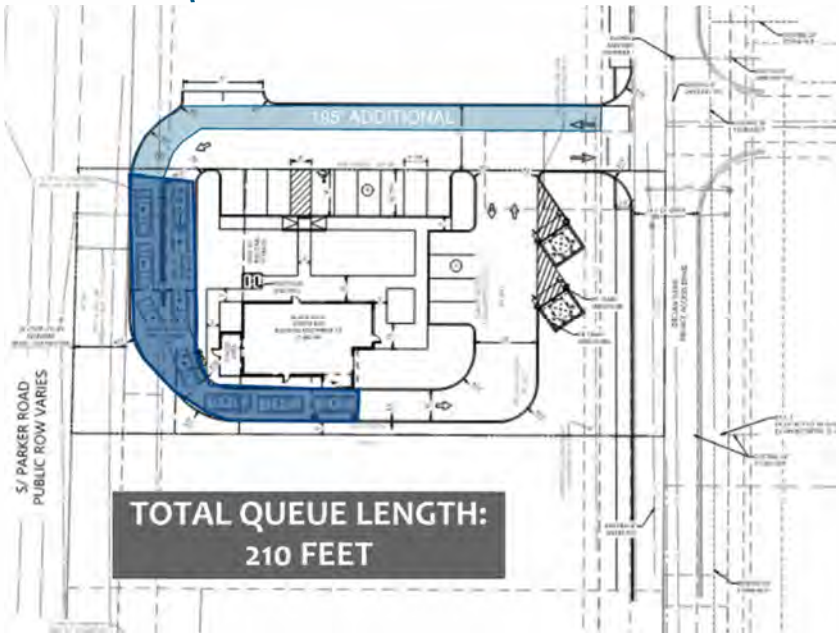


Figure 3 – On Site Queuing

Queue Data

On-site queue data was collected at an existing Black Rock Coffee located at 7451 W Glendale Avenue in Glendale, Arizona on Wednesday, July 10, 2024 and Saturday, July 13, 2024, in one-minute intervals during the peak times in an effort to capture the maximum queue demand. The peak time on Wednesday was from 7:00 to 9:00 am and peak time on Saturday was from 9:00 to 11:00 am. The data is provided in **Attachment F**.

The average number of vehicles in queue was six (6) vehicles, and the maximum number was 15 vehicles, which occurred for a three-minute period during the six (6) hours of observed times. Based on the collected queue data, the proposed on-site storage provides sufficient capacity to accommodate queued vehicles 99% of the time.



SUMMARY

The proposed Black Rock Coffee is a 1,460 SF drive-through coffee shop with approximately 210 feet of vehicle queuing space, accommodating 10 vehicles.

The proposed development is expected to generate 662 new daily trips, with 106 vph occurring during the AM peak hour and 49 vph during the PM peak hour.

Compared to the land use shown in the Master Study, the proposed development will generate 405 fewer weekday trips with 66 fewer AM peak hour trips and 29 fewer PM peak hour trips.

Based on the collected queue data, the proposed on-site storage provides sufficient capacity to accommodate the anticipated queued vehicles.

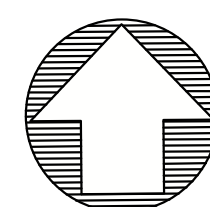
Traffic mitigation measures for the overall Parke Pointe site are outlined in the Master Study.

The proposed Black Rock Coffee Bar development is anticipated to result in minimal traffic impacts to the existing roadway network, and the drive-through provides sufficient vehicle queue lane storage length.



ATTACHMENT A – PROPOSED SITE PLAN



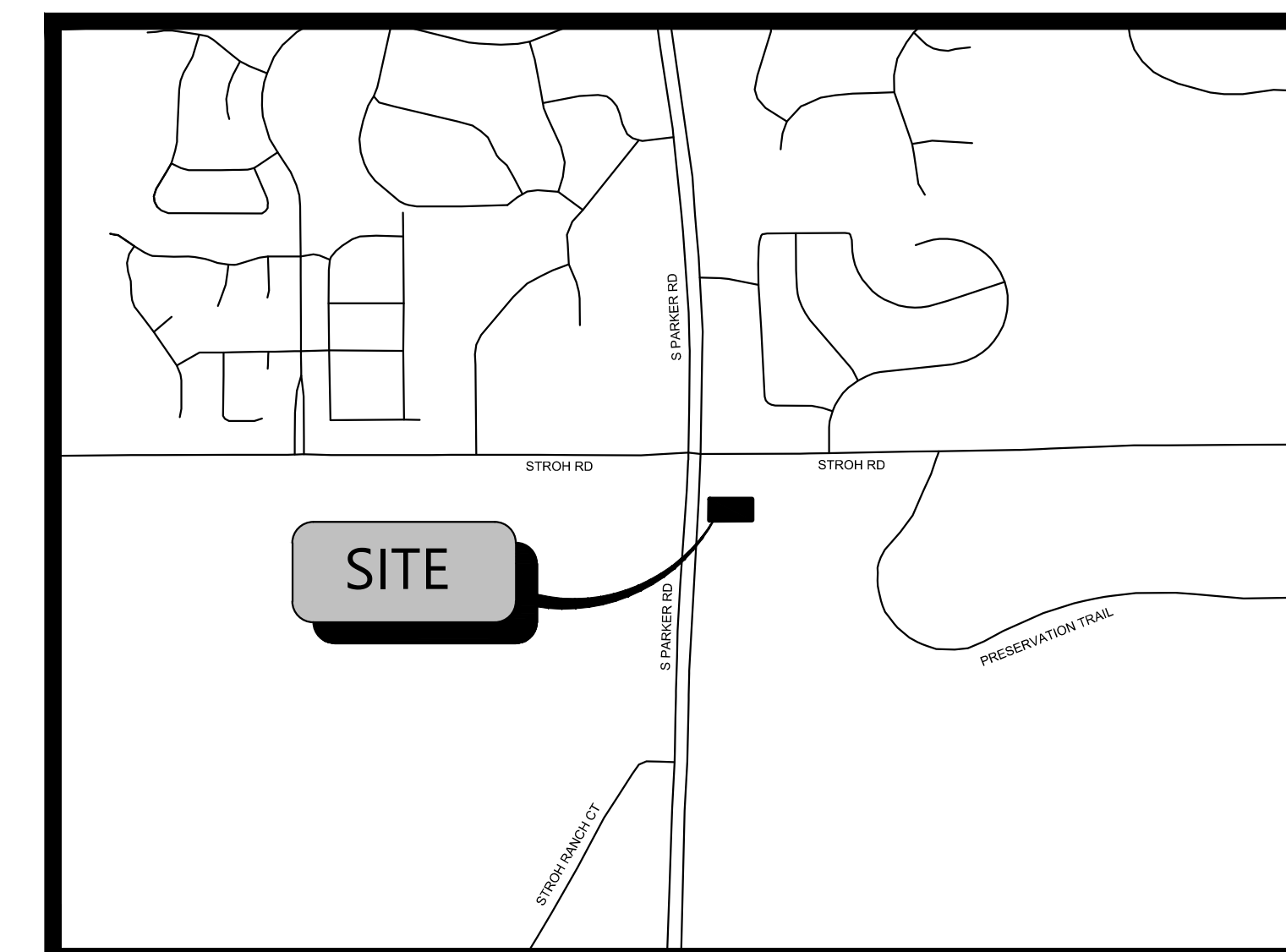


Know what's below. Call before you dig.
 THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE INCURRED BY THE CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
 CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE HELD RESPONSIBLE FOR ANY INJURY OR DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE WORK OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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ATWELL
 866.850.4200 www.atwell-group.com
 9001 AIRPORT FREEWAY, SUITE 660
 NORTH RICHLAND HILLS, TX 76180
 972.356.9860



VICINITY MAP
 N.T.S.

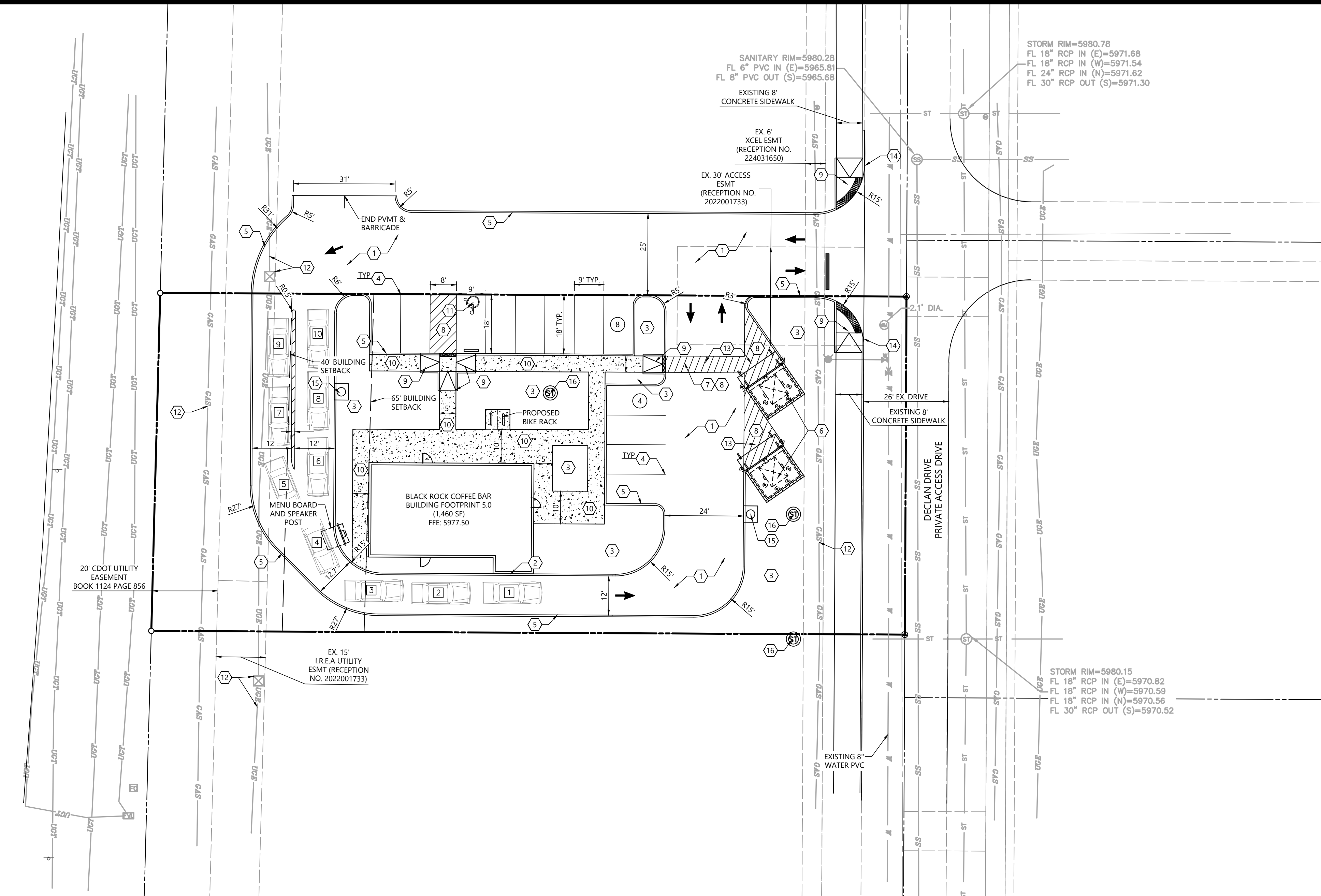
SITE AREA	
TOTAL PROPERTY AREA:	0.60 AC. / 25,933 SF
DISTURBED AREA:	0.67 AC. / 29,406 SF
IMPERVIOUS AREA:	0.40 AC. / 17,639 SF
PERVIOUS AREA:	0.19 AC. / 8,294 SF

ZONING CLASSIFICATION	
JURISDICTION:	CITY OF PARKER
ZONING:	MODIFIED COMMERCIAL
ADJACENT ZONING:	PLANNED DEVELOPMENT

BUILDING SETBACKS	
MIN BUILDING SETBACK:	40'
MAX BUILDING SETBACK:	65'
LANDSCAPE SETBACK:	10' ADJACENT TO PUBLIC OR PRIVATE ROADWAY
REAR BUILDING SETBACK:	25'

BUILDING SUMMARY	
PROPOSED BUILDING AREA:	1,460 SF
BUILDING HEIGHT LIMIT:	35'

PARKING SUMMARY	
PARKING REQUIREMENTS:	1 SPACE PER EACH 3 PERSONS OF RATED CAPACITY (EXCLUDING OUTDOOR SEATING)
TOTAL PARKING REQUIRED:	8 SPACES
PARKING PROVIDED:	12 SPACES (INCLUDING 1 ADA SPACE AND 10 STACKING SPACES)
CAR STACKING REQUIRED:	NO REQUIREMENTS; STACKING COUNTS TOWARDS PARKING REQUIREMENTS
BIKE SPACES REQUIREMENTS:	4 SPACES
TOTAL BIKE PARKING PROVIDED:	4 SPACES



SITE GENERAL NOTES:

- DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS OTHERWISE INDICATED.
- USE 3' RADII, UNLESS SHOWN OTHERWISE.
- THE INFORMATION PERTAINING TO EXISTING CONDITIONS WAS TAKEN FROM A SURVEY PROVIDED BY: BARRON LAND. THE LOCATION OF ALL EXISTING UTILITIES WERE OBTAINED FROM AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY EXACT LOCATION AND DEPTH OF UTILITY PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- ALL ACCESSIBLE PARKING SPACES AND TRAVEL ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH A.D.A. AND/OR STATE REQUIREMENTS.
- ANY DISCREPANCIES IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER AND ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- PRIOR TO STARTING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION SHALL BEGIN UNTIL ALL PERMITS HAVE BEEN RECEIVED.
- CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKERS AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE. CONTRACTOR SHALL REPAIR ANY DAMAGE DONE TO PRIVATE OR PUBLIC PROPERTY.
- ACCESS TO UTILITIES, FIRE HYDRANTS, ETC. SHALL REMAIN UNDISTURBED AT ALL TIMES, UNLESS COORDINATED OTHERWISE.
- THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
- ALL SUBGRADE PREPARATION, PAVING, AND UTILITY TRENCHING MUST BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOILS INVESTIGATION. IF THERE IS A CONFLICT BETWEEN THE SOILS REPORT AND THE PLANS, THE MORE PROHIBITIVE OF THE TWO SHALL TAKE PRECEDENCE.
- CONTRACTOR TO ENSURE COMPLIANCE WITH ANY AND ALL LAND DISTURBANCE NOTIFICATIONS REQUIREMENTS, AND THAT ALL REQUIRED EROSION CONTROL MEASURES ARE INSTALLED AND MAINTAINED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- FOR WORK IN, OR ADJACENT TO, STREET RIGHT OF WAYS, CONTRACTOR SHALL ENSURE APPROPRIATE PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION. CONTRACTOR TO ERECT AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES IN CONFORMANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- ALL PARKING LOT LIGHTING MUST BE INSTALLED AND OPERATE SO AS NOT TO PRODUCE GLARE OR CAST DIRECT ILLUMINATION ACROSS THE BOUNDING PROPERTY LINE. LOW PRESSURE SODIUM LIGHTING IS PROHIBITED. ALL LIGHTING FIXTURES MUST BE RESTRICTED TO DOWN-LIGHT OR CUT-OFF TYPES.

LEGAL DESCRIPTION

LOT 4A, PARKER POINT SUBDIVISION FILING NO. 1, AMENDMENT NO. 1 ACCORDING TO THE PLAT AS RECORDED JULY 31, 2024 AT RECEPTION NO. 2024031650, COUNTY OF DOUGLAS, STATE OF COLORADO

ADDRESS OF RECORD:
 6940 STROH ROAD, PARKER, CO

DEVELOPMENT TEAM

OWNER
 DOUBLETREE VENTURES, LLC
 P.O. BOX 40326
 DENVER, CO 80204
 CONTACT: BRIAN ZUREK
 EMAIL: BRIAN@DOUBLETREEVENTURES.COM

CIVIL ENGINEER
 ATWELL, LLC
 9001 AIRPORT FREEWAY, SUITE 660
 NORTH RICHLAND HILLS, TX 76180
 PHONE: (972) 638-8860
 CONTACT: CATHERINE ATCHLEY
 EMAIL: CATCHLEY@ATWELL.COM

SURVEYOR
 BARRON LAND
 2790 N. ACADEMY BLVD., SUITE 311
 COLORADO SPRINGS, CO 80917
 PHONE: (719) 360-6827
 CONTACT: SPENCER BARRON

DEVELOPER
 BLACK ROCK COFFEE BAR
 16307 NE CAMERON BLVD
 PORTLAND, OR 97230
 PHONE: (541) 531-2149
 CONTACT: TONY POLLOTTA

NOTE NUMBER

- INSTALL 2" AC PAVEMENT OVER 10" ABC
- PROPOSED PICK-UP WINDOW WITH COUNTER
- PROPOSED LANDSCAPE
- 4" WIDE PAINTED WHITE TRAFFIC STRIPE (SEE LENGTH THIS SHEET).
- CONSTRUCT 6" SINGLE CURB
- DUMPSTER ENCLOSURE
- INSTALL ADA CROSSWALK
- 4" WIDE PAINTED STRIPE @ 2" O.C. AND 45 DEGREES.
- CONSTRUCT DIRECTIONAL CURB RAMP PER PARKER STANDARD DETAIL #18.
- CONSTRUCT SIDEWALK PER PARKER STANDARD DETAIL #4
- ADA PARKING STALL WITH ADA SYMBOL AND REQUIRED PAINT.
- PROTECT EXISTING UTILITIES IN PLACE.
- INSTALL 3" CONCRETE OVER 14" ABC
- MATCH EXISTING ASPHALT ALONG DECLAN DRIVE PER PARKER STANDARD DETAIL #26
- INSTALL 5' CURB INLET
- PROPOSED STORM MANHOLE

CORRESPONDING DETAIL NUMBER (SEE DETAIL SHEETS)

- C700
- SEE ARCHITECTURAL PLANS FOR DETAILS
- SEE LANDSCAPE PLANS FOR DETAILS
-
-
-
-
-
- C700
- C700
-
-
- C700
- C700
- C700
- C700

SITE LEGEND

- EXISTING PROPERTY LINE
- EXISTING ROAD CENTERLINE
- EXISTING EASEMENT LINE
- 6" CURB
- HANDICAP STALL
- A.D.A. STD HANDICAP RAMP
- PARKING SPACE COUNT
- # OF STACKING

CALL UTILITY NOTIFICATION
 CENTER OF COLORADO
 1-800-922-1987
 CALL 2-BUSINESS DAYS IN ADVANCE
 BEFORE YOU DIG, GRADE, OR EXCAVATE
 FOR THE MARKING OF UNDERGROUND
 MEMBER UTILITIES.

THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES. SUBJECT TO THESE PLANS BEING STAMPED, SIGNED AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.

THIS REVIEW DOES NOT CONSTITUTE APPROVAL OF ANY PRIVATE ON-SITE IMPROVEMENTS WHICH MAY BE SHOWN. CONSTRUCTION CANNOT COMMENCE UNTIL ALL REQUIRED DRAINAGE/TRAFFIC REPORTS(S), FINAL DEVELOPMENT PLANS(S), SPECIAL REVIEWS(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE APPROVED AND ON FILE WITH THE TOWN OF PARKER.

TOWN OF PARKER, DIRECTOR ENGINEERING DATE

S. PARKER RD & STROH RD
 PARKER
 DOUGLAS COUNTY, COLORADO

BLACK ROCK COFFEE BAR
 BLACK ROCK DEVELOPMENT COMPANY, LLC
 BLACK ROCK COFFEE BAR
 SITE PLAN

DATE 2024-12-06

REVISIONS

SCALE: 1"=20'

DRAWN BY: K. SARWAR

CHECKED BY: N. SALAZAR
 PROJECT MANAGER: N. SALAZAR
 JOB #: 24003198
 FILE CODE: ##
 SHEET NO.

C2.00

CAD FILE: 24003198 - C200 SITE PLAN



ATTACHMENT B – PARKER POINTE MASTER TRAFFIC IMPACT STUDY





ALDRIDGE TRANSPORTATION CONSULTANTS, LLC
Advanced Transportation Planning and Traffic Engineering

John M.W. Aldridge, P.E.
Colorado Licensed Professional Engineer

1082 Chimney Rock Road
Highlands Ranch, CO 80126
303-703-9112
john@atceng.com

August 21, 2024

Mr. Brad Willet
Brad@wildercolorado.com.

RE: Traffic Impact Study - Revised
Parker Pointe – Parker, CO

Dear Mr. Willet:

Aldridge Transportation Consultants (ATC) is pleased to present this Master Traffic Impact Study for the proposed Parker Pointe in Parker, Colorado.

ATC is professional service firm specializing in traffic engineering and transportation planning. ATC's principal, John M.W. Aldridge is a Colorado licensed professional engineer. In the past 20 years, ATC has prepared over 1,500 traffic impact studies, designed over 100 traffic signals, and has provided expert witness testimony on engineering design and access issues on multi-million-dollar interchange and highway projects in Kansas and Colorado.

ATC appreciates the opportunity to be of service. Please call if you have any questions. We can be reached at 303-703-9112.

Respectfully submitted,
Aldridge Transportation Consultants, LLC



John M.W. Aldridge, P.E.
Principal



1. Introduction/Project Description

This study analyzes the impact of the site generated traffic of a new commercial/retail development project known as Parker Pointe located on the SEC of Stroh Road and Parker Road in Douglas County. Figure 1 shows the location of the site, access locations and type, and surrounding streets and intersections.



Figure 1 Project Vicinity and Site Plan



The site is approximately 14 acres and zoned for commercial development. The site will contain lots for general commercial/retail uses that include a myriad of uses such as fast-food, coffee shops, gas stations and convenience stores, day care, bank, and a quick lubrication vehicle shop.

Three accesses are proposed. From Parker Road at approximately 550 feet south of Stroh Road a right in/right out only access. On Stroh Road at approximately 250 east of Parker Road a right in only access, and at approximately 700 feet and directly opposite Reata Ridge Dr., a full-movement access.

Since 2018 several improvements have been made to the Parker/Stroh intersection to accommodate the new Stroh Crossing commercial/retail development on the northeast corner. The improvements include channelized free right turn for the westbound to northbound movement, two through lanes, an exclusive left turn lane, a new northbound right turn lane (which was previously a shared through and right turn lane) and accompanying traffic signal modifications.

With this project a right turn channelizing traffic island will be constructed to contain the existing signal pole in place and a new pedestrian push button post. A new eastbound through lane will also be constructed that will become a right turn only lane at the site access opposite the road serving Stroh Crossing. In addition, a southbound to eastbound left turn lane will be added to the Stroh/Parker intersection to form a dual left turn configuration.



2. Existing Conditions

Parker Road is State Highway 83, and the State Highway Access Code governs access. In addition, the SH-83/SH-86 Access Control Plan defines the type and location of access under an agreement with CDOT, counties, and communities within the corridor. Parker Road is a six-lane principal arterial that currently carries 33,000 AADT per the latest CDOT OTIS website. The posted speed limit is 55 mph. The Code defines it as an NR-A highway. A 30-foot grassy median divides the highway.

On the east side of Parker Road, Stroh Road is a two-lane minor arterial that currently carries approximately 2,000 AADT if the PM peak hour is 10 percent of the daily volume. On the west side, Stroh Road is a four-lane roadway carrying approximately 11,000 AADT. The westbound approach contains two through lanes, and exclusive right and left turn lanes. The eastbound approach includes an exclusive left turn lane and a shared through/left turn lane that will be striped to form a dual left turn lane and a single through lane when the second through receiving lane is constructed on the west side. The eastbound to southbound right turn lane is channelized and operates freely with a southbound acceleration lane.



3. Proposed Conditions

The site plan includes approximately 70,000 square feet of commercial and retail land uses. The trip generation rates for the uses are from the *ITE Trip Generation Manual, 11th Edition*. The following table provides the ADT and AM/PM Peak Hour traffic volumes.

Trip Generation Worksheet								
ITE CODE	LAND USE	UNIT	QUANTITY	ADT	AM		PM	
					IN	OUT	IN	OUT
720	Medical Office	KSF	30	36.00	2.45	0.65	1.18	2.75
				1080	74	20	35	83
934	Fast-Food McDonald's	KSF	4.8	467.48	22.75	21.86	17.18	15.85
				2242	109	105	82	76
945	Gas Station w/Convenience Store	Fueling Positions	8	265.12	8.03	8.03	9.21	9.21
				2121	64	64	74	74
912	Bank	KSF	5	100.36	5.77	4.18	10.50	10.50
				502	29	21	53	53
565	Day Care	KSF	5	47.62	5.83	5.17	5.23	5.89
				238	29	26	26	29
941	Quick Lube Vehicle Stop	Service Positions	2	40.00	2.01	0.99	2.72	2.13
				80	4	2	5	4
945	Fast-Food	KSF	4	467.48	22.75	21.86	17.18	15.85
				1870	91	87	69	63
948	Car-Wash	Tunnels	1				39.00	39.00
							39	39
945	Coffee/Donut Shop w/Drive Thru	KSF	2	533.67	43.80	42.08	19.50	19.50
				1067	88	84	39	39
Total Trips				9200	487	409	422	460

With this mix of uses, internal capture can be expected. In this case, based on the NCHRP 684 Internal Capture Estimation Tool a trip reduction of approximately 10 percent is anticipated.



PARKER POINTE Master Transportation Impact Study

The PM peak hour is the highest time of travel on the adjacent streets and at the intersections and therefore considered the design hour volume (DHV) for operations analysis and geometric design purposes.

About distribution, for the inbound movements, 40 percent of the commercial/retail traffic is expected to turn left at the intersection and turn into the right in only access from Stroh Road. 20 percent is expected to enter the right only coming from the west on Stroh Road. Ten percent is expected to turn left at the full movement access on Stroh Road. 30 percent are expected to enter by turning right from northbound Parker at the right in/right out access. The outbound movements basically mirror the inbound. Figure 2 shows the distribution percentage and trip assignment. Note that while other movements may carry some of the site generated traffic these are considered nominal.

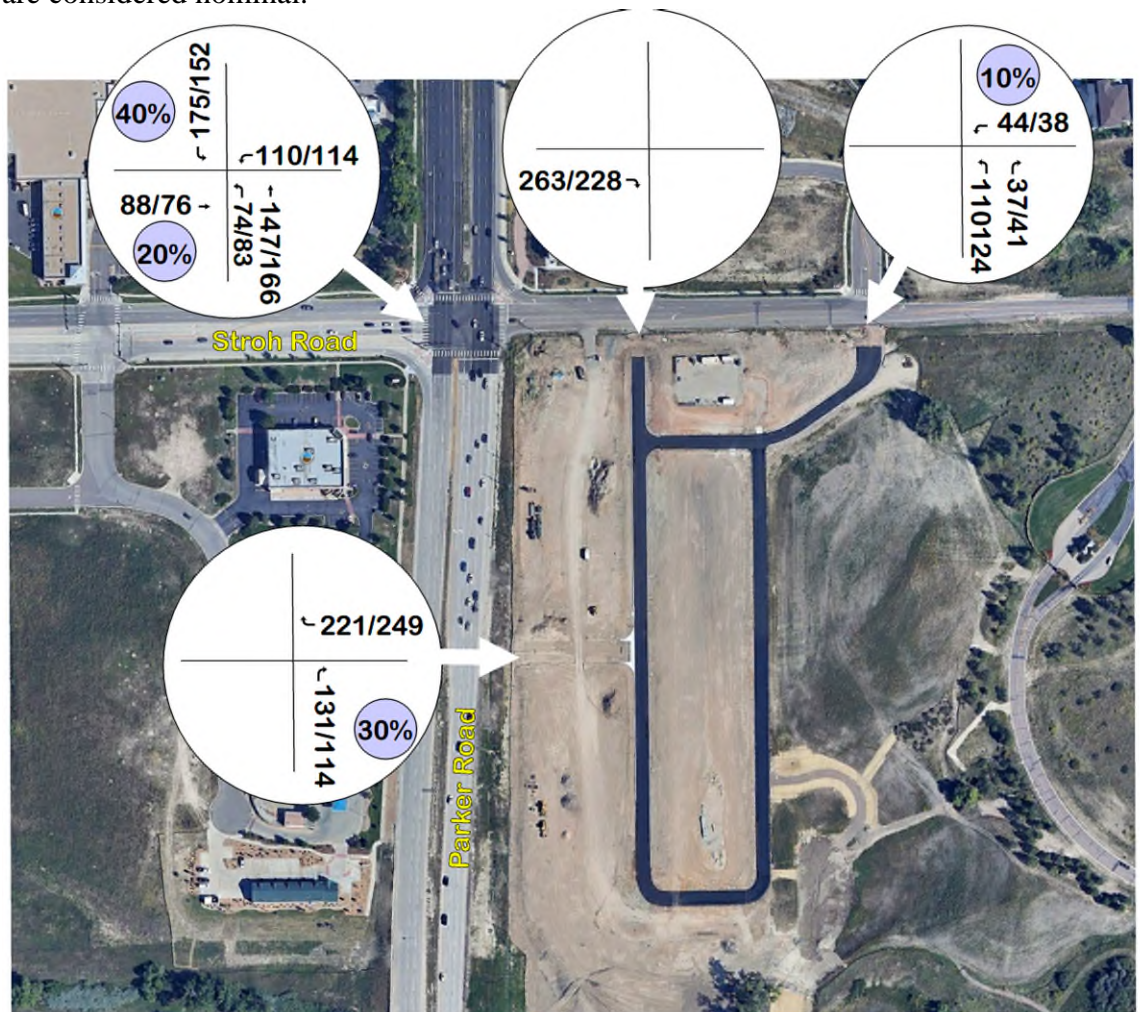




Figure 3 Trip Distribution & Assignment

4. Future Conditions

According to CDOT 20-year growth rate, traffic on Parker Road is expected to increase by a factor of 1.23. This factor was applied as well to Stroh Road for the 5-year and 20-year analysis of traffic conditions. The near-term (within 5 years) background traffic growth assumed a growth factor of 1.05 on Parker Road and the western section of Stroh Road.

Figures 5 through 13 show the near-term 5-year AM and PM with and without the project and the 20-year long-term AM and PM with and without the project.

5. Site Circulation and Design Evaluation

ATC uses Synchro v.11 for operations analyses. The Synchro v.11 methodology is based on the Highway Capacity Manual, 6th Edition (HCM). The Synchro HCM reports are attached for reference. The chart summarizes the forecast near-term and 2044 LOS (level of service). LOS is letter rating from A to F. LOS A indicates free-flow traffic conditions and no delay at intersections. LOS F is heavy traffic congestion with significant delay. LOS is provided for the overall operations at signalized intersections. LOS D is generally the benchmark for acceptable signalized intersection operations during the weekday peak hours. The critical movement, not the overall, provides the LOS rating for unsignalized intersections. The critical movement is generally a left turn from the minor approach. Caution is advised when evaluating the LOS at unsignalized intersections particularly when LOS F shows. In cases of an LOS F, the HCM¹ suggests that other evaluation measures should be considered such as the volume over capacity ratio and 95th percentile queue length to make the most effective traffic control decision. LOS F at unsignalized intersections is often normal for the average weekday peak hour.

The HCM does not analyze intersections without a stop condition. So, the right in only access on Stroh Road is not included in the table. Additionally, the HCM does not analyze a right in/right out movement if there are 3 through lanes or more on the mainline. Consequently, the right in/right out on Parker Road is not included in the table.

¹ Highway Capacity Manual 2010 page 19-40



LOS Summary (LOS/Seconds of Delay)										
Intersection	Existing		2029 w/o Project		2029 with Project		2044 w/o Project		2044 with Project	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Parker/Stroh (Signalized)	C/26.6	C/32.6	C/26.6	C/32.6	D/40.9	D/36.1	D/38.3	C/33.0	E/60.9	D/51.2
Stroh/Full-Movement	B/10.2	B/10.1	B/10.2	B/10.1	B/14.7	B/14.0	B/10.7	B/10.6	C/17.5	C/16.6

The Parker/Stroh signalized intersection will continue to provide an acceptable level of service (LOS C and D) in 2029 with and without the project conditions. In the long-term 2044 future the intersection will operate at LOS D/C without the project and LOS E and D with the project.

The Reata Ridge Dr./Stroh Road full movement intersection will operate at LOS B in the 2029 future with and without the project. In 2044 the intersection will operate at LOS B without the project and LOS C with the project.

The Colorado Golf Club representatives had a special concern regarding the implementation of a southbound dual left turn lane at the Parker/Stroh intersection. Though it is not warranted by volume, a dual left turn will be constructed.

The Synchro graphics and reports are provided in the appendix for reference.

6. Proposed Mitigation Measures

Based on the analysis, traffic generated by the project can be easily absorbed and will not cause a safety or operational problem on the adjacent streets and intersections. The proposed access locations are the best engineering fit for the parcel's configuration and for matching the internal street layout. The following improvements are recommended.

1. Full movement access by forming the south leg of the Stroh Road at Reata Ridge Dr. intersection is critical for traffic exiting the site to head southbound on Parker Road. This access, located approximately 700 feet east of Parker Road, will be connected to the eastern edge of the shopping center property via a short roadway parallel to Stroh Road. No deceleration or acceleration turn lanes are



necessary at this intersection. Stroh Road is posted at 40 mph and would be considered an NR-C by access code standards. The town defers to the access code standards for acceleration and deceleration lanes. In this case, a right turn deceleration lane would be warranted with a turning volume of greater than 50 vph. The turning volume is projected to be zero as all the right turn in traffic will make the movement at the western right in only access. The left turn deceleration lane would be warranted with 25 vph. The maximum projected left turn volume is 21 vph.

2. A right in/right access located approximately 550 feet south of Stroh Road. A right turn deceleration lane of 600 feet will be required. A right turn acceleration lane is warranted but will overlap with the new northbound to eastbound right turn lane forming a continuous turn lane.
3. A right in only access located approximately 250 feet will serve as the primary entry for traffic from southbound Parker Road and eastbound Stroh Road. The outside lane on the new roadway cross-section will serve as the deceleration lane.

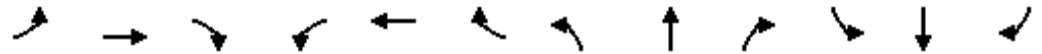
7. Conclusions/Recommendations

This analysis finds that the trip generation from the proposed project and the recommended roadway and intersection improvements will operate efficiently at an acceptable level of service.



APPENDIX





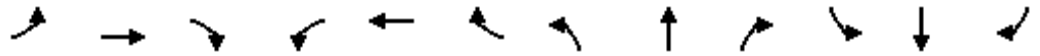
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	445	38	182	22	27	43	332	1901	36	55	892	448
v/c Ratio	0.77	0.09	0.34	0.17	0.11	0.12	0.62	0.83	0.04	0.32	0.48	0.52
Control Delay	45.7	30.1	2.9	41.4	40.0	0.7	40.4	28.9	0.1	42.4	24.7	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	30.1	2.9	41.4	40.0	0.7	40.4	28.9	0.1	42.4	24.7	5.0
Queue Length 50th (ft)	124	15	0	12	7	0	91	378	0	30	149	0
Queue Length 95th (ft)	176	47	17	35	21	0	129	#535	0	65	205	71
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	610	425	558	314	629	491	541	2302	816	170	1858	862
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.09	0.33	0.07	0.04	0.09	0.61	0.83	0.04	0.32	0.48	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

PARKER POINTE
3: Parker & Stroh

EX AM
02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖	↖	↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑↑	↖
Traffic Volume (veh/h)	409	35	167	20	25	40	305	1749	33	51	821	412
Future Volume (veh/h)	409	35	167	20	25	40	305	1749	33	51	821	412
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	445	38	0	22	27	0	332	1901	36	55	892	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	528	276		79	140		404	2562	795	70	2167	
Arrive On Green	0.15	0.15	0.00	0.04	0.04	0.00	0.12	0.50	0.50	0.04	0.42	0.00
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	445	38	0	22	27	0	332	1901	36	55	892	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1781	1702	1585
Q Serve(g_s), s	11.3	1.6	0.0	1.1	0.7	0.0	8.4	26.6	1.0	2.8	11.0	0.0
Cycle Q Clear(g_c), s	11.3	1.6	0.0	1.1	0.7	0.0	8.4	26.6	1.0	2.8	11.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	528	276		79	140		404	2562	795	70	2167	
V/C Ratio(X)	0.84	0.14		0.28	0.19		0.82	0.74	0.05	0.78	0.41	
Avail Cap(c_a), veh/h	614	333		317	632		422	2562	795	79	2167	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.1	33.4	0.0	41.6	41.8	0.0	38.8	17.8	11.4	42.8	18.1	0.0
Incr Delay (d2), s/veh	9.2	0.2	0.0	1.9	0.7	0.0	11.9	2.0	0.1	35.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.7	0.0	0.5	0.3	0.0	4.0	9.0	0.4	1.8	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	33.6	0.0	43.5	42.5	0.0	50.7	19.8	11.5	78.1	18.6	0.0
LnGrp LOS	D	C		D	D		D	B	B	E	B	
Approach Vol, veh/h		483			49			2269				947
Approach Delay, s/veh		45.3			42.9			24.2				22.1
Approach LOS		D			D			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	51.2	10.0	19.3	16.5	44.2	19.7	9.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	30.0	16.0	16.0	11.0	23.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s	4.8	28.6	3.1	3.6	10.4	13.0	13.3	2.7				
Green Ext Time (p_c), s	0.0	1.2	0.0	0.1	0.1	3.8	0.5	0.0				

Intersection Summary

HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

PARKER POINTE
8: Stroh & East Ent.

