

# Exhibit E Traffic Impact Study

To: Justin Ahn, PWS, SSIT

**Environmental Resources Management** 

Managing Consultant, CPD

From: Josh Coburn, PE, PTOE, RSP1

Date: April 22, 2024

Re: Pike County Solar Project Traffic Impact Study, Pike County, Kentucky

#### **EXECUTIVE SUMMARY**

The Pike County Solar Project development is proposed for a property located in Pike County, Kentucky west of US 119. The petitioner proposes to utilize the existing land to establish a solar facility on the site which is approximately 1,543 acres in size. The project site will have primary access points along US 119, KY 881 (Brushy Road), and KY 1426 (Bent Branch Road).

In this study, analysis of the existing conditions, the 2024 construction year, and the operation phase were performed. The traffic impact study (TIS) evaluated the operating conditions for the AM and PM peak hours at the following four roadway segments:

- KYTC Count Station 098015: KY 881 (Brushy Road) from US 119 (MP 0.0000) to Brushy Fork Road (MP. 4.6540)
- KYTC Count Station 098762: KY 1426 (Bent Branch Road) from KY 194 (MP 15.9930) to US 119 (MP 18.6880)
- KYTC Count Station 098812: US 119 from KY 194 Underpass (MP 7.8860) to KY 1426 (Bent Branch Road) (MP 9.6920)
- KYTC Count Station 098813: US 119 from KY 1426 (Bent Branch Road) (MP 9.6920) to KY 881 (Brushy Road) (MP 10.4800)

Based on the results of the analysis, the following conclusions were developed:

- During construction, all highway segments are anticipated to continue to operate at acceptable levels of service (LOS) standards during both the peak hours. Therefore, the construction for this project will not adversely affect traffic operations on US 119, KY 881 (Brushy Road), and KY 1426 (Bent Branch Road).
- After construction is complete, all highway segments are anticipated to continue to operate at acceptable level of service (LOS) standards during both the peak hours. Therefore, the postconstruction operation of this solar field site will not adversely affect traffic operations on US 119, KY 881 (Brushy Road), and KY 1426 (Bent Branch Road).



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#### 1 INTRODUCTION

This traffic study was undertaken to assess the traffic impact of a proposed solar facility in Pike County, Kentucky. The project site is located northwest of US 119. The vicinity map (Figure 1) displays the location of the proposed project and study area.

The project site will have a primary access point along US 119, KY 881 (Brushy Road), and KY 1426 (Bent Branch Road). Existing traffic conditions, a construction year of 2024, and the operational phase of the site were evaluated as part of the study. Twenty-four-hour count and classification data were obtained from The Kentucky Transportation Cabinet (KYTC) to establish the existing traffic conditions. Figure 2 shows the locations of the four KYTC count stations used in this analysis. The summarized count data for each of these KYTC count stations is included in Appendix A for the following KYTC count stations:

- KYTC Count Station 098015: KY 881 (Brushy Road) from US 119 (MP 0.0000) to Brushy Fork Road (MP. 4.6540)
- KYTC Count Station 098762: KY 1426 (Bent Branch Road) from KY 194 (MP 15.9930) to US 119 (MP 18.6880)
- KYTC Count Station 098812: US 119 from KY 194 Underpass (MP 7.8860) to KY 1426 (Bent Branch Road) (MP 9.6920)
- KYTC Count Station 098813: US 119 from KY 1426 (Bent Branch Road) (MP 9.6920) to KY 881 (Brushy Road) (MP 10.4800)

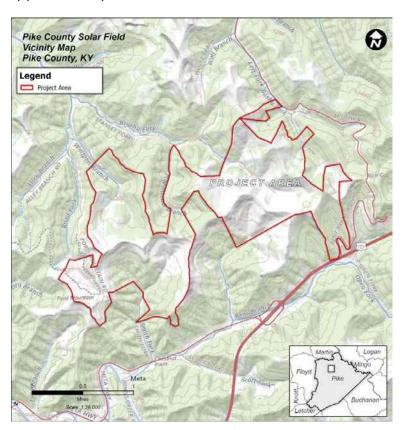


Figure 1: Vicinity Map



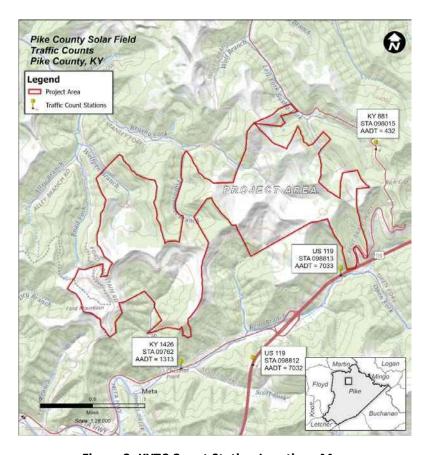


Figure 2: KYTC Count Station Locations Map

#### 2 EXISTING CONDITIONS

#### 2.1 REGIONAL AND LOCAL ACCESS

US 119, KY 881 (Brushy Road), and KY 1426 (Bent Branch Road) will provide local and regional access to the proposed project. A brief description of the surrounding roadways follows:

**US 119** – US 119 is a rural principal arterial that provides local and regional access to the proposed project. US 119 generally runs in the north-south direction. Lane widths measure approximately 12 feet. In the vicinity of the project site, this road consists of two thru lanes in each direction and wide shoulders (approximately 10') on both sides of the roadway. The existing speed limit is posted at 55 mph.

**KY 881 (Brushy Road)** – KY 881 (Brushy Road) is a rural minor collector that provides local access to the proposed project. KY 881 (Brushy Road) generally runs in the north-south direction. Lane widths measure approximately 11 feet. In the vicinity of the project site, this road consists of one thru lane in each direction. The existing speed limit is posted at 55 mph.

**KY 1426 (Bent Branch Road)** – KY 1426 (Bent Branch Road) is a rural major collector that provides local and regional access to the proposed project. KY 1426 (Bent Branch Road) generally runs in the east-west direction. Lane widths measure approximately 11 feet. In the vicinity of the project site, this road consists of one thru lane in each direction. The existing speed limit is posted at 45 mph.