EX AM
02/28/2024

Intersection

Int Delay, s/veh 3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	58	80	47	2	3	39
Future Vol, veh/h	58	80	47	2	3	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	87	51	2	3	42

Major/Minor

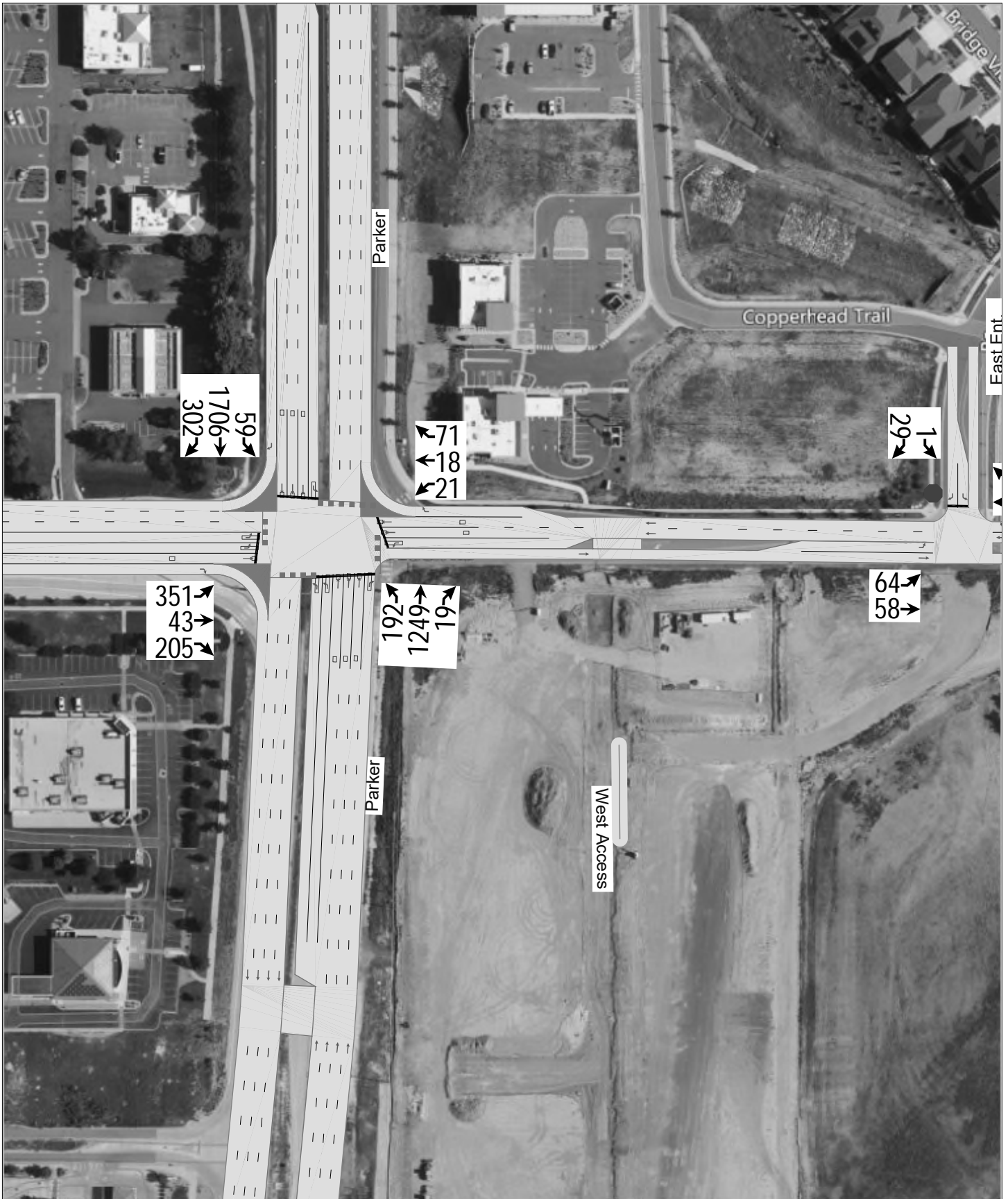
	Major1	Major2	Minor2		
Conflicting Flow All	53	0	0	264	51
Stage 1	-	-	-	51	-
Stage 2	-	-	-	213	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1553	-	-	725	1017
Stage 1	-	-	-	971	-
Stage 2	-	-	-	823	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1553	-	-	695	1017
Mov Cap-2 Maneuver	-	-	-	695	-
Stage 1	-	-	-	931	-
Stage 2	-	-	-	823	-

Approach

	EB	WB	SB
HCM Control Delay, s	3.1	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1553	-	-	-	695	1017
HCM Lane V/C Ratio	0.041	-	-	-	0.005	0.042
HCM Control Delay (s)	7.4	-	-	-	10.2	8.7
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.1





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	382	47	223	23	20	77	209	1358	21	64	1854	328
v/c Ratio	0.70	0.12	0.44	0.17	0.08	0.28	0.39	0.58	0.03	0.37	0.97	0.41
Control Delay	42.8	30.9	8.1	41.4	39.9	2.5	37.0	21.8	0.1	43.5	44.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	30.9	8.1	41.4	39.9	2.5	37.0	21.8	0.1	43.5	44.2	4.7
Queue Length 50th (ft)	105	19	0	13	5	0	56	225	0	35	~418	3
Queue Length 95th (ft)	151	54	61	36	17	0	90	303	0	72	#535	60
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	610	414	525	314	629	431	534	2344	827	173	1914	794
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.11	0.42	0.07	0.03	0.18	0.39	0.58	0.03	0.37	0.97	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

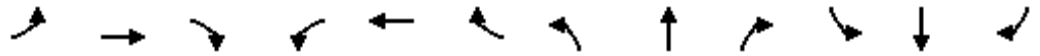
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Parker Pointe
3: Parker & Stroh

EX PM
02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖	↗	↖↗	↖	↖↗	↖↗↘	↖	↗	↖↗↘	↖
Traffic Volume (veh/h)	351	43	205	21	18	71	192	1249	19	59	1706	302
Future Volume (veh/h)	351	43	205	21	18	71	192	1249	19	59	1706	302
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	382	47	0	23	20	0	209	1358	21	64	1854	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	470	245		79	141		154	2612	811	82	2621	
Arrive On Green	0.14	0.13	0.00	0.04	0.04	0.00	0.04	0.51	0.51	0.05	0.51	0.00
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	382	47	0	23	20	0	209	1358	21	64	1854	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1781	1702	1585
Q Serve(g_s), s	9.7	2.0	0.0	1.1	0.5	0.0	4.0	15.9	0.6	3.2	25.0	0.0
Cycle Q Clear(g_c), s	9.7	2.0	0.0	1.1	0.5	0.0	4.0	15.9	0.6	3.2	25.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	245		79	141		154	2612	811	82	2621	
V/C Ratio(X)	0.81	0.19		0.29	0.14		1.36	0.52	0.03	0.78	0.71	
Avail Cap(c_a), veh/h	614	333		317	632		154	2612	811	119	2621	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.8	34.8	0.0	41.6	41.7	0.0	43.0	14.6	10.9	42.5	16.7	0.0
Incr Delay (d2), s/veh	6.3	0.4	0.0	2.0	0.5	0.0	198.5	0.7	0.1	18.0	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.9	0.0	0.5	0.2	0.0	5.8	5.2	0.2	1.7	8.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	35.2	0.0	43.6	42.2	0.0	241.5	15.4	10.9	60.5	18.4	0.0
LnGrp LOS	D	D		D	D		F	B	B	E	B	
Approach Vol, veh/h		429			43			1588			1918	
Approach Delay, s/veh		43.1			43.0			45.1			19.8	
Approach LOS		D			D			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	52.0	10.0	17.8	10.0	52.2	18.2	9.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	28.0	16.0	16.0	4.0	30.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s	5.2	17.9	3.1	4.0	6.0	27.0	11.7	2.5				
Green Ext Time (p_c), s	0.0	5.7	0.0	0.1	0.0	2.5	0.6	0.0				

Intersection Summary

HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Parker Pointe
8: Stroh & East Ent.

EX PM
02/28/2024

Intersection

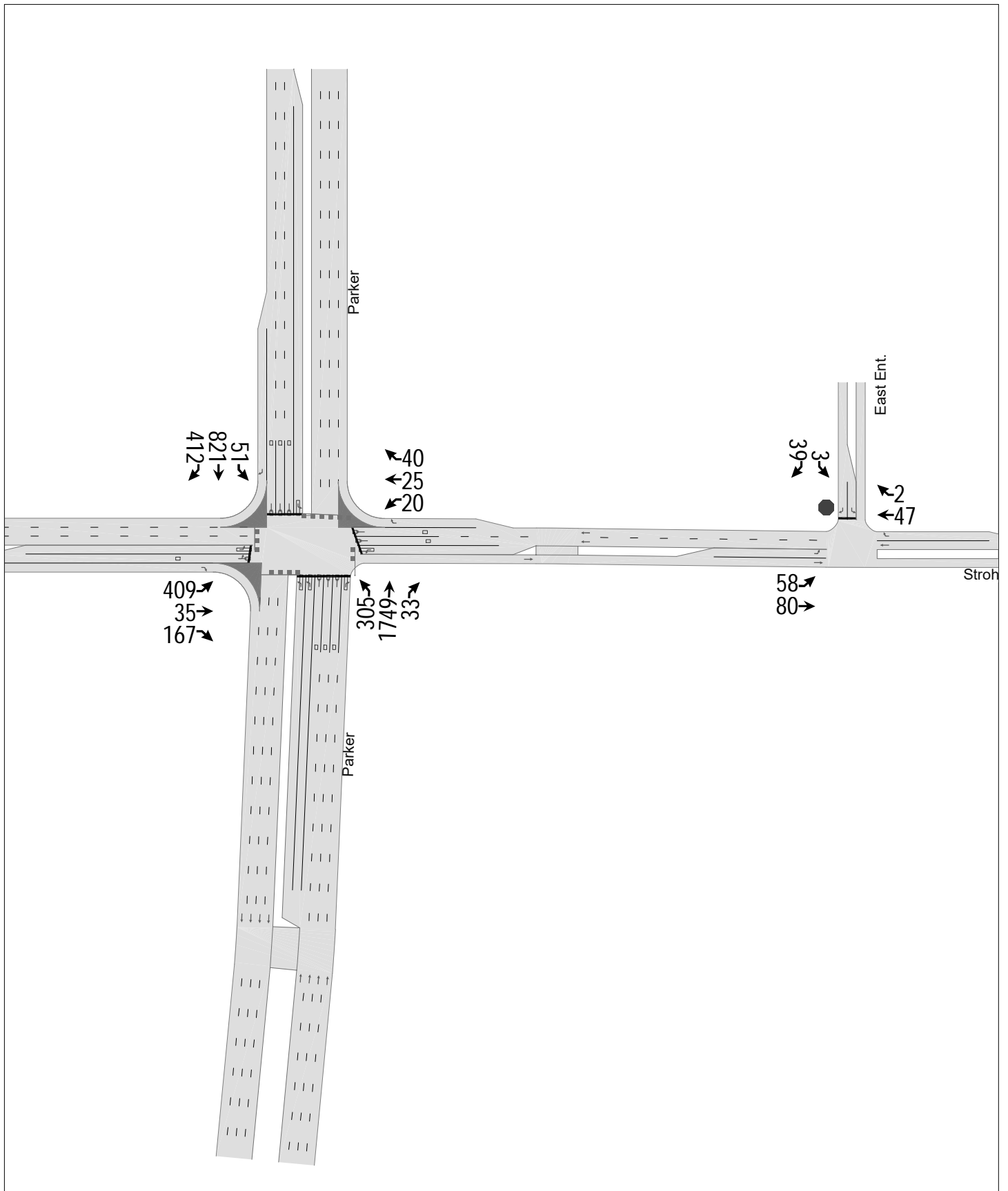
Int Delay, s/veh 3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	64	58	41	4	1	29
Future Vol, veh/h	64	58	41	4	1	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	63	45	4	1	32

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	49	0	-	0	248 45
Stage 1	-	-	-	-	45 -
Stage 2	-	-	-	-	203 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1558	-	-	-	740 1025
Stage 1	-	-	-	-	977 -
Stage 2	-	-	-	-	831 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1558	-	-	-	707 1025
Mov Cap-2 Maneuver	-	-	-	-	707 -
Stage 1	-	-	-	-	933 -
Stage 2	-	-	-	-	831 -

Approach	EB	WB	SB
HCM Control Delay, s	3.9	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1558	-	-	-	707	1025
HCM Lane V/C Ratio	0.045	-	-	-	0.002	0.031
HCM Control Delay (s)	7.4	-	-	-	10.1	8.6
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.1





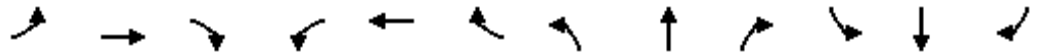
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	445	38	182	22	27	43	332	1901	36	55	892	448
v/c Ratio	0.77	0.09	0.34	0.17	0.11	0.12	0.62	0.83	0.04	0.32	0.48	0.52
Control Delay	45.7	30.1	2.9	41.4	40.0	0.7	40.4	28.9	0.1	42.4	24.7	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	30.1	2.9	41.4	40.0	0.7	40.4	28.9	0.1	42.4	24.7	5.0
Queue Length 50th (ft)	124	15	0	12	7	0	91	378	0	30	149	0
Queue Length 95th (ft)	176	47	17	35	21	0	129	#535	0	65	205	71
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	610	425	558	314	629	491	541	2302	816	170	1858	862
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.09	0.33	0.07	0.04	0.09	0.61	0.83	0.04	0.32	0.48	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Parker Pointe
3: Parker & Stroh

2029 AM BKG
02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖	↗	↖↗	↖	↖↗	↖↗↘	↖	↗	↖↗↘	↖
Traffic Volume (veh/h)	409	35	167	20	25	40	305	1749	33	51	821	412
Future Volume (veh/h)	409	35	167	20	25	40	305	1749	33	51	821	412
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	445	38	0	22	27	0	332	1901	36	55	892	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	528	276		79	140		404	2562	795	70	2167	
Arrive On Green	0.15	0.15	0.00	0.04	0.04	0.00	0.12	0.50	0.50	0.04	0.42	0.00
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	445	38	0	22	27	0	332	1901	36	55	892	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1781	1702	1585
Q Serve(g_s), s	11.3	1.6	0.0	1.1	0.7	0.0	8.4	26.6	1.0	2.8	11.0	0.0
Cycle Q Clear(g_c), s	11.3	1.6	0.0	1.1	0.7	0.0	8.4	26.6	1.0	2.8	11.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	528	276		79	140		404	2562	795	70	2167	
V/C Ratio(X)	0.84	0.14		0.28	0.19		0.82	0.74	0.05	0.78	0.41	
Avail Cap(c_a), veh/h	614	333		317	632		422	2562	795	79	2167	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.1	33.4	0.0	41.6	41.8	0.0	38.8	17.8	11.4	42.8	18.1	0.0
Incr Delay (d2), s/veh	9.2	0.2	0.0	1.9	0.7	0.0	11.9	2.0	0.1	35.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.7	0.0	0.5	0.3	0.0	4.0	9.0	0.4	1.8	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	33.6	0.0	43.5	42.5	0.0	50.7	19.8	11.5	78.1	18.6	0.0
LnGrp LOS	D	C		D	D		D	B	B	E	B	
Approach Vol, veh/h		483			49			2269			947	
Approach Delay, s/veh		45.3			42.9			24.2			22.1	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	51.2	10.0	19.3	16.5	44.2	19.7	9.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	30.0	16.0	16.0	11.0	23.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s	4.8	28.6	3.1	3.6	10.4	13.0	13.3	2.7				
Green Ext Time (p_c), s	0.0	1.2	0.0	0.1	0.1	3.8	0.5	0.0				