#### 2.2 BASE TRAFFIC VOLUMES (EXISTING CONDITION)

On US 119 at KYTC Count Station 098812, traffic counts were taken each hour from 2:00 PM on November 4, 2020 to 2:00 PM on November 6, 2020. On US 119 at KYTC Count Station 098813, traffic counts were taken each hour from 4:00 PM on September 30, 2020 to 4:00 PM on October 2, 2020. On KY 881 (Brushy Road) at KYTC Count Station 098015, traffic counts were taken each hour from 3:00 PM on September 28, 2022 to 3:00 PM on September 30, 2022. On Kentucky 1426 (Bent Branch Road) at KYTC Count Station 098765, traffic counts were taken each hour from 4:00 PM on December 1, 2021 to 4:00 PM on December 3, 2021. All traffic volumes can be found in the Appendix A.

#### 2.3 BACKGROUND TRAFFIC VOLUMES

The historic traffic volumes along KY 881 (Brushy Road) has shown a flat growth rate over the twelve years between 2010 and 2022 (KYTC Count Station 098015). Along KY 1426 (Bent Branch Road), the historic traffic volumes has shown a flat growth rate over the nine years between 2012 and 2003 (KYTC Count Station 098762). Along US 119, the historic traffic volumes has shown a flat growth rate for the 7 years between 2016 and 2009 (KYTC Count Station 098812) and for the 8 years between 2017 and 2009 (KYTC Count Station 098813). The 2020 and 2021 historic volumes were not considered due to the COVID-19 pandemic and its effect on traffic. The analysis assumes an annual flat growth rate for all traffic within the project vicinity.

#### 2.4 METHODOLOGY AND EXISTING CONDITIONS ANALYSIS

Two-lane highway analysis was used to evaluate KY 881 (Brushy Road) and KY 1426 (Bent Branch Road) using Highway Capacity Software (HCS2024). According to the Highway Capacity Manual, the roadway characteristics of KY 881 (Brushy Road) and KY 1426 (Bent Branch Road) would classify both as Class II Highways (see Table 2 below). Multilane highway analysis was used to evaluate US 119 also using HCS2024. The results can be found in Appendix B. The highway analyses estimates capacity and Level of Service (LOS) for given traffic and geometric conditions. LOS provides a measure describing the quality of traffic flow provided by a roadway facility, expressed in terms of letter grades with LOS A representing the highest quality traffic flow and minimal delay, and LOS F representing poor traffic operations and significant delay. The two-lane highways method utilizes follower density (followers/mile) as the service measure for LOS. The multilane highways method utilizes density (pc/mi/ln) as the service measure for LOS. Table 1 displays the density ranges with its corresponding LOS for multilane highway segments and Table 2 displays the density ranges with its corresponding LOS for two-lane highway segments. These were extracted from the Highway Capacity Manual (HCM).

LOS	Density (pc/mi/ln)
Α	≤11
В	>11 - 18
С	>18 - 26
D	>26 - 35
Е	>35 - 45
F	Demand Exceeds Capacity OR Density > 45

Table 1: LOS Criteria for Basic Freeway and Multilane Highway Segments



LOS	Class I Hig	thways	<u>Class II</u> <u>Highways</u>	<u>Class III</u> <u>Highways</u>
	ATS (mi/h)	PTSF (%)	PTSF (%)	PFFS (%)
Α	>55	≤35	≤40	>91.7
В	>50 - 55	>35 - 50	>40 - 55	>83.3 - 91.7
С	>45 - 50	>50 - 65	>55 - 70	>75.0 - 83.3
D	>40 - 45	>65 - 80	>70 - 85	>66.7 - 75.0
Е	≤40	>80	>85	≤66.7
F	Demand Exceeds Capacity			

**Table 2: LOS Criteria for Highways** 

The results of the existing traffic AM peak-hour analyses are summarized in Table 3. The results of the existing traffic PM peak-hour analyses are summarized in Table 4. For US 119, which was analyzed using the multilane analysis method, the two densities listed represent the density for each direction of traffic. The tables indicate that all highways currently operate at acceptable level-of-service standards during both the AM and PM peak hours.

	Existing	
Segment	Density	LOS
US 119 at:		
KY 194 Underpass (MP 7.8860) to KY 1426 (Bent Branch		
Road) (MP 9.6920)	2.0, 3.9	Α
KY 1426 (Bent Branch Road) (MP 9.6920) to KY 881 (Brushy		
Road) (MP 10.4800)	2.9, 4.8	Α
KY 881 (Brushy Road) at:		
US 119 (MP 0.0000) to Brushy Fork Road (MP. 4.6540)	0.1	Α
KY 1426 (Bent Branch Road) at:		
KY 194 (MP 15.9930) to US 119 (MP 18.6880)	0.5	Α

**Table 3: Existing AM Highway Analysis** 



	Existing	
Segment	Density	LOS
US 119 at:		
KY 194 Underpass (MP 7.8860) to KY 1426 (Bent Branch		
Road) (MP 9.6920)	3.8, 3.2	Α
KY 1426 (Bent Branch Road) (MP 9.6920) to KY 881 (Brushy		
Road) (MP 10.4800)	4.7, 3.3	Α
KY 881 (Brushy Road) at:		
US 119 (MP 0.0000) to Brushy Fork Road (MP. 4.6540)	0.1	А
KY 1426 (Bent Branch Road) at:		
KY 194 (MP 15.9930) to US 119 (MP 18.6880)	0.5	А

**Table 4: Existing PM Highway Analysis** 

#### 3 TRIP GENERATION AND PROJECTED TRAFFIC VOLUMES

#### 3.1 CONSTRUCTION

Trip estimates for the proposed project are based upon information provided by the developer for construction and operations traffic. The trip generation analysis for this project is based on the number of workers and the associated construction and delivery truck trips expected during the construction of the project. Construction workers will consist of laborers, equipment operators, electricians, supervisory personnel, support personnel, and construction management personnel. It is envisioned that workers will arrive from passenger vehicles and trucks daily during the AM (7:00-9:00 AM) and depart during the PM (3:00-6:00 PM) peak hours. Equipment deliveries will occur at various times during the day. During construction, the vehicle traffic expected is approximately 100 pickup trucks and passenger cars and 5 to 10 tractor trailer trucks. Therefore, this analysis will assume 10 tractor trailer trucks per day. The construction of the proposed facility will take from twelve to eighteen months to complete.

#### 3.2 CONSTRUCTION ANALYSIS

The construction year analysis assumed the same roadway geometry that was used for the analysis of existing conditions. The results of the construction year for the AM peak-hour analysis are summarized in Table 5. The results of the construction year for the PM peak-hour is summarized in Table 6. The tables indicates that all highway segments are anticipated to continue to operate at acceptable LOS standards during construction for both peak hours. Therefore, the construction for this project will not adversely affect the operation of US 119, KY 881 (Brushy Road), and KY 1426 (Bent Branch Road).



	Existing	
Segment	Density	LOS
US 119 at:		
KY 194 Underpass (MP 7.8860) to KY 1426 (Bent Branch		
Road) (MP 9.6920)	2.6, 4.5	Α
KY 1426 (Bent Branch Road) (MP 9.6920) to KY 881 (Brushy		
Road) (MP 10.4800)	3.5, 5.4	Α
KY 881 (Brushy Road) at:		
US 119 (MP 0.0000) to Brushy Fork Road (MP. 4.6540)	0.9	Α
KY 1426 (Bent Branch Road) at:		
KY 194 (MP 15.9930) to US 119 (MP 18.6880)	1.9	Α

**Table 5: Construction AM Highway Analysis** 

	Existing	
Segment	Density	LOS
US 119 at:		
KY 194 Underpass (MP 7.8860) to KY 1426 (Bent Branch		
Road) (MP 9.6920)	4.4, 3.8	Α
KY 1426 (Bent Branch Road) (MP 9.6920) to KY 881 (Brushy		
Road) (MP 10.4800)	5.3, 3.8	Α
KY 881 (Brushy Road) at:		
US 119 (MP 0.0000) to Brushy Fork Road (MP. 4.6540)	0.9	Α
KY 1426 (Bent Branch Road) at:		
KY 194 (MP 15.9930) to US 119 (MP 18.6880)	1.9	Α

**Table 6: Construction PM Highway Analysis** 

#### 3.3 OPERATION

Once operational, the solar facility will only have to be managed and monitored. Trip estimates for the proposed project are based upon information provided by the developer. It is estimated that the facility will have one vehicle travel to the site each day post-construction.

#### 3.4 OPERATION ANALYSIS

The operation analysis assumed the same roadway geometry that was used for the analysis of existing conditions. The results of the operation phase for the AM peak-hour analysis are summarized in Table 7. The results of the operation phase for the PM peak-hour is summarized in Table 8. The tables indicate



that all highway segments are anticipated to continue to operate at acceptable LOS standards during operation for both peak hours. This additional volume for the operational phase of the project will have no measurable impact on the traffic and/or transportation infrastructure.

	Existing	
Segment	Density	LOS
US 119 at:		
KY 194 Underpass (MP 7.8860) to KY 1426 (Bent Branch		
Road) (MP 9.6920)	2.0, 3.9	Α
KY 1426 (Bent Branch Road) (MP 9.6920) to KY 881 (Brushy		
Road) (MP 10.4800)	2.9, 4.8	Α
KY 881 (Brushy Road) at:		
US 119 (MP 0.0000) to Brushy Fork Road (MP. 4.6540)	0.1	Α
KY 1426 (Bent Branch Road) at:		
KY 194 (MP 15.9930) to US 119 (MP 18.6880)	0.5	Α

**Table 7: Operation AM Highway Analysis** 

	Existing	
Segment	Density	LOS
US 119 at:		
KY 194 Underpass (MP 7.8860) to KY 1426 (Bent Branch		
Road) (MP 9.6920)	3.8, 3.2	Α
KY 1426 (Bent Branch Road) (MP 9.6920) to KY 881 (Brushy		
Road) (MP 10.4800)	4.7, 3.3	Α
KY 881 (Brushy Road) at:		
US 119 (MP 0.0000) to Brushy Fork Road (MP. 4.6540)	0.1	А
KY 1426 (Bent Branch Road) at:		
KY 194 (MP 15.9930) to US 119 (MP 18.6880)	0.5	А

**Table 8: Operation PM Highway Analysis** 



#### 4 CONCLUSIONS AND RECOMMENDATIONS

As demonstrated in the traffic analysis, the construction period trip generation of workers and trucks will not generate a significant number of trips on local roadways. US 119, KY 881 (Brushy Road), and KY 1426 (Bent Branch Road) will continue to operate at an acceptable LOS during the scenario of when construction traffic is added to the existing peak traffic counts and during the scenario when post-construction traffic is added to existing peak traffic counts. Although no significant or adverse traffic impacts are expected during project construction or operation, using mitigation measures such as ridesharing between construction workers, using appropriate traffic controls, or allowing flexible working hours outside of the peak hour could be implemented to minimize any potential for delays during the AM and PM peak hours. It is recommended that deliveries involving large heavy loads be scheduled during off peak hours to minimize traffic impacts.



### **APPENDIX A**

TRAFFIC COUNTS AND CLASSIFICATION DATA



#### Historical Traffic Volume Summary

#### Station Details:

Sta ID:	098015
Sta Type:	Full Coverage
Мар:	<u>MapIt</u>
District:	12
County:	Pike
Route:	098-KY-0881 -000
Route Desc:	KY-881

Begin MP:	0
Begin Desc:	US 119
End Mp:	4.6540
End Desc:	BRUSHY FORK ROAD
Impact Year:	1998
Year Added:	