Intersection Summary

HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

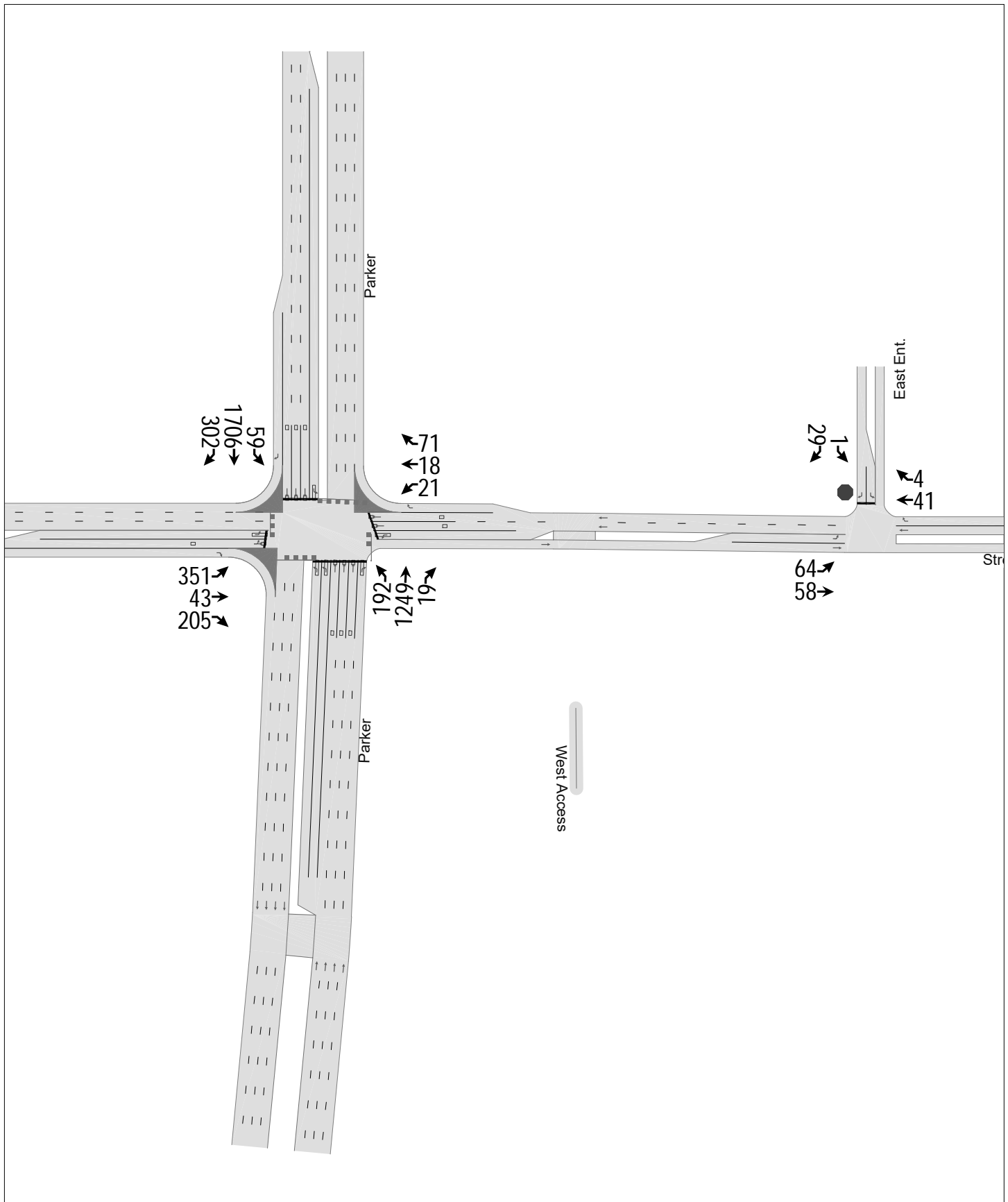
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

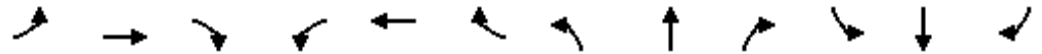
Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	58	80	47	2	3	39
Future Vol, veh/h	58	80	47	2	3	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	87	51	2	3	42

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	53	0	-	0	264 51
Stage 1	-	-	-	-	51 -
Stage 2	-	-	-	-	213 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1553	-	-	-	725 1017
Stage 1	-	-	-	-	971 -
Stage 2	-	-	-	-	823 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1553	-	-	-	695 1017
Mov Cap-2 Maneuver	-	-	-	-	695 -
Stage 1	-	-	-	-	931 -
Stage 2	-	-	-	-	823 -

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1553	-	-	-	695	1017
HCM Lane V/C Ratio	0.041	-	-	-	0.005	0.042
HCM Control Delay (s)	7.4	-	-	-	10.2	8.7
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.1





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	382	47	223	23	20	77	209	1358	21	64	1854	328
v/c Ratio	0.70	0.12	0.44	0.17	0.08	0.28	0.39	0.58	0.03	0.37	0.97	0.41
Control Delay	42.8	30.9	8.1	41.4	39.9	2.5	37.0	21.8	0.1	43.5	44.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	30.9	8.1	41.4	39.9	2.5	37.0	21.8	0.1	43.5	44.2	4.7
Queue Length 50th (ft)	105	19	0	13	5	0	56	225	0	35	~418	3
Queue Length 95th (ft)	151	54	61	36	17	0	90	303	0	72	#535	60
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	610	414	525	314	629	431	534	2344	827	173	1914	794
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.11	0.42	0.07	0.03	0.18	0.39	0.58	0.03	0.37	0.97	0.41

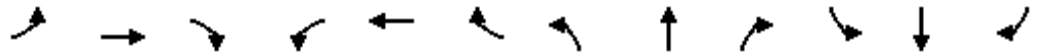
Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Parker Pointe
3: Parker & Stroh

2029 PM BKG
02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖	↗	↑↑	↖	↖↗	↑↑↑	↖	↗	↑↑↑	↖
Traffic Volume (veh/h)	351	43	205	21	18	71	192	1249	19	59	1706	302
Future Volume (veh/h)	351	43	205	21	18	71	192	1249	19	59	1706	302
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	382	47	0	23	20	0	209	1358	21	64	1854	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	470	245		79	141		154	2612	811	82	2621	
Arrive On Green	0.14	0.13	0.00	0.04	0.04	0.00	0.04	0.51	0.51	0.05	0.51	0.00
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	382	47	0	23	20	0	209	1358	21	64	1854	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1781	1702	1585
Q Serve(g_s), s	9.7	2.0	0.0	1.1	0.5	0.0	4.0	15.9	0.6	3.2	25.0	0.0
Cycle Q Clear(g_c), s	9.7	2.0	0.0	1.1	0.5	0.0	4.0	15.9	0.6	3.2	25.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	245		79	141		154	2612	811	82	2621	
V/C Ratio(X)	0.81	0.19		0.29	0.14		1.36	0.52	0.03	0.78	0.71	
Avail Cap(c_a), veh/h	614	333		317	632		154	2612	811	119	2621	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.8	34.8	0.0	41.6	41.7	0.0	43.0	14.6	10.9	42.5	16.7	0.0
Incr Delay (d2), s/veh	6.3	0.4	0.0	2.0	0.5	0.0	198.5	0.7	0.1	18.0	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.9	0.0	0.5	0.2	0.0	5.8	5.2	0.2	1.7	8.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	35.2	0.0	43.6	42.2	0.0	241.5	15.4	10.9	60.5	18.4	0.0
LnGrp LOS	D	D		D	D		F	B	B	E	B	
Approach Vol, veh/h		429			43			1588			1918	
Approach Delay, s/veh		43.1			43.0			45.1			19.8	
Approach LOS		D			D			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	52.0	10.0	17.8	10.0	52.2	18.2	9.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	28.0	16.0	16.0	4.0	30.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s	5.2	17.9	3.1	4.0	6.0	27.0	11.7	2.5				
Green Ext Time (p_c), s	0.0	5.7	0.0	0.1	0.0	2.5	0.6	0.0				

Intersection Summary

HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

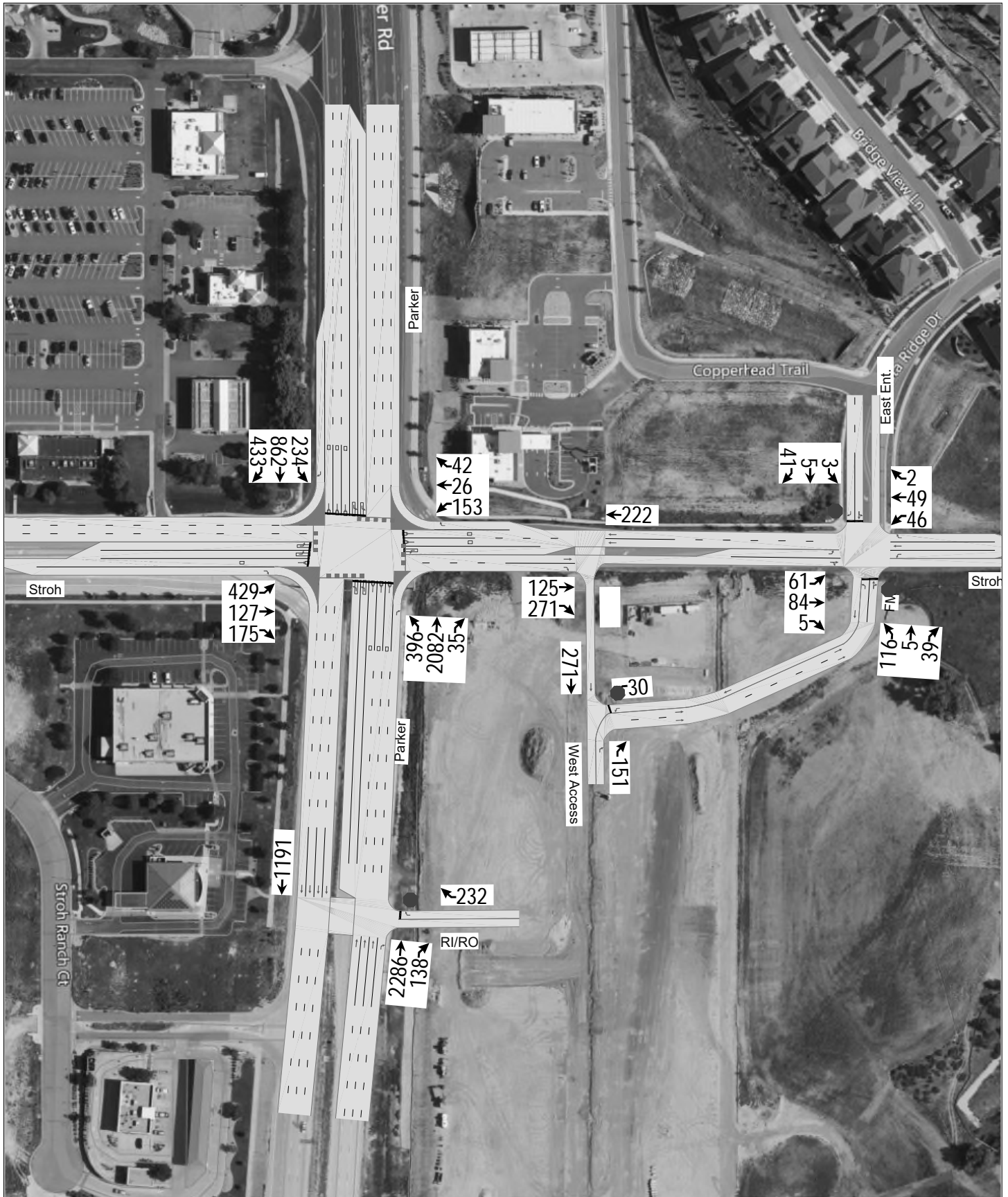
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

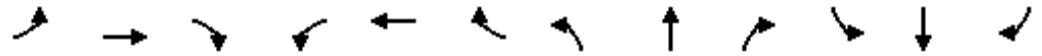
Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	64	58	41	4	1	29
Future Vol, veh/h	64	58	41	4	1	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	63	45	4	1	32

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	49	0	-	0	248 45
Stage 1	-	-	-	-	45 -
Stage 2	-	-	-	-	203 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1558	-	-	-	740 1025
Stage 1	-	-	-	-	977 -
Stage 2	-	-	-	-	831 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1558	-	-	-	707 1025
Mov Cap-2 Maneuver	-	-	-	-	707 -
Stage 1	-	-	-	-	933 -
Stage 2	-	-	-	-	831 -

Approach	EB	WB	SB
HCM Control Delay, s	3.9	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1558	-	-	-	707	1025
HCM Lane V/C Ratio	0.045	-	-	-	0.002	0.031
HCM Control Delay (s)	7.4	-	-	-	10.1	8.6
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.1





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	467	138	191	167	29	46	430	2263	38	255	937	470
v/c Ratio	0.85	0.63	0.52	0.73	0.08	0.13	0.76	1.03	0.05	0.72	0.50	0.53
Control Delay	61.1	59.0	9.9	64.9	42.3	0.8	53.0	58.8	0.1	61.5	29.2	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	59.0	9.9	64.9	42.3	0.8	53.0	58.8	0.1	61.5	29.2	5.1
Queue Length 50th (ft)	170	94	0	113	10	0	150	~647	0	91	192	0
Queue Length 95th (ft)	#268	156	52	#188	23	0	202	#742	0	#182	250	77
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	551	270	408	257	514	408	628	2199	769	353	1885	882
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.51	0.47	0.65	0.06	0.11	0.68	1.03	0.05	0.72	0.50	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Parker Pointe
3: Parker & Stroh

2029 AM TOTAL

08/21/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	409	121	167	146	25	40	377	1983	33	223	821	412
Future Volume (veh/h)	409	121	167	146	25	40	377	1983	33	223	821	412
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	467	138	0	167	29	0	430	2263	0	255	937	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	503	174		198	209		503	2577		251	2205	
Arrive On Green	0.15	0.09	0.00	0.11	0.06	0.00	0.15	0.50	0.00	0.07	0.43	0.00
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	467	138	0	167	29	0	430	2263	0	255	937	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	14.7	7.9	0.0	10.1	0.9	0.0	13.4	43.4	0.0	8.0	14.0	0.0
Cycle Q Clear(g_c), s	14.7	7.9	0.0	10.1	0.9	0.0	13.4	43.4	0.0	8.0	14.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	503	174		198	209		503	2577		251	2205	
V/C Ratio(X)	0.93	0.79		0.84	0.14		0.85	0.88		1.01	0.42	
Avail Cap(c_a), veh/h	503	272		259	517		628	2577		251	2205	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.4	48.9	0.0	47.9	49.1	0.0	45.9	24.2	0.0	51.0	21.7	0.0
Incr Delay (d2), s/veh	23.9	8.3	0.0	17.2	0.3	0.0	9.3	4.6	0.0	60.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	4.0	0.0	5.3	0.4	0.0	6.1	16.2	0.0	5.4	5.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.3	57.2	0.0	65.1	49.4	0.0	55.1	28.9	0.0	111.6	22.3	0.0
LnGrp LOS	E	E		E	D		E	C		F	C	
Approach Vol, veh/h		605			196			2693			1192	
Approach Delay, s/veh		67.3			62.8			33.1			41.4	
Approach LOS		E			E			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	61.5	18.3	16.2	22.0	53.5	22.0	12.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	8.0	46.0	16.0	16.0	20.0	34.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s	10.0	45.4	12.1	9.9	15.4	16.0	16.7	2.9				
Green Ext Time (p_c), s	0.0	0.6	0.1	0.3	0.7	5.4	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D

Notes

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

Intersection												
Int Delay, s/veh	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘		↙	↑	↗	↙	↘			↖	↗
Traffic Vol, veh/h	58	80	5	44	47	2	110	5	37	3	5	39
Future Vol, veh/h	58	80	5	44	47	2	110	5	37	3	5	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	150	0	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	91	6	50	54	2	126	6	42	3	6	45

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	56	0	0	97	0	0	407	382	94	404	383	54
Stage 1	-	-	-	-	-	-	226	226	-	154	154	-
Stage 2	-	-	-	-	-	-	181	156	-	250	229	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1549	-	-	1496	-	-	555	551	963	557	550	1013
Stage 1	-	-	-	-	-	-	777	717	-	848	770	-
Stage 2	-	-	-	-	-	-	821	769	-	754	715	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1549	-	-	1496	-	-	496	510	963	498	509	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	496	510	-	498	509	-
Stage 1	-	-	-	-	-	-	744	686	-	812	745	-
Stage 2	-	-	-	-	-	-	753	744	-	684	684	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	3		3.5		13.2		9.3	
HCM LOS					B		A	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	496	871	1549	-	-	1496	-	-	505	1013
HCM Lane V/C Ratio	0.253	0.055	0.043	-	-	0.034	-	-	0.018	0.044
HCM Control Delay (s)	14.7	9.4	7.4	-	-	7.5	-	-	12.3	8.7
HCM Lane LOS	B	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	1	0.2	0.1	-	-	0.1	-	-	0.1	0.1

Parker Pointe
13: West Access & Frontage

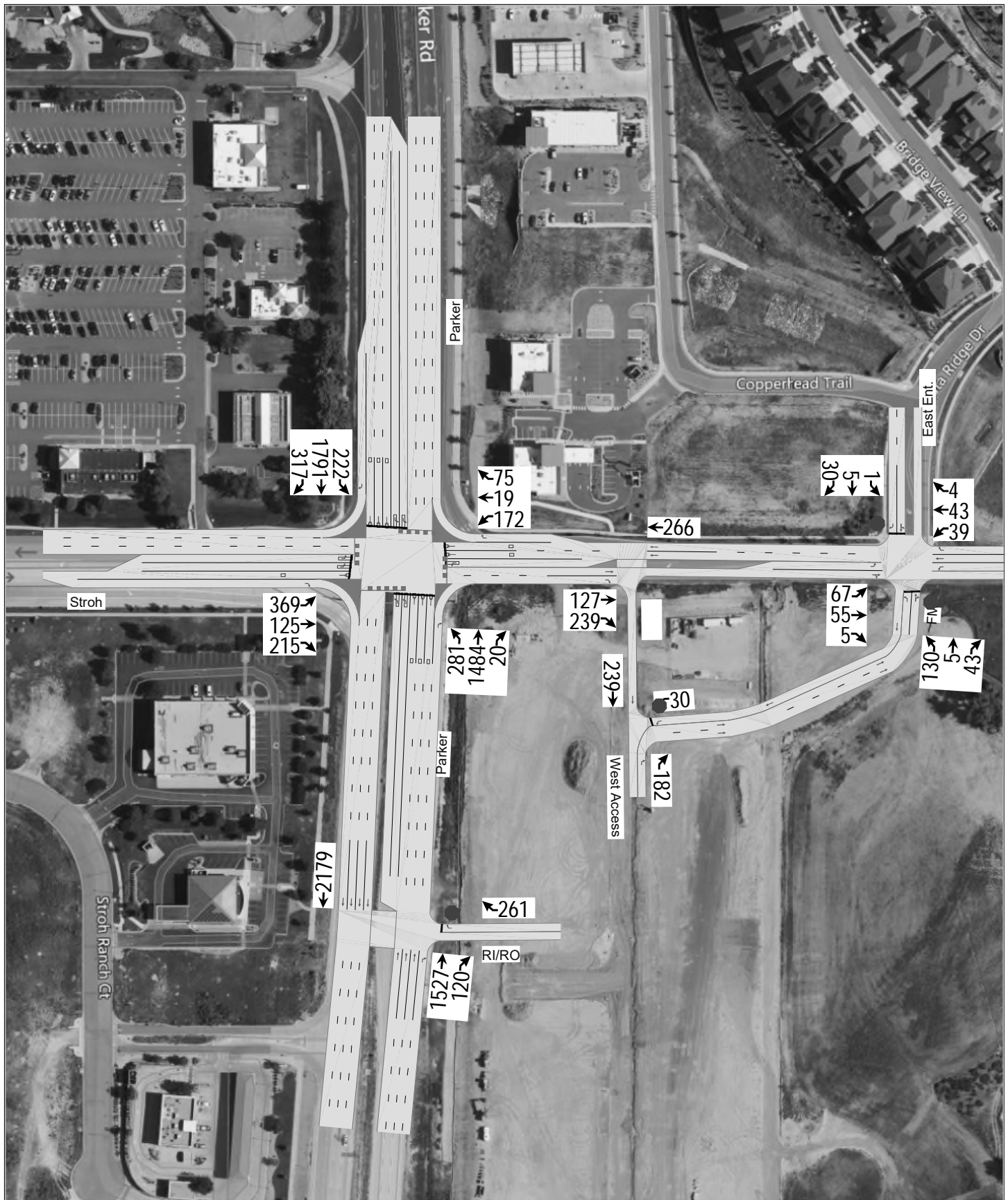
2029 AM TOTAL
08/21/2024

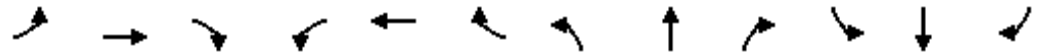
Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙			↗		↑
Traffic Vol, veh/h	29	0	0	144	0	258
Future Vol, veh/h	29	0	0	144	0	258
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	0	0	164	0	294