#### **Newest Count:**

AADT:	432
Year:	2022
% Single:	
% Combo:	
K Factor:	12.30
D Factor:	58

#### Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

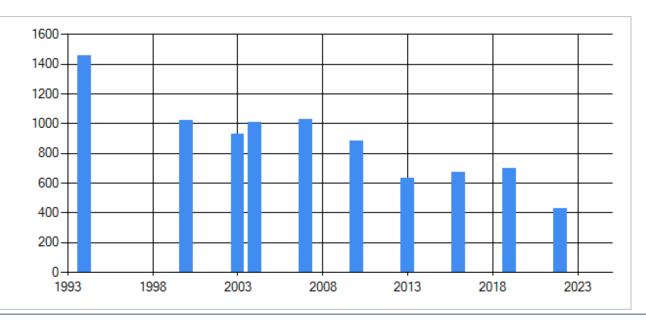
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	1010
2023		2013	634	2003	929
2022	432	2012		2002	
2021		2011		2001	
2020		2010	884	2000	1020
2019	702	2009		1999	
2018		2008		1998	
2017		2007	1030	1997	
2016	673	2006		1996	
2015		2005		1995	



# **Kentucky Transportation Cabinet**

Short-term Hourly Traffic Volume for 09/28/2022 through 09/30/2022

Site names: 098015, Seasonal Factor Grp: 2
County: Pike Daily Factor Grp: 2
Funct Class: Minor Collector Axle Factor Grp: 08
Location: 098-KY-0881 -000 @ 2.327 From: US 119 Growth Factor Grp: 08

	Su	ın, Sep 25	, 2022	Mor	n, Sep 26	, 2022	Tu	e, Sep 27	, 2022	Wed	d, Sep 28,	2022	Thu	ı, Sep 29, 2	2022	Fri, Sep 30, 2022			Sat, Oct 1, 2022		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00													6			2					
01:00													5			5					
02:00													2			2					
03:00													1			2					
04:00													4			9				1	<u> </u>
05:00													16			17					
06:00													24			21					<u> </u>
07:00													53			50					<u> </u>
08:00													18			29					
09:00													20			33					
10:00													33			17					
11:00													35			30					
12:00													27			40					
13:00													27			38					<u> </u>
14:00													29			42					
15:00										38			40								
16:00										41			48								1
17:00										42			33								
18:00										31			24								<u> </u>
19:00										22			14								L
20:00										6			18								
21:00										17			21								
22:00										6			9							ı	1
23:00										2			3								
Total										205			510			337					
AM Peak Vol													53			50				ı	1
AM Peak Fct													.828			.833					<u></u>
AM Peak Hr													7: 00			7: 00					
PM Peak Vol													48							ı	1
PM Peak Fct													.8								
PM Peak Hr													16: 00			:					
Seasonal Fct										.938	.938	.938	.938	.938	.938	.938	.938	.938			
Daily Fct										.977	.977	.977	.927	.927	.927	.849	.849	.849			
Axle Fct										.479	.479	.479	.479	.479	.479	.479	.479	.479			
Pulse Fct										2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000			1

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## Historical Traffic Volume Summary Station Details:

Sta ID:	098812
Sta Type:	Classification
Мар:	<u>Maplt</u>
District:	12
County:	Pike
Route:	098-US-0119 -000
Route Desc:	US-119

Begin MP:	7.8860
Begin Desc:	KY 194 UNDERPASS
End Mp:	9.6920
End Desc:	KY 1426
Impact Year:	
Year Added:	2009

Newest Cot	אוונ.
AADT:	7032
Year:	2020
% Single:	6.1760
% Combo:	4.4630
K Factor:	8.90
D Factor:	55

Newest Count:

#### Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

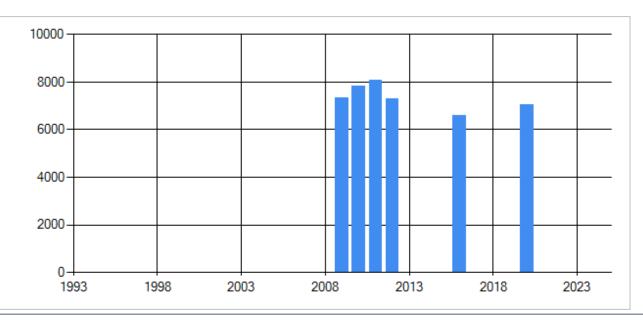
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	
2023		2013		2003	
2022		2012	7281	2002	
2021		2011	8090	2001	
2020	7032	2010	7830	2000	
2019		2009	7350	1999	
2018		2008		1998	
2017		2007		1997	
2016	6611	2006		1996	
2015		2005		1995	



# **Kentucky Transportation Cabinet**

Short-term Hourly Traffic Volume for 11/04/2020 through 11/06/2020

Seasonal Factor Grp: 2 Site names: 098812, Daily Factor Grp: 2 County: Pike Principal Arterial - Other 02 Funct Class: Axle Factor Grp: 098-US-0119 -000 @ 9.249 From: KY 194 Growth Factor Grp: 02 Location:

	S	un, Nov 1,	2020	Мс	on, Nov 2,	2020	Tı	ıe, Nov 3,	2020	We	ed, Nov 4,	2020	Thu	, Nov 5,	2020	F	ri, Nov 6, 2	2020	Sat, Nov 7, 2020		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00													45	29	16	43	28	15			
01:00													28	18	10	23	15	8			
02:00													14	8	6	30	16	14			
03:00													46	27	19	44	22	22			
04:00													87	47	40	77	35	42			
05:00													167	74	93	148	69	79			
06:00													357	133	224	288	94	194			
07:00													525	176	349	525	164	361			
08:00													440	163	277	407	161	246			
09:00													385	151	234	415	140	275			
10:00													375	203	172	403	167	236			
11:00													423	208	215	440	214	226			
12:00													496	211	285	467	216	251			
13:00													450	210	240	502	231	271			
14:00										461	235	226	446	212	234						
15:00										495	261	234	539	288	251						
16:00										607	360	247	627	342	285						
17:00										607	345	262	626	377	249						
18:00										427	238	189	447	267	180						
19:00										229	150	79	256	164	92						
20:00										202	127	75	177	119	58						
21:00										115	67	48	149	93	56						
22:00										85	61	24	117	85	32						<u> </u>
23:00										56	36	20	69	45	24						
Total										3,284	1,880	1,404	7,291	3,650	3,641	3,812	1,572	2,240			
AM Peak Vol													553	210	359	539	214	368			<u> </u>
AM Peak Fct													.823	.833	.801	.797	.907	.773			
AM Peak Hr													7: 15	10: 45	7: 15	7: 15	11: 00	7: 15			
PM Peak Vol													664	404	297						
PM Peak Fct													.949	.91	.863						
PM Peak Hr													16: 45	16: 45	15: 45	:	:	:			
Seasonal Fct										1.012	1.012	1.012	1.012	1.012	1.012	1.012	1.012	1.012			
Daily Fct										.958	.958	.958	1.012	1.012	1.012	.885	.885	.885			
Axle Fct										.500	.500	.500	.500	.500	.500	.500	.500	.500			
Pulse Fct										2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000			1

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### Historical Traffic Volume Summary

#### Station Details:

Sta ID:	098813
Sta Type:	Full Coverage
Мар:	<u>Maplt</u>
District:	12
County:	Pike
Route:	098-US-0119 -000
Route Desc:	US-119

9.6920
KY 1426
10.48
KY 881
2009

Newest Cou	unt:
AADT:	7033
Year:	2020
% Single:	5.4790
% Combo:	3.8420
K Factor:	10.40
D Factor:	60

#### Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

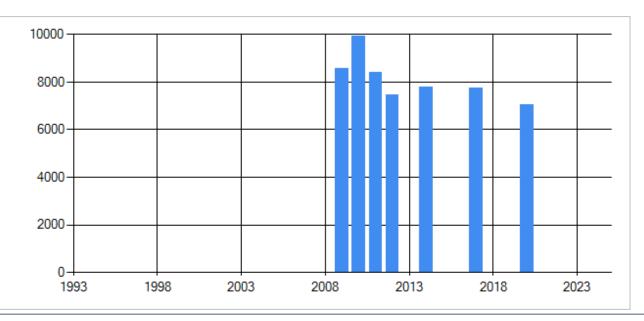
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014	7809	2004	
2023		2013		2003	
2022		2012	7451	2002	
2021		2011	8420	2001	
2020	7033	2010	9940	2000	
2019		2009	8590	1999	
2018		2008		1998	
2017	7765	2007		1997	
2016		2006		1996	
2015		2005		1995	



# **Kentucky Transportation Cabinet**

Short-term Hourly Traffic Volume for 09/30/2020 through 10/02/2020

Site names:098813,Seasonal Factor Grp:2County:PikeDaily Factor Grp:2Funct Class:Principal Arterial - OtherAxle Factor Grp:02Location:098-US-0119 -000 @ 10.086 From: KY 1426Growth Factor Grp:02

	Su	ın, Sep 27	, 2020	Мо	n, Sep 28	, 2020	Tu	e, Sep 29	, 2020	Wed	d, Sep 30,	2020	Th	u, Oct 1, 2	020	F	ri, Oct 2, 2	020	Sat, Oct 3, 2020		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00													50	28	22	44	31	13			
01:00													44	19	25	40	27	13			
02:00													32	14	18	46	20	26			
03:00													66	40	26	54	21	33			
04:00													116	73	43	132	80	52			
05:00													219	94	125	235	111	124			
06:00													433	174	259	389	146	243			
07:00													701	263	438	550	177	373			
08:00													463	171	292	479	178	301			
09:00													486	203	283	517	213	304			
10:00													479	204	275	515	221	294			
11:00													502	217	285	517	232	285			
12:00													472	235	237	574	249	325			
13:00													543	252	291	597	281	316			
14:00													553	290	263	648	332	316			
15:00													693	361	332	689	373	316			
16:00										669	375	294	714	388	326						
17:00										733	442	291	727	430	297						
18:00										528	299	229	524	274	250						
19:00										338	210	128	334	207	127						
20:00										265	171	94	257	167	90						
21:00										177	115	62	170	106	64						
22:00										132	65	67	102	67	35						
23:00										68	45	23	85	54	31						
Total										2,910	1,722	1,188	8,765	4,331	4,434	6,026	2,692	3,334			
AM Peak Vol													701	263	441	572	235	378			
AM Peak Fct													.765	.715	.805	.856	.816	.851			
AM Peak Hr													7: 00	7: 00	7: 15	7: 30	10: 30	7: 30			
PM Peak Vol													776	463	348						
PM Peak Fct													.898	.884	.926						
PM Peak Hr													16: 30	16: 45	15: 15	:	:	:			
Seasonal Fct										.924	.924	.924	.941	.941	.941	.941	.941	.941			
Daily Fct										.986	.986	.986	.949	.949	.949	.860	.860	.860			
Axle Fct										.455	.455	.455	.459	.459	.459	.459	.459	.459			
Pulse Fct										2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000			

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### Historical Traffic Volume Summary

#### Station Details:

Sta ID:	098762
Sta Type:	Classification
Мар:	<u>Maplt</u>
District:	12
County:	Pike
Route:	098-KY-1426 -000
Route Desc:	KY-1426

Begin MP:	15.9930
Begin Desc:	KY 194
End Mp:	18.6880
End Desc:	US 119
Impact Year:	
Year Added:	2009

### Newest Count:

AADT:	1313
Year:	2021
% Single:	7.7160
% Combo:	2.0120
K Factor:	10.90
D Factor:	53

#### Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

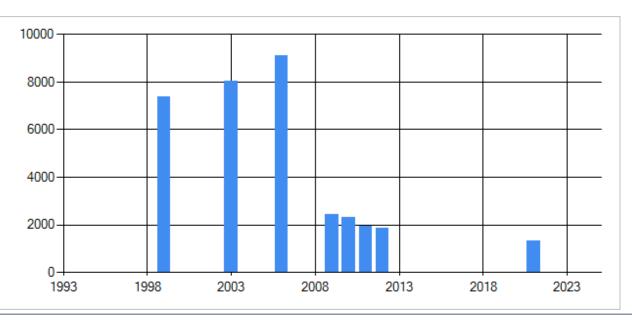
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	
2023		2013		2003	8020
2022		2012	1858	2002	
2021	1313	2011	1960	2001	
2020		2010	2330	2000	
2019		2009	2430	1999	7390
2018		2008		1998	
2017		2007		1997	
2016		2006	9100	1996	
2015		2005		1995	