Major/Minor	Minor1	Major2
Conflicting Flow All	294	-
Stage 1	0	-
Stage 2	294	-
Critical Hdwy	6.42	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	5.42	-
Follow-up Hdwy	3.518	-
Pot Cap-1 Maneuver	697	0
Stage 1	-	0
Stage 2	756	0
Platoon blocked, %		-
Mov Cap-1 Maneuver	697	-
Mov Cap-2 Maneuver	697	-
Stage 1	-	-
Stage 2	756	-

Approach	WB	SB
HCM Control Delay, s	10.4	0
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	697	-
HCM Lane V/C Ratio	0.047	-
HCM Control Delay (s)	10.4	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.1	-





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	401	136	234	187	21	81	306	1613	22	241	1947	345
v/c Ratio	0.67	0.59	0.60	0.74	0.05	0.25	0.73	0.82	0.03	0.67	1.03	0.45
Control Delay	45.6	51.7	12.7	58.9	37.2	1.8	54.6	32.6	0.1	53.4	61.6	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	51.7	12.7	58.9	37.2	1.8	54.6	32.6	0.1	53.4	61.6	6.7
Queue Length 50th (ft)	126	83	4	114	6	0	97	354	0	75	~516	21
Queue Length 95th (ft)	178	139	71	#198	17	0	#190	#431	0	#138	#613	88
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	604	298	443	283	566	391	420	1976	715	361	1888	773
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.46	0.53	0.66	0.04	0.21	0.73	0.82	0.03	0.67	1.03	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Parker Pointe
3: Parker & Stroh

2029 PM TOTAL

08/21/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	351	119	205	164	18	71	268	1413	19	211	1706	302	
Future Volume (veh/h)	351	119	205	164	18	71	268	1413	19	211	1706	302	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	401	136	0	187	21	0	306	1613	0	241	1947	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	475	176		221	288		311	2315		305	2306		
Arrive On Green	0.14	0.09	0.00	0.12	0.08	0.00	0.09	0.45	0.00	0.09	0.45	0.00	
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	3456	5106	1585	
Grp Volume(v), veh/h	401	136	0	187	21	0	306	1613	0	241	1947	0	
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1728	1702	1585	
Q Serve(g_s), s	11.3	7.1	0.0	10.3	0.5	0.0	8.8	25.2	0.0	6.8	33.8	0.0	
Cycle Q Clear(g_c), s	11.3	7.1	0.0	10.3	0.5	0.0	8.8	25.2	0.0	6.8	33.8	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	475	176		221	288		311	2315		305	2306		
V/C Ratio(X)	0.84	0.77		0.84	0.07		0.98	0.70		0.79	0.84		
Avail Cap(c_a), veh/h	553	299		285	569		311	2315		311	2306		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	42.1	44.3	0.0	42.8	42.5	0.0	45.4	21.8	0.0	44.7	24.3	0.0	
Incr Delay (d2), s/veh	10.3	7.1	0.0	16.4	0.1	0.0	46.5	1.8	0.0	12.6	4.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.4	3.5	0.0	5.4	0.2	0.0	5.6	9.2	0.0	3.3	12.6	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	52.4	51.3	0.0	59.3	42.6	0.0	91.9	23.6	0.0	57.3	28.3	0.0	
LnGrp LOS	D	D		E	D		F	C		E	C		
Approach Vol, veh/h		537			208			1919			2188		
Approach Delay, s/veh		52.1			57.6			34.5			31.5		
Approach LOS		D			E			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	14.8	51.3	18.4	15.4	15.0	51.2	19.7	14.1					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	9.0	35.0	16.0	16.0	9.0	35.0	16.0	16.0					
Max Q Clear Time (g_c+I1), s	8.8	27.2	12.3	9.1	10.8	35.8	13.3	2.5					
Green Ext Time (p_c), s	0.0	5.4	0.2	0.3	0.0	0.0	0.4	0.0					

Intersection Summary

HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Notes

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

Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘		↙	↑	↘	↙	↘			↙	↘
Traffic Vol, veh/h	64	52	5	37	41	4	124	5	41	1	5	29
Future Vol, veh/h	64	52	5	37	41	4	124	5	41	1	5	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	150	0	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	59	6	42	47	5	142	6	47	1	6	33

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	52	0	0	65	0	0	361	344	62	366	342	47
Stage 1	-	-	-	-	-	-	208	208	-	131	131	-
Stage 2	-	-	-	-	-	-	153	136	-	235	211	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1554	-	-	1537	-	-	595	579	1003	590	580	1022
Stage 1	-	-	-	-	-	-	794	730	-	873	788	-
Stage 2	-	-	-	-	-	-	849	784	-	768	728	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1554	-	-	1537	-	-	539	537	1003	527	538	1022
Mov Cap-2 Maneuver	-	-	-	-	-	-	539	537	-	527	538	-
Stage 1	-	-	-	-	-	-	757	696	-	832	767	-
Stage 2	-	-	-	-	-	-	793	763	-	692	694	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	3.9		3.3		12.7		9.1	
HCM LOS					B		A	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	539	917	1554	-	-	1537	-	-	536	1022
HCM Lane V/C Ratio	0.263	0.057	0.047	-	-	0.027	-	-	0.013	0.032
HCM Control Delay (s)	14	9.2	7.4	-	-	7.4	-	-	11.8	8.6
HCM Lane LOS	B	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	1	0.2	0.1	-	-	0.1	-	-	0	0.1

Parker Pointe
13: West Access & Frontage

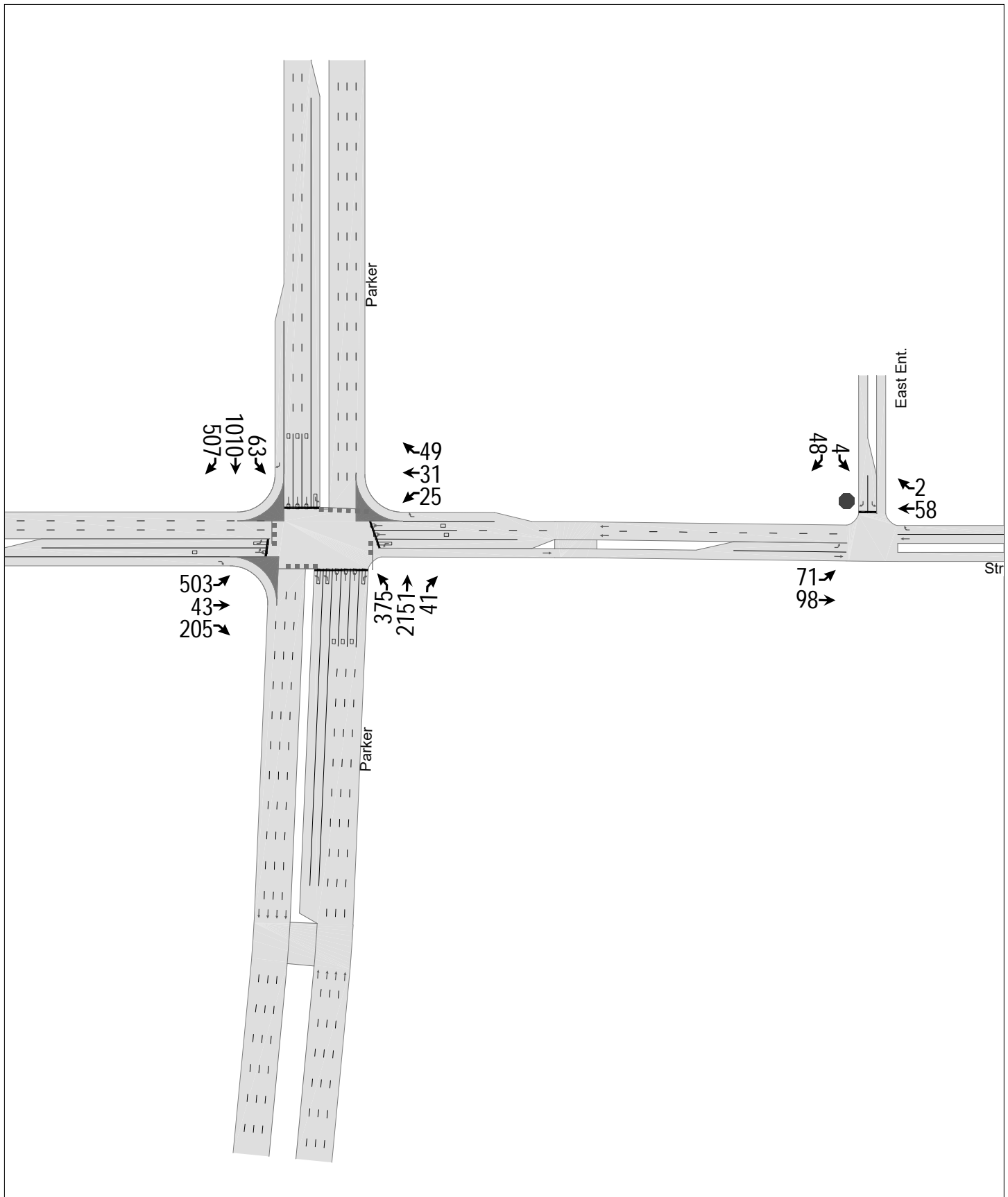
2029 PM TOTAL
08/21/2024

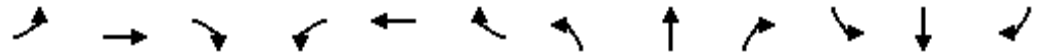
Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘			↗		↑
Traffic Vol, veh/h	29	0	0	173	0	228
Future Vol, veh/h	29	0	0	173	0	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	0	0	197	0	260

Major/Minor	Minor1	Major2
Conflicting Flow All	260	-
Stage 1	0	-
Stage 2	260	-
Critical Hdwy	6.42	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	5.42	-
Follow-up Hdwy	3.518	-
Pot Cap-1 Maneuver	729	0
Stage 1	-	0
Stage 2	783	0
Platoon blocked, %		-
Mov Cap-1 Maneuver	729	-
Mov Cap-2 Maneuver	729	-
Stage 1	-	-
Stage 2	783	-

Approach	WB	SB
HCM Control Delay, s	10.2	0
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	729	-
HCM Lane V/C Ratio	0.045	-
HCM Control Delay (s)	10.2	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.1	-





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	547	47	223	27	33	53	408	2338	44	68	1098	551
v/c Ratio	1.10	0.16	0.51	0.23	0.16	0.18	0.72	0.93	0.05	0.37	0.50	0.55
Control Delay	113.3	42.8	10.3	52.9	50.5	1.4	50.8	35.3	0.1	51.7	24.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.3	42.8	10.3	52.9	50.5	1.4	50.8	35.3	0.1	51.7	24.8	4.5
Queue Length 50th (ft)	~225	30	0	18	12	0	142	571	0	46	208	0
Queue Length 95th (ft)	#334	67	71	47	27	0	186	#732	0	90	276	73
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	499	310	449	257	514	408	622	2509	856	185	2202	997
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.15	0.50	0.11	0.06	0.13	0.66	0.93	0.05	0.37	0.50	0.55

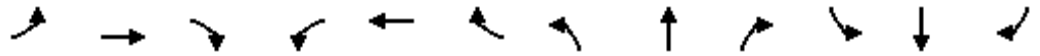
Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Parker Pointe
3: Parker & Stroh

2044 AM BKG
02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑	↗	↖	↑↑	↗	↖↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	409	35	167	20	25	40	305	1749	33	51	821	412
Future Volume (veh/h)	409	35	167	20	25	40	305	1749	33	51	821	412
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	547	47	0	27	33	0	408	2338	44	68	1098	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	503	269		65	124		480	2885	896	65	2362	
Arrive On Green	0.15	0.14	0.00	0.04	0.03	0.00	0.14	0.57	0.57	0.04	0.46	0.00
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	547	47	0	27	33	0	408	2338	44	68	1098	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1781	1702	1585
Q Serve(g_s), s	16.0	2.4	0.0	1.6	1.0	0.0	12.7	40.4	1.4	4.0	16.2	0.0
Cycle Q Clear(g_c), s	16.0	2.4	0.0	1.6	1.0	0.0	12.7	40.4	1.4	4.0	16.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	503	269		65	124		480	2885	896	65	2362	
V/C Ratio(X)	1.09	0.17		0.42	0.27		0.85	0.81	0.05	1.05	0.46	
Avail Cap(c_a), veh/h	503	272		259	517		597	2885	896	65	2362	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.0	41.3	0.0	51.9	51.7	0.0	46.2	19.2	10.7	53.0	20.2	0.0
Incr Delay (d2), s/veh	66.2	0.3	0.0	4.2	1.1	0.0	9.4	2.6	0.1	126.3	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	1.1	0.0	0.8	0.5	0.0	5.8	14.0	0.5	4.0	5.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.2	41.6	0.0	56.1	52.8	0.0	55.7	21.8	10.8	179.3	20.9	0.0
LnGrp LOS	F	D		E	D		E	C	B	F	C	
Approach Vol, veh/h		594			60			2790			1166	
Approach Delay, s/veh		107.5			54.3			26.6			30.1	
Approach LOS		F			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	68.2	10.0	21.8	21.3	56.9	22.0	9.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	50.0	16.0	16.0	19.0	35.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s	6.0	42.4	3.6	4.4	14.7	18.2	18.0	3.0				
Green Ext Time (p_c), s	0.0	6.7	0.0	0.1	0.6	6.2	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

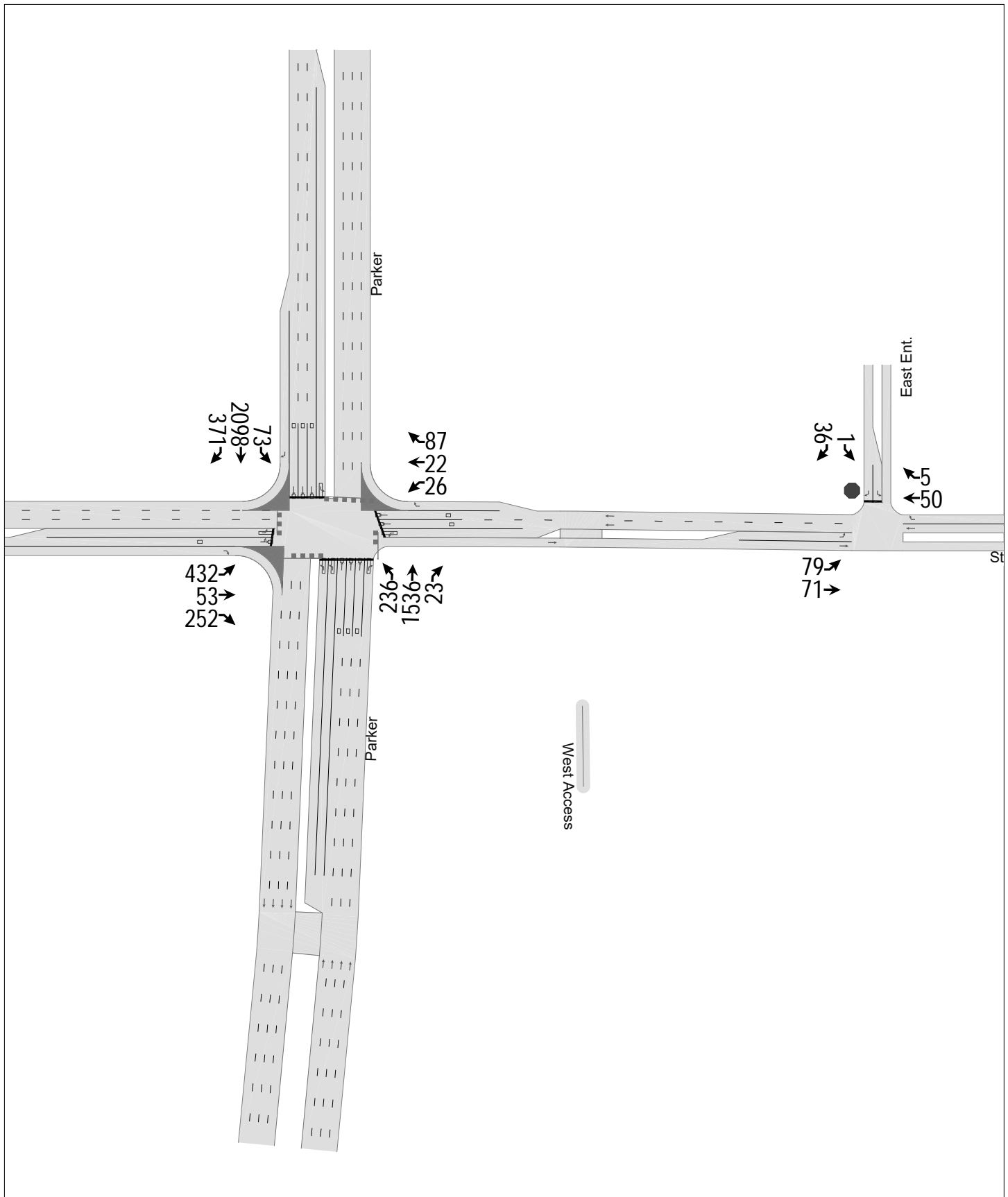
Int Delay, s/veh 3.5

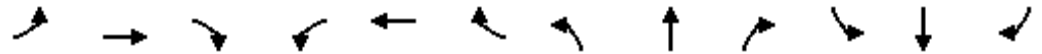
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	58	80	47	2	3	39
Future Vol, veh/h	58	80	47	2	3	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	107	63	3	4	52