# **Kentucky Transportation Cabinet**

Short-term Hourly Traffic Volume for 12/01/2021 through 12/03/2021

Seasonal Factor Grp: 2 Site names: 098762, Daily Factor Grp: 2 County: Pike 07 Funct Class: Major Collector Axle Factor Grp: 07 Location: 098-KY-1426 -000 @ 17.341 From: KY 194 Growth Factor Grp:

	Sun, Nov 28, 2021 Mon, Nov 29, 2021		Tu	e, Nov 30	, 2021	We	d, Dec 1,	2021	Thu	, Dec 2,	2021	F	ri, Dec 3, 2	2021	Sa	at, Dec 4,	2021				
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00													8	5	3	5	3	2			
01:00													4	1	3	7	3	4			
02:00													9	7	2	10	8	2			
03:00													11	6	5	12	5	7			
04:00													17	14	3	19	12	7			
05:00													22	14	8	16	8	8			
06:00													51	16	35	52	14	38			
07:00													122	44	78	132	56	76			
08:00													67	39	28	79	40	39			
09:00													57	23	34	66	29	37			
10:00													75	39	36	64	35	29			
11:00													61	39	22	85	48	37			
12:00													76	41	35	91	50	41			
13:00													112	56	56	107	51	56			
14:00													95	41	54	143	67	76			
15:00													126	78	48	112	74	38			
16:00										98	56	42	120	74	46						
17:00										99	66	33	98	57	41						
18:00										68	35	33	71	39	32						
19:00										40	25	15	38	24	14						
20:00										35	26	9	26	15	11						
21:00										29	17	12	27	19	8						
22:00										19	6	13	13	4	9						<u> </u>
23:00										6	3	3	4	3	1						
Total										394	234	160	1,310	698	612	1,000	503	497			
AM Peak Vol													122	53	78	132	56	79			<u> </u>
AM Peak Fct													.782	.631	.813	.717	.7	.76			
AM Peak Hr													7: 00	7: 30	7: 00	7: 00	7: 00	7: 15			
PM Peak Vol													136	88	56						
PM Peak Fct													.895	.846	.778						
PM Peak Hr													15: 30	15: 30	13: 00		:				
Seasonal Fct										1.044	1.044	1.044	1.044	1.044	1.044	1.044	1.044	1.044			
Daily Fct										.929	.929	.929	.918	.918	.918	.947	.947	.947			
Axle Fct										.500	.500	.500	.500	.500	.500	.500	.500	.500			
Pulse Fct										2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000			

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### **APPENDIX B**

HIGHWAY CAPACITY SOFTWARE RESULTS



		HCS Two-Lai	ne Hi	ighway Re	port	
Projec	t Information		_			
Analyst			D	ate		2/15/2024
Agency		Palmer Engineering	А	nalysis Year		2024
Jurisdict	tion		Ti	ime Analyzed		
Project	Description	Pike Savion Sta 098015 AM Existing	5 U	nits		U.S. Customary
		Se	egme	nt 1		
Vehicle	e Inputs					
Segmer	nt Type	Passing Constrained	Le	ength, ft		5280
Lane Wi	idth, ft	11	SI	houlder Width, f	t	2
Speed L	_imit, mi/h	55	А	ccess Point Dens	sity, pts/mi	1.0
Demai	nd and Capacity					
Directio	onal Demand Flow Rate, veh/h	33	0	pposing Deman	d Flow Rate, veh/h	-
Peak Ho	our Factor	0.94	To	otal Trucks, %	0.00	
Segmer	nt Capacity, veh/h	1700		emand/Capacity	0.02	
Interm	nediate Results					
Segmer	nt Vertical Class	5	Fr	ree-Flow Speed,	mi/h	59.1
Speed S	Slope Coefficient (m)	3.51150	Sı	peed Power Coe	0.36356	
PF Slope	e Coefficient (m)	-1.92758	P	F Power Coefficie	0.80211	
In Passii	ng Lane Effective Length?	No	Fo	ollower Density,	0.1	
%lmpro	ovement to Percent Followers	0.0	%	Improvement to	0.0	
Subse	gment Data					
# Se	egment Type	Length, ft	Radius	i, ft	Superelevation, %	Average Speed, mi/h
1 Ta	angent	5280	-		-	59.1
Vehicle	e Results					
Average	e Speed, mi/h	59.1	Pe	ercent Followers,	, %	11.7
Segmer	nt Travel Time, minutes	1.02	А	dj. Follower Den	0.1	
Vehicle	LOS	А				
Facility	y Results					
Т	VMT veh-mi/AP	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1	8	0.00			0.1	А

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		HCS Two-Lan	ie Hig	jhway Re	port	
Project	t Information					
Analyst			Dat	e		2/15/2024
Agency		Palmer Engineering	Ana	alysis Year		2024
Jurisdict	ion		Tim	e Analyzed		
Project [	Description	Pike Savion Sta 098015 Existing	PM Uni	ts		U.S. Customary
		Se	gmen	t 1		
Vehicle	e Inputs					
Segmen	t Type	Passing Constrained	Len	gth, ft		5280
Lane Wi	dth, ft	11	Sho	oulder Width, f	ī	2
Speed Li	imit, mi/h	55	Acc	ess Point Dens	ity, pts/mi	1.0
Demar	nd and Capacity					
Direction	nal Demand Flow Rate, veh/h	30	Ор	posing Deman	d Flow Rate, veh/h	-
Peak Ho	our Factor	0.94	Tot	al Trucks, %		0.00
Segmen	t Capacity, veh/h	1700	Der	mand/Capacity	(D/C)	0.02
Interm	ediate Results					
Segmen	t Vertical Class	5	Fre	e-Flow Speed,	mi/h	59.1
Speed S	lope Coefficient (m)	3.51150	Spe	ed Power Coe	fficient (p)	0.36356
PF Slope	e Coefficient (m)	-1.92758	PF	Power Coefficie	ent (p)	0.80211
In Passin	ng Lane Effective Length?	No	Fol	ower Density,	followers/mi/ln	0.1
%Improv	vement to Percent Followers	0.0	%lr	nprovement to	Speed	0.0
Subsec	gment Data					
# Se	egment Type	Length, ft	Radius, f	t	Superelevation, %	Average Speed, mi/h
1 Ta	ngent	5280	-		-	59.1
Vehicle	e Results					
Average	Speed, mi/h	59.1	Per	cent Followers,	%	10.9
Segmen	t Travel Time, minutes	1.02	Adj	. Follower Den	sity, followers/mi/ln	0.1
Vehicle L	LOS	А				
Facility	/ Results					
Т	VMT veh-mi/AP	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1	7	0.00			0.1	А

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		HCS Two-Lai	ne Hi	ghway Re	port	
Projec	ct Information		_			
Analyst	t		D	ate		2/15/2024
Agency	1	Palmer Engineering	Aı	nalysis Year		2024
Jurisdic	ction		Ti	me Analyzed		
Project	Description	Pike Savion Sta 098762 AM Existing	. Ui	nits		U.S. Customary
		Se	gme	nt 1		
Vehicl	le Inputs					
Segmei	nt Type	Passing Constrained	Le	ength, ft		5280
Lane W	/idth, ft	11	Sł	noulder Width, ft	ī	2
Speed I	Limit, mi/h	45	A	ccess Point Dens	ity, pts/mi	2.0
Dema	nd and Capacity					
Direction	onal Demand Flow Rate, veh/h	83	0	pposing Deman	d Flow Rate, veh/h	-
Peak H	our Factor	0.94	To	tal Trucks, %	9.73	
Segme	nt Capacity, veh/h	1700	D	emand/Capacity	0.05	
Intern	mediate Results					
Segme	nt Vertical Class	4	Fr	ee-Flow Speed,	mi/h	46.0
Speed :	Slope Coefficient (m)	3.74240	Sp	peed Power Coet	0.49094	
PF Slop	pe Coefficient (m)	-1.71466		Power Coefficie	0.71798	
In Passi	ing Lane Effective Length?	No	Fo	llower Density,	0.5	
%lmpro	ovement to Percent Followers	0.0	%	%Improvement to Speed		0.0
Subse	egment Data					•
# S	Segment Type	Length, ft	Radius	, ft	Superelevation, %	Average Speed, mi/h
1 Ta	angent	5280	-		-	46.0
Vehicl	le Results					
Averag	e Speed, mi/h	46.0	Pe	ercent Followers,	%	25.0
Segme	nt Travel Time, minutes	1.31	A	dj. Follower Den	sity, followers/mi/ln	0.5
Vehicle	LOS	А				
Facilit	y Results					
Т	VMT veh-mi/AP	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1	20	0.00			0.5	А

U.00

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Pike Savion Sta 098762 AM Existing.xuf

		HCS Two-Lan	e Hi	ghway Re	port	
Proje	ct Information					
Analys	t		Da	nte		2/15/2024
Agency	у	Palmer Engineering	An	nalysis Year		2024
Jurisdio	ction		Tir	me Analyzed		
Project	t Description	Pike Savion Sta 098762 F Existing	PM Un	nits		U.S. Customary
		Seg	gmer	nt 1		
Vehic	le Inputs					
Segme	ent Type	Passing Constrained	Lei	ngth, ft		5280
Lane W	Vidth, ft	11	Sh	oulder Width, ft	t	2
Speed	Limit, mi/h	45	Ac	cess Point Dens	sity, pts/mi	2.0
Dema	and and Capacity					
Directi	onal Demand Flow Rate, veh/h	83	Op	pposing Deman	d Flow Rate, veh/h	-
Peak H	lour Factor	0.94	To	tal Trucks, %	9.73	
Segme	ent Capacity, veh/h	1700		emand/Capacity	0.05	
Interr	mediate Results					
Segme	ent Vertical Class	4	Fre	ee-Flow Speed,	mi/h	46.0
Speed	Slope Coefficient (m)	3.74240	Sp	eed Power Coet	0.49094	
PF Slop	pe Coefficient (m)	-1.71466		Power Coefficie	0.71798	
In Pass	ing Lane Effective Length?	No	Fo	llower Density,	0.5	
%lmpr	ovement to Percent Followers	0.0	%I	mprovement to	0.0	
Subse	egment Data					
# 5	Segment Type	Length, ft	Radius,	ft	Superelevation, %	Average Speed, mi/h
1 7	langent langent	5280 -	-		-	46.0
Vehic	le Results					
Averag	je Speed, mi/h	46.0	Pe	rcent Followers,	, %	25.0
Segme	ent Travel Time, minutes	1.31	Ad	lj. Follower Den	sity, followers/mi/ln	0.5
Vehicle	LOS	А				
Facilit	ty Results					
Т	VMT veh-mi/AP	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1	20	0.00			0.5	А

0.00

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Pike Savion Sta 098762 PM Existing.xuf

	HCS Multilane	Highway Report	
Drainet Information	Tres Waterland	Tingriway report	
Project Information  Analyst		Date	3/5/2024
Agency	Palmer Engineering	Analysis Year	2024
Jurisdiction	Tamier Engineering	Time Analyzed	
Project Description	Pike Savion Station 098812 AM Existing	Units	U.S. Customary
Direction 1 Geometric Data			<u> </u>
Direction 1	Northbound		
Number of Lanes (N), In	2	Terrain Type	Rolling
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	3.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12
<b>Direction 1 Adjustment Factors</b>	•		
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		
Direction 1 Demand and Capacit	ty		
Volume (V) veh/h	176	Heavy Vehicle Adjustment Factor (fHV)	0.825
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	114
Total Trucks, %	10.64	Capacity (c), pc/h/ln	2186
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05
Direction 1 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		

Direction 2 Geometric Data									
Direction 2	Southbound								
Number of Lanes (N), In	2	Terrain Type	Rolling						
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-						
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-						
Lane Width, ft	12	Access Point Density, pts/mi	3.0						
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6						
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12						
Direction 2 Adjustment Factors									
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975						
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968						
Driver Population CAF	0.968								
<b>Direction 2 Demand and Capacity</b>									
Volume (V) veh/h	349	Heavy Vehicle Adjustment Factor (fHV)	0.825						
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	225						
Total Trucks, %	10.64	Capacity (c), pc/h/ln	2186						
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116						
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11						
Direction 2 Speed and Density									
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8						
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.9						
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А						
Access Point Density Adjustment (fA)	0.8								