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	66	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1536	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1536	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1536	-	-	-	634	1002
HCM Lane V/C Ratio	0.05	-	-	-	0.006	0.052
HCM Control Delay (s)	7.5	-	-	-	10.7	8.8
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0	0.2





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	469	57	274	28	24	95	257	1670	25	79	2281	404
v/c Ratio	0.94	0.17	0.54	0.24	0.11	0.41	0.54	0.65	0.03	0.48	1.02	0.47
Control Delay	75.0	42.6	9.5	53.0	49.4	6.8	48.8	22.8	0.0	56.4	56.5	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.0	42.6	9.5	53.0	49.4	6.8	48.8	22.8	0.0	56.4	56.5	7.7
Queue Length 50th (ft)	171	36	0	19	8	0	88	318	0	54	~627	43
Queue Length 95th (ft)	#270	75	77	48	22	13	130	421	0	100	#752	124
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	499	349	519	257	514	357	474	2572	874	174	2229	861
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.16	0.53	0.11	0.05	0.27	0.54	0.65	0.03	0.45	1.02	0.47

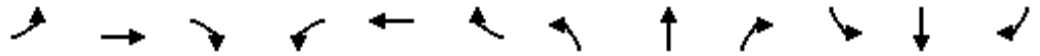
Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Parker Pointe
3: Parker & Stroh

2044 PM BKG
02/28/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖	↗	↑↑	↖	↖↗	↑↑↑	↖	↗	↑↑↑	↖
Traffic Volume (veh/h)	351	43	205	21	18	71	192	1249	19	59	1706	302
Future Volume (veh/h)	351	43	205	21	18	71	192	1249	19	59	1706	302
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	469	57	0	28	24	0	257	1670	25	79	2281	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	503	270		65	125		251	2781	863	101	2699	
Arrive On Green	0.15	0.14	0.00	0.04	0.04	0.00	0.07	0.54	0.54	0.06	0.53	0.00
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	469	57	0	28	24	0	257	1670	25	79	2281	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1781	1702	1585
Q Serve(g_s), s	14.8	3.0	0.0	1.7	0.7	0.0	8.0	24.3	0.8	4.8	41.9	0.0
Cycle Q Clear(g_c), s	14.8	3.0	0.0	1.7	0.7	0.0	8.0	24.3	0.8	4.8	41.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	503	270		65	125		251	2781	863	101	2699	
V/C Ratio(X)	0.93	0.21		0.43	0.19		1.02	0.60	0.03	0.78	0.85	
Avail Cap(c_a), veh/h	503	272		259	517		251	2781	863	146	2699	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.5	41.6	0.0	51.9	51.6	0.0	51.0	16.9	11.6	51.2	22.1	0.0
Incr Delay (d2), s/veh	24.6	0.4	0.0	4.5	0.7	0.0	62.7	1.0	0.1	15.7	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	1.4	0.0	0.8	0.3	0.0	5.5	8.4	0.3	2.5	15.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.1	41.9	0.0	56.4	52.3	0.0	113.7	17.9	11.6	66.9	25.6	0.0
LnGrp LOS	E	D		E	D		F	B	B	E	C	
Approach Vol, veh/h		526			52			1952			2360	
Approach Delay, s/veh		67.9			54.5			30.4			26.9	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	65.9	10.0	21.9	14.0	64.1	22.0	9.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	45.0	16.0	16.0	8.0	46.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s	6.8	26.3	3.7	5.0	10.0	43.9	16.8	2.7				
Green Ext Time (p_c), s	0.0	10.5	0.0	0.1	0.0	2.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	64	58	41	4	1	29
Future Vol, veh/h	64	58	41	4	1	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	86	78	55	5	1	39

Major/Minor

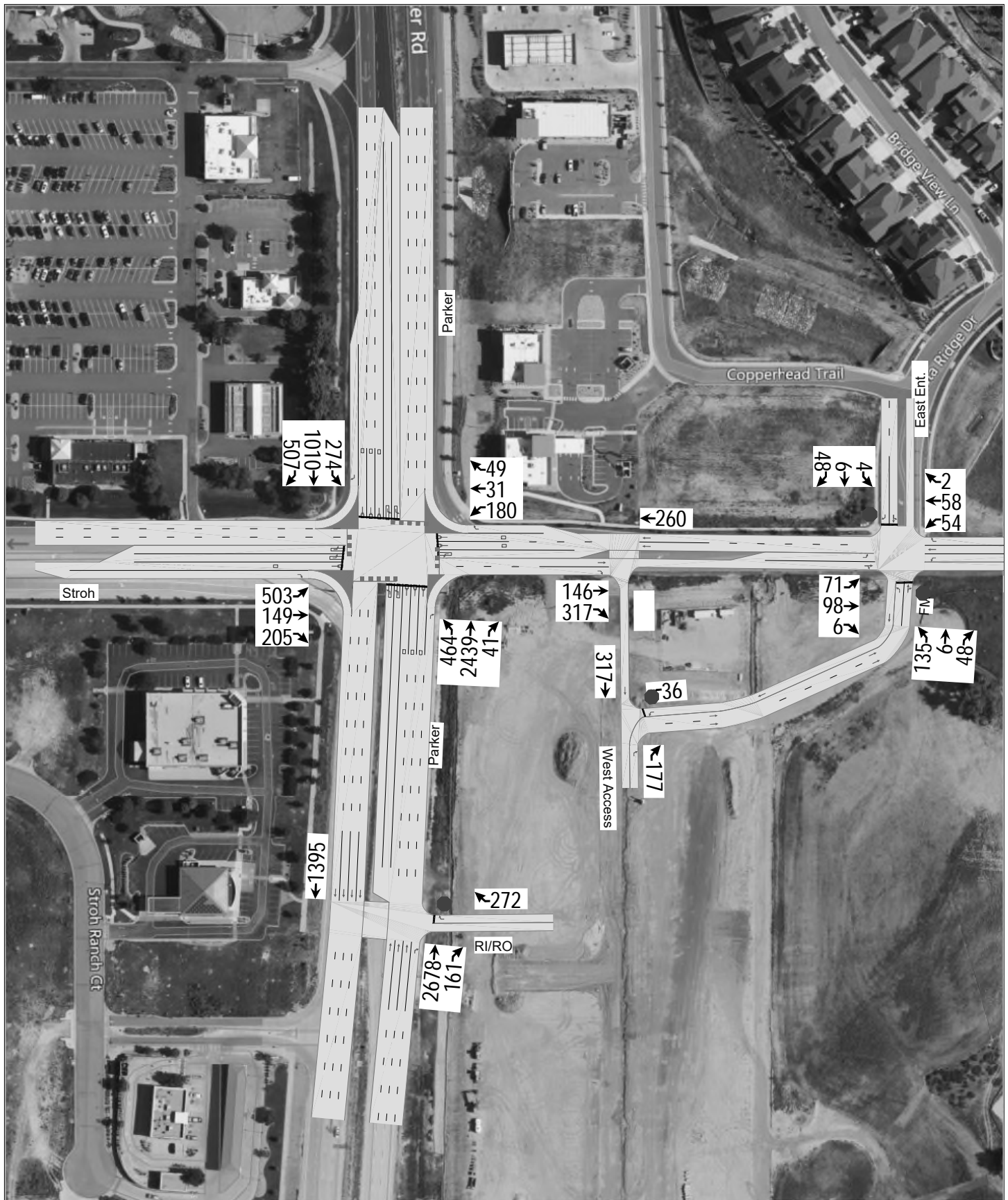
	Major1	Major2	Minor2		
Conflicting Flow All	60	0	0	305	55
Stage 1	-	-	-	55	-
Stage 2	-	-	-	250	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1544	-	-	687	1012
Stage 1	-	-	-	968	-
Stage 2	-	-	-	792	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1544	-	-	649	1012
Mov Cap-2 Maneuver	-	-	-	649	-
Stage 1	-	-	-	914	-
Stage 2	-	-	-	792	-

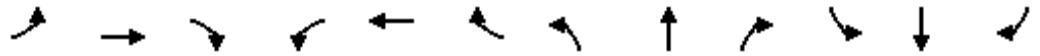
Approach

	EB	WB	SB
HCM Control Delay, s	3.9	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1544	-	-	-	649	1012
HCM Lane V/C Ratio	0.055	-	-	-	0.002	0.038
HCM Control Delay (s)	7.5	-	-	-	10.6	8.7
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0	0.1





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	547	162	223	195	33	53	504	2651	44	298	1098	551
v/c Ratio	0.98	0.79	0.60	0.87	0.10	0.19	0.83	1.03	0.05	0.90	0.51	0.56
Control Delay	95.5	91.4	14.3	97.3	61.6	1.5	72.0	62.1	0.1	95.6	33.4	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.5	91.4	14.3	97.3	61.6	1.5	72.0	62.1	0.1	95.6	33.4	4.7
Queue Length 50th (ft)	~308	155	0	189	15	0	247	~1012	0	~168	296	0
Queue Length 95th (ft)	#428	#258	82	#323	33	0	306	#1093	0	#267	354	79
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	557	223	386	236	377	305	686	2576	855	330	2169	991
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.73	0.58	0.83	0.09	0.17	0.73	1.03	0.05	0.90	0.51	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Parker Pointe
3: Parker & Stroh

2044 AM TOTAL

08/21/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	409	121	167	146	25	40	377	1983	33	223	821	412
Future Volume (veh/h)	409	121	167	146	25	40	377	1983	33	223	821	412
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	547	162	0	195	33	0	504	2651	0	298	1098	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	507	187		217	267		564	2748		276	2323	
Arrive On Green	0.15	0.10	0.00	0.12	0.08	0.00	0.16	0.54	0.00	0.08	0.46	0.00
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	547	162	0	195	33	0	504	2651	0	298	1098	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	22.0	12.8	0.0	16.2	1.3	0.0	21.4	74.8	0.0	12.0	22.4	0.0
Cycle Q Clear(g_c), s	22.0	12.8	0.0	16.2	1.3	0.0	21.4	74.8	0.0	12.0	22.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	507	187		217	267		564	2748		276	2323	
V/C Ratio(X)	1.08	0.87		0.90	0.12		0.89	0.96		1.08	0.47	
Avail Cap(c_a), veh/h	507	224		238	379		691	2748		276	2323	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	64.0	66.5	0.0	64.9	64.7	0.0	61.5	33.3	0.0	69.0	28.4	0.0
Incr Delay (d2), s/veh	63.0	24.9	0.0	31.3	0.2	0.0	12.4	10.7	0.0	76.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	7.3	0.0	9.2	0.6	0.0	10.1	30.7	0.0	8.1	8.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.0	91.4	0.0	96.2	64.9	0.0	73.9	44.0	0.0	145.4	29.1	0.0
LnGrp LOS	F	F		F	E		E	D		F	C	
Approach Vol, veh/h		709			228			3155			1396	
Approach Delay, s/veh		118.9			91.7			48.8			53.9	
Approach LOS		F			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	86.7	24.3	21.0	30.5	74.3	28.0	17.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	12.0	76.0	20.0	18.0	30.0	58.0	22.0	16.0				
Max Q Clear Time (g_c+I1), s	14.0	76.8	18.2	14.8	23.4	24.4	24.0	3.3				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.2	1.0	7.9	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	60.9
HCM 6th LOS	E

Notes

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

Intersection												
Int Delay, s/veh	8.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘		↙	↘	↙	↙	↘			↙	↘
Traffic Vol, veh/h	58	80	5	44	47	2	110	5	39	3	5	39
Future Vol, veh/h	58	80	5	44	47	2	110	5	39	3	5	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	150	0	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	107	7	59	63	3	147	7	52	4	7	52

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	66	0	0	114	0	0	479	451	111	477	451	63
Stage 1	-	-	-	-	-	-	267	267	-	181	181	-
Stage 2	-	-	-	-	-	-	212	184	-	296	270	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1536	-	-	1475	-	-	497	504	942	498	504	1002
Stage 1	-	-	-	-	-	-	738	688	-	821	750	-
Stage 2	-	-	-	-	-	-	790	747	-	712	686	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1536	-	-	1475	-	-	434	459	942	434	459	1002
Mov Cap-2 Maneuver	-	-	-	-	-	-	434	459	-	434	459	-
Stage 1	-	-	-	-	-	-	700	653	-	779	720	-
Stage 2	-	-	-	-	-	-	712	717	-	632	651	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	3		3.6		15.2		9.5	
HCM LOS					C		A	

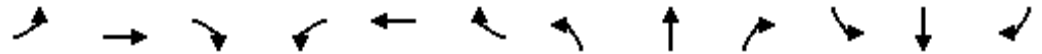
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	434	841	1536	-	-	1475	-	-	449	1002
HCM Lane V/C Ratio	0.339	0.07	0.05	-	-	0.04	-	-	0.024	0.052
HCM Control Delay (s)	17.5	9.6	7.5	-	-	7.5	-	-	13.2	8.8
HCM Lane LOS	C	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	1.5	0.2	0.2	-	-	0.1	-	-	0.1	0.2

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙			↗		↑
Traffic Vol, veh/h	29	0	0	144	0	258
Future Vol, veh/h	29	0	0	144	0	258
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	0	0	193	0	345

Major/Minor	Minor1	Major2	
Conflicting Flow All	345	-	-
Stage 1	0	-	-
Stage 2	345	-	-
Critical Hdwy	6.42	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	-	-
Pot Cap-1 Maneuver	652	0	0
Stage 1	-	0	-
Stage 2	717	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	652	-	-
Mov Cap-2 Maneuver	652	-	-
Stage 1	-	-	-
Stage 2	717	-	-

Approach	WB	SB
HCM Control Delay, s	10.9	0
HCM LOS	B	

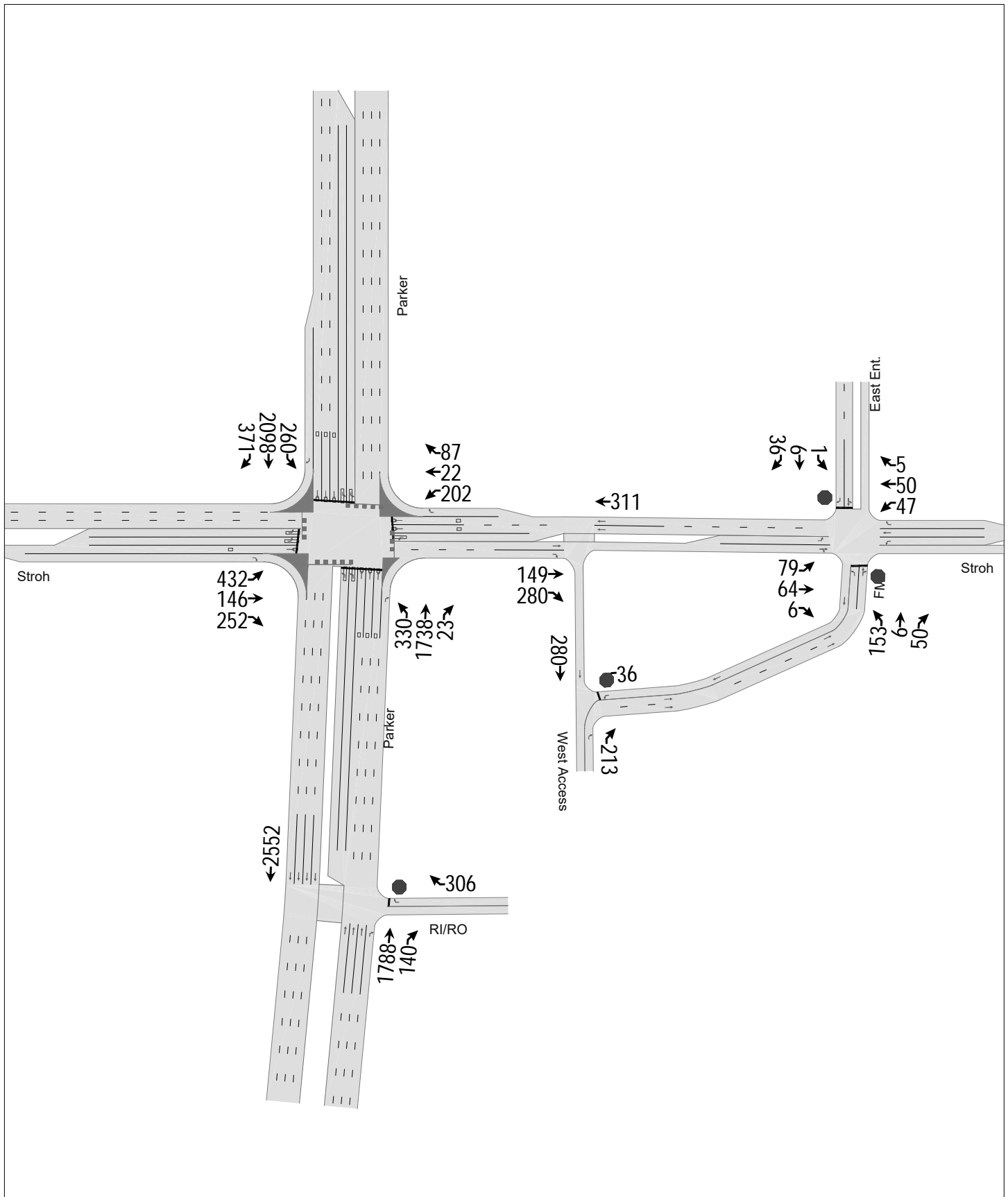
Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	652	-
HCM Lane V/C Ratio	0.059	-
HCM Control Delay (s)	10.9	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.2	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	469	159	274	219	24	95	358	1889	25	282	2281	404
v/c Ratio	1.03	0.73	0.78	0.93	0.06	0.31	0.90	0.83	0.03	0.79	1.04	0.48
Control Delay	100.0	70.1	32.4	94.5	46.1	5.3	79.2	33.8	0.1	69.6	62.8	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.0	70.1	32.4	94.5	46.1	5.3	79.2	33.8	0.1	69.6	62.8	9.0
Queue Length 50th (ft)	~199	119	62	170	8	0	145	473	0	111	~696	57
Queue Length 95th (ft)	#306	193	#169	#321	22	20	#252	543	0	#181	#790	141
Internal Link Dist (ft)		434			261			454			564	
Turn Bay Length (ft)	300		400	200		150	500			550		250
Base Capacity (vph)	457	248	374	236	471	328	397	2266	781	357	2203	845
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.64	0.73	0.93	0.05	0.29	0.90	0.83	0.03	0.79	1.04	0.48

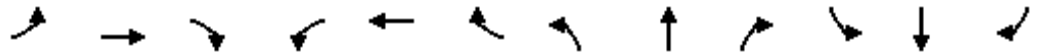
Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Parker Pointe
3: Parker & Stroh

2044 PM TOTAL
08/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖	↖	↑↑	↖	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	351	119	205	164	18	71	268	1413	19	211	1706	302
Future Volume (veh/h)	351	119	205	164	18	71	268	1413	19	211	1706	302
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	469	159	0	219	24	0	358	1889	0	282	2281	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	461	191		238	363		346	2387		336	2372	
Arrive On Green	0.13	0.10	0.00	0.13	0.10	0.00	0.10	0.47	0.00	0.10	0.46	0.00
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	469	159	0	219	24	0	358	1889	0	282	2281	0
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	16.0	10.0	0.0	14.6	0.7	0.0	12.0	37.5	0.0	9.6	51.9	0.0
Cycle Q Clear(g_c), s	16.0	10.0	0.0	14.6	0.7	0.0	12.0	37.5	0.0	9.6	51.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	461	191		238	363		346	2387		336	2372	
V/C Ratio(X)	1.02	0.83		0.92	0.07		1.04	0.79		0.84	0.96	
Avail Cap(c_a), veh/h	461	249		238	474		346	2387		346	2372	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.0	52.9	0.0	51.4	48.7	0.0	54.0	27.0	0.0	53.2	31.1	0.0
Incr Delay (d2), s/veh	46.5	16.6	0.0	37.9	0.1	0.0	58.0	2.8	0.0	16.3	11.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	5.5	0.0	8.9	0.3	0.0	7.8	14.4	0.0	4.8	21.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.5	69.5	0.0	89.2	48.8	0.0	112.0	29.8	0.0	69.5	42.5	0.0
LnGrp LOS	F	E		F	D		F	C		E	D	
Approach Vol, veh/h		628			243			2247			2563	
Approach Delay, s/veh		91.2			85.2			42.9			45.5	
Approach LOS		F			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.7	62.1	22.0	18.2	18.0	61.8	22.0	18.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	12.0	52.0	16.0	16.0	12.0	52.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s	11.6	39.5	16.6	12.0	14.0	53.9	18.0	2.7				
Green Ext Time (p_c), s	0.0	8.9	0.0	0.2	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

Notes

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

Intersection												
Int Delay, s/veh	8.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘		↙	↘	↙	↙	↘			↙	↘
Traffic Vol, veh/h	64	52	5	38	41	4	124	5	41	1	5	29
Future Vol, veh/h	64	52	5	38	41	4	124	5	41	1	5	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	150	0	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	86	70	7	51	55	5	166	7	55	1	7	39

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	60	0	0	77	0	0	429	408	74	434	406	55
Stage 1	-	-	-	-	-	-	246	246	-	157	157	-
Stage 2	-	-	-	-	-	-	183	162	-	277	249	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1544	-	-	1522	-	-	536	533	988	532	534	1012
Stage 1	-	-	-	-	-	-	758	703	-	845	768	-
Stage 2	-	-	-	-	-	-	819	764	-	729	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1544	-	-	1522	-	-	476	486	988	464	487	1012
Mov Cap-2 Maneuver	-	-	-	-	-	-	476	486	-	464	487	-
Stage 1	-	-	-	-	-	-	716	664	-	798	742	-
Stage 2	-	-	-	-	-	-	754	738	-	644	662	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	4		3.4		14.7		9.4	
HCM LOS					B		A	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	476	888	1544	-	-	1522	-	-	483	1012
HCM Lane V/C Ratio	0.348	0.069	0.055	-	-	0.033	-	-	0.017	0.038
HCM Control Delay (s)	16.6	9.4	7.5	-	-	7.4	-	-	12.6	8.7
HCM Lane LOS	C	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	1.5	0.2	0.2	-	-	0.1	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙			↗		↑
Traffic Vol, veh/h	29	0	0	173	0	228
Future Vol, veh/h	29	0	0	173	0	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	0	0	231	0	305

Major/Minor	Minor1	Major2
Conflicting Flow All	305	-
Stage 1	0	-
Stage 2	305	-
Critical Hdwy	6.42	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	5.42	-
Follow-up Hdwy	3.518	-
Pot Cap-1 Maneuver	687	0
Stage 1	-	0
Stage 2	748	0
Platoon blocked, %		-
Mov Cap-1 Maneuver	687	-
Mov Cap-2 Maneuver	687	-
Stage 1	-	-
Stage 2	748	-

Approach	WB	SB
HCM Control Delay, s	10.6	0
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	687	-
HCM Lane V/C Ratio	0.056	-
HCM Control Delay (s)	10.6	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.2	-



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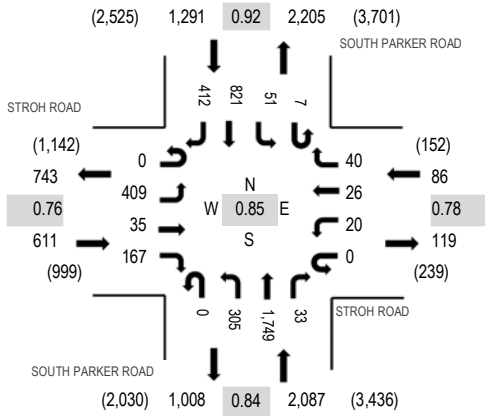
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Date: Thursday, February 22, 2024

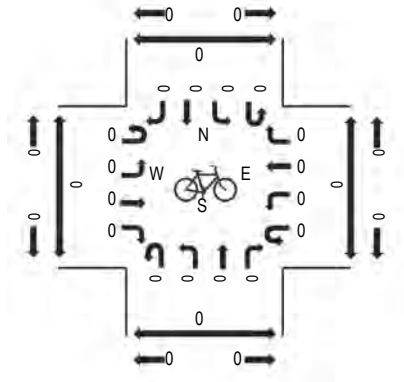
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Peak 15-Minutes: 07:30 AM - 07:45 AM

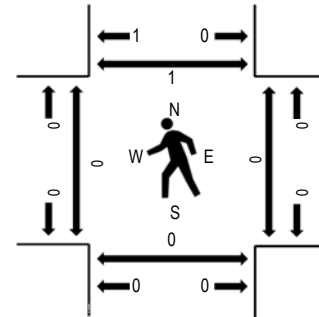
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	STROH ROAD Eastbound				STROH ROAD Westbound				SOUTH PARKER ROAD Northbound				SOUTH PARKER ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	55	5	29	0	10	3	8	0	48	410	8	1	6	192	79	854	4,075	0	0	0	0
7:15 AM	0	73	4	52	0	4	3	11	0	84	473	9	1	13	193	104	1,024	4,055	0	0	0	1
7:30 AM	0	152	16	48	0	2	7	10	0	100	515	9	4	15	200	121	1,199	3,779	0	0	0	0
7:45 AM	0	129	10	38	0	4	13	11	0	73	351	7	1	17	236	108	998	3,290	0	0	0	0
8:00 AM	0	98	11	25	0	8	9	5	0	34	319	7	6	23	212	77	834	3,037	0	0	0	0
8:15 AM	1	53	3	18	0	0	3	5	0	36	308	4	2	12	252	51	748		0	0	0	0
8:30 AM	0	51	7	25	0	3	5	9	3	28	266	4	1	14	239	55	710		0	0	0	0
8:45 AM	0	67	9	20	0	5	5	9	1	31	297	11	0	15	211	64	745		0	0	0	0
Count Total	1	678	65	255	0	36	48	68	4	434	2,939	59	16	115	1,735	659	7,112		0	0	0	1
Peak Hour	0	409	35	167	0	20	26	40	0	305	1,749	33	7	51	821	412	4,075		0	0	0	1

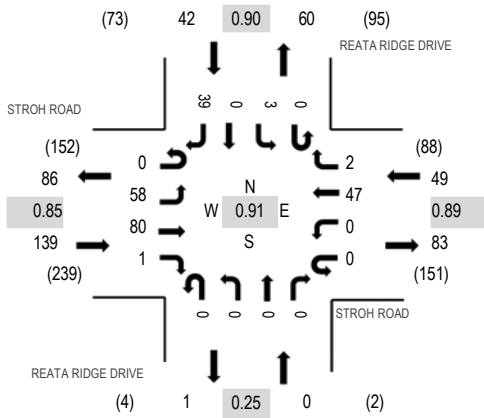
Location: 2 REATA RIDGE DRIVE & STROH ROAD AM

Date: Thursday, February 22, 2024

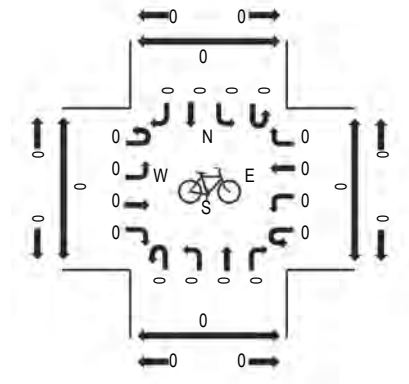
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

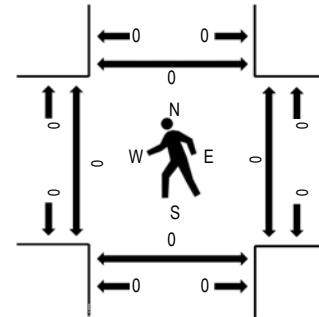
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	STROH ROAD Eastbound				STROH ROAD Westbound				REATA RIDGE DRIVE Northbound				REATA RIDGE DRIVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	10	10	0	0	0	11	1	0	0	0	0	0	1	0	11	44	212	0	0	0	0
7:15 AM	0	15	10	0	0	0	12	1	0	0	0	0	0	0	0	9	47	230	0	0	0	0
7:30 AM	0	13	27	1	0	0	10	1	0	0	0	0	0	0	0	11	63	214	0	0	0	0
7:45 AM	0	15	18	0	0	0	14	0	0	0	0	0	0	1	0	10	58	195	0	0	0	0
8:00 AM	0	15	25	0	0	0	11	0	0	0	0	0	0	2	0	9	62	190	0	0	0	0
8:15 AM	0	6	15	0	0	0	8	1	0	0	0	0	0	0	0	1	31		0	0	0	0
8:30 AM	0	9	16	0	0	0	7	0	0	0	0	0	0	0	0	12	44		0	0	0	0
8:45 AM	0	8	25	1	0	2	9	0	0	2	0	0	0	1	0	5	53		0	0	0	0
Count Total	0	91	146	2	0	2	82	4	0	2	0	0	0	5	0	68	402		0	0	0	0
Peak Hour	0	58	80	1	0	0	47	2	0	0	0	0	0	3	0	39	230		0	0	0	0



(303) 216-2439
www.alltrafficdata.net

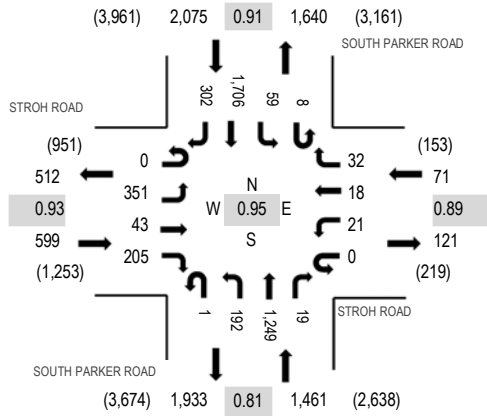
Location: 1 SOUTH PARKER ROAD & STROH ROAD PM

Date: Thursday, February 22, 2024

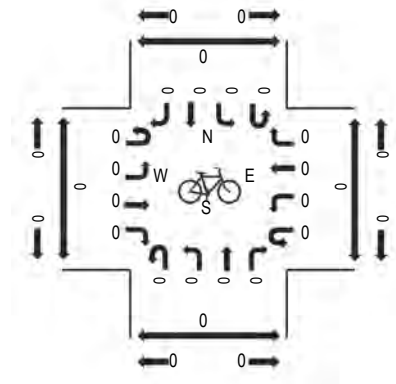
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

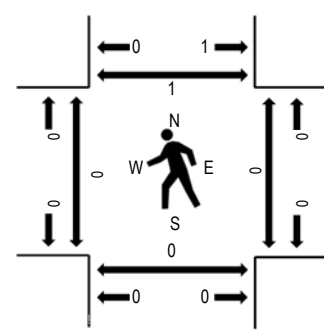
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	STROH ROAD Eastbound				STROH ROAD Westbound				SOUTH PARKER ROAD Northbound				SOUTH PARKER ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	89	9	48	0	10	2	7	0	53	395	5	0	16	392	86	1,112	4,206	0	0	0	1
4:15 PM	0	89	14	42	0	1	7	5	1	50	298	7	3	14	396	80	1,007	4,057	0	0	0	0
4:30 PM	0	88	11	56	0	4	6	12	0	40	249	5	4	14	430	70	989	4,052	0	0	0	0
4:45 PM	0	85	9	59	0	6	3	8	0	49	307	2	1	15	488	66	1,098	4,022	0	0	0	0
5:00 PM	0	94	8	42	0	5	7	7	1	36	299	1	6	17	369	71	963	3,799	0	0	0	0
5:15 PM	0	106	13	52	0	2	4	14	1	38	285	2	1	14	401	69	1,002		0	0	0	0
5:30 PM	0	111	7	46	0	4	9	10	1	33	251	2	4	12	392	77	959		0	0	0	0
5:45 PM	0	131	9	35	0	4	4	12	0	41	184	2	6	11	386	50	875		0	0	0	0
Count Total	0	793	80	380	0	36	42	75	4	340	2,268	26	25	113	3,254	569	8,005		0	0	0	1
Peak Hour	0	351	43	205	0	21	18	32	1	192	1,249	19	8	59	1,706	302	4,206		0	0	0	1

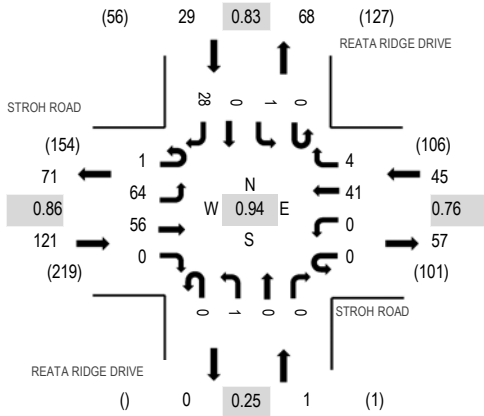
Location: 2 REATA RIDGE DRIVE & STROH ROAD PM

Date: Thursday, February 22, 2024

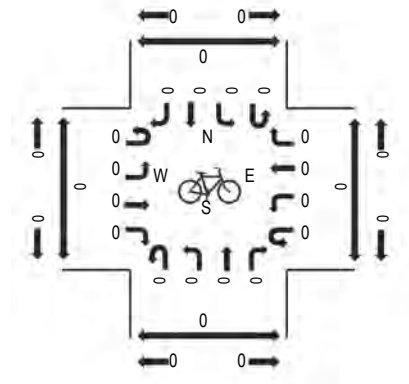
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

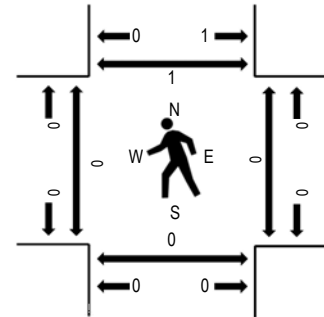
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	STROH ROAD Eastbound				STROH ROAD Westbound				REATA RIDGE DRIVE Northbound				REATA RIDGE DRIVE Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
	4:00 PM	0	20	10	0	0	0	11	1	0	0	0	0	0	0	0			0	8	50	196	0
4:15 PM	0	16	19	0	0	0	7	1	0	1	0	0	0	1	0	5	50	191	0	0	0	0	1
4:30 PM	1	11	17	0	0	0	14	2	0	0	0	0	0	0	0	7	52	194	0	0	0	0	
4:45 PM	0	17	10	0	0	0	9	0	0	0	0	0	0	0	0	8	44	186	0	0	0	0	
5:00 PM	0	14	12	0	0	0	10	0	0	0	0	0	0	0	0	9	45	186	0	0	0	0	
5:15 PM	0	14	15	0	0	0	17	3	0	0	0	0	0	0	0	4	53		0	0	0	0	
5:30 PM	0	12	9	0	0	0	15	1	0	0	0	0	0	0	0	7	44		0	0	0	0	
5:45 PM	0	14	8	0	0	0	14	1	0	0	0	0	0	0	0	7	44		0	0	0	0	
Count Total	1	118	100	0	0	0	97	9	0	1	0	0	0	1	0	55	382		0	0	0	0	1
Peak Hour	1	64	56	0	0	0	41	4	0	1	0	0	0	1	0	28	196		0	0	0	0	1



ATTACHMENT C– DOUGLAS COUNTY ASSESSOR’S INFORMATION DATA



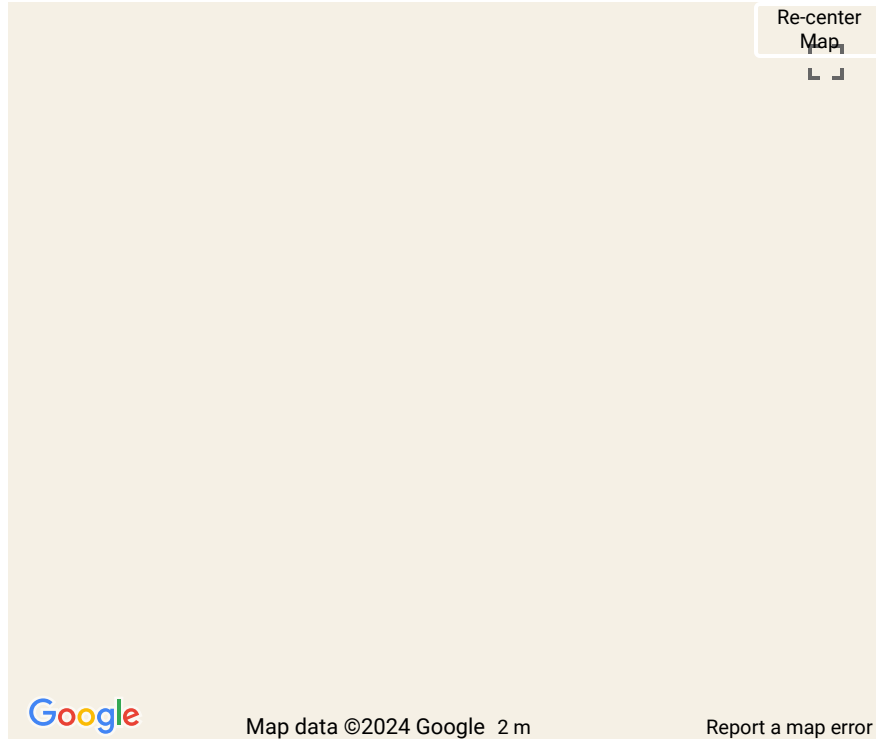
Property Details for 2024 ▾


Search  Print  Actions & Links 

Account #: R0623627


Parcel #: 2349-031-04-021

No Address




- 


Account Summary

2023 Property Tax Relief Check Information
Account Type: Vacant Land
Location Description: LOT 4A PARKER POINTE 1 AMD
1 0.543 AM/L
- 


Valuation Info

Current value in process
2024 Actual Value: \$0 2024 Tax Rate: 0.0000%
2024 Assessed Value: \$0 2024 Est. Taxes
- 


Sales History

No Sales
- 


Building Details

No Buildings
- 


Land Details

No Land
- 

Tax Authorities

14 Tax Authorities - Total Mills: 88.399
- 

Documents

Notice of Determination, Notice of Valuation and other documents related to this property.
- 

Notifications

[+](#) Expand All [-](#) Collapse All

[\[-\] Account Summary](#)

Account #: R0623627
State Parcel #: 2349-031-04-021
Account Type: Vacant Land
Tax District: 0803
Neighborhood-Ext:

Building Count: 0
Building Permit Authority:
Town of Parker (website [↗](#))
Phone: 303-841-1970

Owner Info

PARKER & STROH LLC
PO BOX 40326
DENVER, CO 80204

Subdivision

Name: PARKER POINTE
Reception No: 2024031650

Public Land Survey System (PLSS) Location

Quarter: NE; Section: 3; Township: 7; Range: 66

Location Description

LOT 4A PARKER POINTE 1 AMD 1 0.543 AM/L
[Section PDF Map ↗](#)

[\[-\] Valuation Info](#)

No Values available

[Show graphs](#) [Get Taxes Due ↗](#) [Property Tax Calculation ↗](#)

[\[-\] Sales History](#)

There are no sales for this property.

[\[-\] Building Details](#)

There are no buildings on this property.

☰ Land Details


There are no land segments for this property

Land Attributes: None listed

☰ Tax Authorities

Show graphs

ID	Authority Name	Mills	Tax Rate	Est. Tax Amount
2001	Douglas County Re-1 School District	40.730	4.0730%	\$0
0001	Douglas County Government	19.774	1.9774%	\$0
4014	South Metro Fire Rescue Fire Protection District	9.250	0.9250%	\$0
4022	Parker Water & Sanitation District	5.901	0.5901%	\$0
2004	Douglas County Schools - Debt Service	5.204	0.5204%	\$0
4390	Douglas Public Library District	3.513	0.3513%	\$0
3004	Town of Parker	2.602	0.2602%	\$0
4002	Urban Drainage & Flood Control District	0.900	0.0900%	\$0
4340	Cherry Creek Basin Water Quality Authority	0.425	0.0425%	\$0
4392	Urban Drainage & Flood South Platte	0.100	0.0100%	\$0
2002	Douglas County Schools - Cap Reserve	0.000	0.0000%	\$0
2003	Douglas County Schools - Insurance Reserve	0.000	0.0000%	\$0
4010	Regional Transportation District	0.000	0.0000%	\$0
4077	Douglas County Soil Conservation District	0.000	0.0000%	\$0
Total:	14 Authorities	88.399	8.8399%	\$0

 Documents

No Documents available

 Notifications

 Expand All  Collapse All



ATTACHMENT D – ITE PASS-BY



D



Black Rock Coffee Bar - Parker, CO

11th Edition Trip Generation Calculations

Proposed Development

937 Coffee/Donut Shop with Drive-Through Window																						
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Weekday			AM Peak Hour			PM Peak Hour			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	
Coffee/Donut Shop with Drive-Through Window	937	1.460	1000 SF GFA	533.57	50%	50%	85.88	51%	49%	38.99	50%	50%	779	389	390	125	64	61	57	28	29	Average
Coffee/Donut Shop with Drive-Through Window	937	1.460	1000 SF GFA	309.41	50%	50%	18.51	51%	49%	13.78	50%	50%	452	226	226	27	14	13	20	10	10	Minimum
Coffee/Donut Shop with Drive-Through Window	937	1.460	1000 SF GFA	869.00	50%	50%	282.05	51%	49%	92.31	50%	50%	1,269	634	635	412	210	202	135	67	68	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Weekday			AM Peak Hour			PM Peak Hour			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	
Coffee/Donut Shop with Drive-Through Window	937	1.460	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Equation

Coffee/Donut Shop with Drive-Through Window	Standard Deviation	243.65		44.92		17.79	
	Number of Studies	6		78		36	
	Average Size	2		2		2	
	R ²	N/A		N/A		N/A	

Master Plan Recalculated

937 Coffee/Donut Shop with Drive-Through Window																						
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Weekday			AM Peak Hour			PM Peak Hour			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	
Coffee/Donut Shop with Drive-Through Window	937	2.000	1000 SF GFA	533.57	50%	50%	85.88	51%	49%	38.99	50%	50%	1,067	533	534	172	88	84	78	39	39	Average
Coffee/Donut Shop with Drive-Through Window	937	2.000	1000 SF GFA	309.41	50%	50%	18.51	51%	49%	13.78	50%	50%	619	309	310	37	19	18	28	14	14	Minimum
Coffee/Donut Shop with Drive-Through Window	937	2.000	1000 SF GFA	869.00	50%	50%	282.05	51%	49%	92.31	50%	50%	1,738	869	869	564	288	276	185	92	93	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Weekday			AM Peak Hour			PM Peak Hour			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	
Coffee/Donut Shop with Drive-Through Window	937	2.000	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Equation

Coffee/Donut Shop with Drive-Through Window	Standard Deviation	243.65		44.92		17.79	
	Number of Studies	6		78		36	
	Average Size	2		2		2	
	R ²	N/A		N/A		N/A	



Black Rock Coffee Bar - Parker, CO
Source: ITE 11th Edition

Using ITE Passby Rates

Land Use	Drive-Thru Lanes	AM Peak Hour											PM Peak Hour									
		BEFORE REDUCTION			Pass-by Rate %	Pass-by Trips			After Pass-by Trips			BEFORE REDUCTION			Pass-by Rate %	Pass-by Trips			After Pass-by Trips			
		TOTAL	ENTER	EXIT		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	
Coffee/Donut Shop with Drive-Through Window	0	-	64	61	90%	113	58	55	(113)	6	6		57	28	29	98%	55	27	28	2	1	1
TOTAL		-	64	61		113	58	55	(113)	6	6		57	28	29		55	27	28	2	1	1

Weekday Pass-by Trips	
Rate (Avg)	Trips
94.0%	779
Total Pass-by	732
After Pass-by	47

Using Reduced Passby Rates IAW Parker RDCCM Section 5.6.3.1

Land Use	Drive-Thru Lanes	AM Peak Hour											PM Peak Hour									
		BEFORE REDUCTION			Pass-by Rate %	Pass-by Trips			After Pass-by Trips			BEFORE REDUCTION			Pass-by Rate %	Pass-by Trips			After Pass-by Trips			
		TOTAL	ENTER	EXIT		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	
Coffee/Donut Shop with Drive-Through Window	0	-	64	61	15%	19	10	9	(19)	54	52		-	28	29	15%	8	4	4	(8)	24	25
TOTAL		-	64	61		19	10	9	(19)	54	52		-	28	29		8	4	4	(8)	24	25

Weekday Pass-by Trips	
Rate (Avg)	Trips
15.0%	779
Total Pass-by	117
After Pass-by	662



ATTACHMENT E- TRIP GENERATION



Vehicle Pass-By Rates by Land Use									
Source: ITE <i>Trip Generation Manual</i> , 11th Edition									
Land Use Code	938								
Land Use	Coffee/Donut Shop with Drive-Through Window and No Indoor Seating								
Setting	General Urban/Suburban								
Time Period	Weekday AM Peak Period								
# Data Sites	3								
Average Pass-By Rate	90%								
Pass-By Characteristics for Individual Sites									
					Non-Pass-By Trips			Adj Street Peak	
Drive-Through Lanes	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Primary (%)	Diverted (%)	Total (%)	Hour Volume	Source
1	Washington	1997	—	83	—	—	17	—	18
1	Oregon	1998	—	95	—	—	5	—	18
1	Washington	1998	—	92	—	—	8	—	18

Vehicle Pass-By Rates by Land Use									
Source: ITE <i>Trip Generation Manual</i> , 11th Edition									
Land Use Code	938								
Land Use	Coffee/Donut Shop with Drive-Through Window and No Indoor Seating								
Setting	General Urban/Suburban								
Time Period	Weekday PM Peak Period								
# Data Sites	2								
Average Pass-By Rate	98%								
Pass-By Characteristics for Individual Sites									
					Non-Pass-By Trips			Adj Street Peak	
Drive-Through Lanes	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Primary (%)	Diverted (%)	Total (%)	Hour Volume	Source
1	Washington	1997	—	100	—	—	0	—	18
1	Oregon	1998	—	95	—	—	5	—	18



ATTACHMENT F- QUEUE DATA



Black Rock Coffee Queue Data

Location: 7451 W Glendale Avenue, Glendale, Arizona 85303

Dates Collected: 7/10/24 and 7/13/2024

Time	Queue	Time	Queue	Time	Queue	Time	Queue	Time	Queue	Time	Queue
	7/10/2024		7/10/2024		7/10/2024		7/13/2024		7/13/2024		7/13/2024
6:00 AM	4	7:00 AM	4	8:00 AM	3	9:00 AM	7	10:00 AM	12	11:00 AM	11
6:01 AM	5	7:01 AM	4	8:01 AM	3	9:01 AM	8	10:01 AM	12	11:01 AM	11
6:02 AM	4	7:02 AM	3	8:02 AM	4	9:02 AM	8	10:02 AM	12	11:02 AM	12
6:03 AM	3	7:03 AM	2	8:03 AM	3	9:03 AM	7	10:03 AM	10	11:03 AM	13
6:04 AM	2	7:04 AM	1	8:04 AM	4	9:04 AM	6	10:04 AM	9	11:04 AM	13
6:05 AM	1	7:05 AM	0	8:05 AM	3	9:05 AM	6	10:05 AM	9	11:05 AM	12
6:06 AM	1	7:06 AM	2	8:06 AM	2	9:06 AM	6	10:06 AM	9	11:06 AM	12
6:07 AM	1	7:07 AM	3	8:07 AM	2	9:07 AM	7	10:07 AM	10	11:07 AM	12
6:08 AM	1	7:08 AM	3	8:08 AM	1	9:08 AM	6	10:08 AM	9	11:08 AM	12
6:09 AM	1	7:09 AM	2	8:09 AM	1	9:09 AM	14	10:09 AM	9	11:09 AM	12
6:10 AM	1	7:10 AM	2	8:10 AM	1	9:10 AM	7	10:10 AM	8	11:10 AM	12
6:11 AM	1	7:11 AM	2	8:11 AM	1	9:11 AM	8	10:11 AM	8	11:11 AM	12
6:12 AM	1	7:12 AM	1	8:12 AM	1	9:12 AM	7	10:12 AM	9	11:12 AM	12
6:13 AM	1	7:13 AM	0	8:13 AM	0	9:13 AM	7	10:13 AM	9	11:13 AM	12
6:14 AM	2	7:14 AM	0	8:14 AM	2	9:14 AM	7	10:14 AM	9	11:14 AM	13
6:15 AM	1	7:15 AM	3	8:15 AM	2	9:15 AM	7	10:15 AM	9	11:15 AM	13
6:16 AM	0	7:16 AM	2	8:16 AM	1	9:16 AM	6	10:16 AM	9	11:16 AM	13
6:17 AM	1	7:17 AM	4	8:17 AM	2	9:17 AM	6	10:17 AM	10	11:17 AM	13
6:18 AM	1	7:18 AM	4	8:18 AM	4	9:18 AM	7	10:18 AM	11	11:18 AM	13
6:19 AM	0	7:19 AM	4	8:19 AM	4	9:19 AM	6	10:19 AM	10	11:19 AM	13
6:20 AM	0	7:20 AM	4	8:20 AM	4	9:20 AM	6	10:20 AM	9	11:20 AM	15
6:21 AM	2	7:21 AM	4	8:21 AM	3	9:21 AM	5	10:21 AM	9	11:21 AM	15
6:22 AM	2	7:22 AM	3	8:22 AM	2	9:22 AM	5	10:22 AM	9	11:22 AM	15
6:23 AM	2	7:23 AM	2	8:23 AM	2	9:23 AM	5	10:23 AM	11	11:23 AM	13
6:24 AM	3	7:24 AM	2	8:24 AM	2	9:24 AM	8	10:24 AM	10	11:24 AM	13
6:25 AM	4	7:25 AM	1	8:25 AM	1	9:25 AM	9	10:25 AM	10	11:25 AM	13
6:26 AM	5	7:26 AM	2	8:26 AM	0	9:26 AM	11	10:26 AM	10	11:26 AM	11
6:27 AM	4	7:27 AM	2	8:27 AM	1	9:27 AM	8	10:27 AM	11	11:27 AM	13
6:28 AM	4	7:28 AM	2	8:28 AM	1	9:28 AM	8	10:28 AM	11	11:28 AM	12
6:29 AM	4	7:29 AM	2	8:29 AM	1	9:29 AM	7	10:29 AM	11	11:29 AM	12
6:30 AM	4	7:30 AM	1	8:30 AM	1	9:30 AM	9	10:30 AM	11	11:30 AM	12
6:31 AM	4	7:31 AM	3	8:31 AM	1	9:31 AM	9	10:31 AM	11	11:31 AM	12
6:32 AM	3	7:32 AM	3	8:32 AM	3	9:32 AM	8	10:32 AM	11	11:32 AM	10
6:33 AM	5	7:33 AM	3	8:33 AM	2	9:33 AM	10	10:33 AM	11	11:33 AM	10
6:34 AM	3	7:34 AM	4	8:34 AM	4	9:34 AM	10	10:34 AM	11	11:34 AM	10
6:35 AM	3	7:35 AM	4	8:35 AM	3	9:35 AM	9	10:35 AM	11	11:35 AM	10
6:36 AM	3	7:36 AM	2	8:36 AM	2	9:36 AM	10	10:36 AM	12	11:36 AM	10
6:37 AM	4	7:37 AM	2	8:37 AM	2	9:37 AM	12	10:37 AM	12	11:37 AM	10
6:38 AM	5	7:38 AM	1	8:38 AM	4	9:38 AM	11	10:38 AM	11	11:38 AM	9
6:39 AM	3	7:39 AM	1	8:39 AM	5	9:39 AM	11	10:39 AM	11	11:39 AM	9
6:40 AM	4	7:40 AM	0	8:40 AM	6	9:40 AM	9	10:40 AM	14	11:40 AM	8
6:41 AM	4	7:41 AM	0	8:41 AM	5	9:41 AM	9	10:41 AM	14	11:41 AM	8
6:42 AM	3	7:42 AM	2	8:42 AM	5	9:42 AM	8	10:42 AM	14	11:42 AM	7
6:43 AM	4	7:43 AM	3	8:43 AM	5	9:43 AM	10	10:43 AM	13	11:43 AM	7
6:44 AM	5	7:44 AM	4	8:44 AM	4	9:44 AM	11	10:44 AM	12	11:44 AM	7
6:45 AM	5	7:45 AM	2	8:45 AM	3	9:45 AM	11	10:45 AM	11	11:45 AM	7
6:46 AM	4	7:46 AM	1	8:46 AM	1	9:46 AM	11	10:46 AM	10	11:46 AM	9
6:47 AM	3	7:47 AM	4	8:47 AM	1	9:47 AM	11	10:47 AM	10	11:47 AM	9
6:48 AM	3	7:48 AM	4	8:48 AM	2	9:48 AM	13	10:48 AM	10	11:48 AM	8
6:49 AM	3	7:49 AM	5	8:49 AM	3	9:49 AM	13	10:49 AM	9	11:49 AM	7
6:50 AM	3	7:50 AM	4	8:50 AM	3	9:50 AM	13	10:50 AM	9	11:50 AM	6
6:51 AM	6	7:51 AM	3	8:51 AM	3	9:51 AM	10	10:51 AM	10	11:51 AM	8
6:52 AM	7	7:52 AM	2	8:52 AM	3	9:52 AM	10	10:52 AM	11	11:52 AM	7
6:53 AM	6	7:53 AM	3	8:53 AM	4	9:53 AM	11	10:53 AM	11	11:53 AM	7
6:54 AM	6	7:54 AM	3	8:54 AM	3	9:54 AM	10	10:54 AM	11	11:54 AM	8
6:55 AM	5	7:55 AM	3	8:55 AM	4	9:55 AM	10	10:55 AM	11	11:55 AM	8
6:56 AM	4	7:56 AM	2	8:56 AM	5	9:56 AM	11	10:56 AM	11	11:56 AM	8
6:57 AM	3	7:57 AM	2	8:57 AM	5	9:57 AM	11	10:57 AM	10	11:57 AM	8
6:58 AM	2	7:58 AM	4	8:58 AM	5	9:58 AM	11	10:58 AM	10	11:58 AM	7
6:59 AM	2	7:59 AM	4	8:59 AM	5	9:59 AM	11	10:59 AM	10	11:59 AM	6

MAX	15
Average	6