HCS<sup>™</sup> Highways Version 2024 Pike Savion Sta 098812 AM Existing.xuf Generated: 03/05/2024 12:55:21

	HCS Multilane	Highway Report	
Project Information	The striction in	Tingriway report	
Project Information  Analyst	T	Date	3/5/2024
Agency	Palmer Engineering	Analysis Year	2024
Jurisdiction	Tumer Engineering	Time Analyzed	1021
Project Description	Pike Savion Station 098812 PM Existing	Units	U.S. Customary
Direction 1 Geometric Data		<b>'</b>	
Direction 1	Northbound		
Number of Lanes (N), In	2	Terrain Type	Rolling
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	3.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12
<b>Direction 1 Adjustment Factors</b>			•
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		
Direction 1 Demand and Capacit	ty		
Volume (V) veh/h	342	Heavy Vehicle Adjustment Factor (fHV)	0.825
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	220
Total Trucks, %	10.64	Capacity (c), pc/h/ln	2186
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10
Direction 1 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		

Direction 2 Geometric Data				
Direction 2	Southbound			
Number of Lanes (N), In	2	Terrain Type	Rolling	
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-	
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-	
Lane Width, ft	12	Access Point Density, pts/mi	3.0	
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6	
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12	
<b>Direction 2 Adjustment Factors</b>		·		
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975	
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968	
Driver Population CAF	0.968			
Direction 2 Demand and Capac	ity			
Volume (V) veh/h	285	Heavy Vehicle Adjustment Factor (fHV)	0.825	
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	184	
Total Trucks, %	10.64	Capacity (c), pc/h/ln 2186		
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116	
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09	
<b>Direction 2 Speed and Density</b>				
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8	
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.2	
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А	
Access Point Density Adjustment (fA)	0.8			
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	HCS Multilane	Highway Report		
Project Information				
Analyst	Τ	Date	3/5/2024	
Agency	Palmer Engineering	Analysis Year	2024	
Jurisdiction		Time Analyzed		
Project Description	Pike Savion Station 098813 AM Existing	Units	U.S. Customary	
Direction 1 Geometric Data			•	
Direction 1	Northbound			
Number of Lanes (N), In	2	Terrain Type	Rolling	
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-	
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-	
Lane Width, ft	12	Access Point Density, pts/mi	3.0	
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6	
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12	
<b>Direction 1 Adjustment Factors</b>				
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975	
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968	
Driver Population CAF	0.968			
Direction 1 Demand and Capacit	ty			
Volume (V) veh/h	263	Heavy Vehicle Adjustment Factor (fHV)	0.843	
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	166	
Total Trucks, %	9.32	Capacity (c), pc/h/ln	2186	
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116	
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08	
Direction 1 Speed and Density				
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h 57.8		
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.9	
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A	
Access Point Density Adjustment (fA)	0.8			

Direction 2 Geometric Data							
Direction 2	Southbound	outhbound					
Number of Lanes (N), In	2	Terrain Type	Rolling				
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-				
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-				
Lane Width, ft	12	Access Point Density, pts/mi	3.0				
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6				
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12				
Direction 2 Adjustment Factors							
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975				
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968				
Driver Population CAF	0.968						
<b>Direction 2 Demand and Capacity</b>	1						
Volume (V) veh/h	438	Heavy Vehicle Adjustment Factor (fHV)	0.843				
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	276				
Total Trucks, %	9.32	Capacity (c), pc/h/ln	2186				
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116				
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13				
Direction 2 Speed and Density							
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8				
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.8				
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А				
Access Point Density Adjustment (fA)	0.8						

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	HCS Multilane	Highway Report		
Project Information	The Striate land	Trigitway report		
Project Information  Analyst		Date	3/5/2024	
Agency	Palmer Engineering	Analysis Year	2024	
Jurisdiction	Tumer Engineering	Time Analyzed	2021	
Project Description	Pike Savion Station 098813 PM Existing	Units	U.S. Customary	
Direction 1 Geometric Data				
Direction 1	Northbound			
Number of Lanes (N), In	2	Terrain Type	Rolling	
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-	
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-	
Lane Width, ft	12	Access Point Density, pts/mi	3.0	
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6	
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12	
<b>Direction 1 Adjustment Factors</b>				
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975	
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968	
Driver Population CAF	0.968			
Direction 1 Demand and Capaci	ty			
Volume (V) veh/h	430	Heavy Vehicle Adjustment Factor (fHV)	0.843	
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	272	
Total Trucks, %	9.32	Capacity (c), pc/h/ln	2186	
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116	
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13	
Direction 1 Speed and Density				
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h 57.8		
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.7	
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A	
Access Point Density Adjustment (fA)	0.8			

Direction 2 Geometric Data			
Direction 2	Southbound		
Number of Lanes (N), In	2	Terrain Type	Rolling
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	3.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12
<b>Direction 2 Adjustment Factors</b>			
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		
Direction 2 Demand and Capaci	ty		
Volume (V) veh/h	297	Heavy Vehicle Adjustment Factor (fHV)	0.843
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	188
Total Trucks, %	9.32	Capacity (c), pc/h/ln	2186
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А
Access Point Density Adjustment (fA)	0.8		
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		HCS Two-Lai	ne H	ighway Re	port	
Proje	ct Information		_			
Analys	t		D	ate		2/15/2024
Agency	у	Palmer Engineering	А	nalysis Year		2024
Jurisdi	ction		Т	ime Analyzed		
Project	t Description	Pike Savion Sta 098015 AM Construction	5 U	nits		U.S. Customary
		Se	egme	nt 1		
Vehic	le Inputs					
Segme	ent Type	Passing Constrained	L	ength, ft		5280
Lane V	Vidth, ft	11	S	houlder Width, ft	ī	2
Speed	Limit, mi/h	55	А	ccess Point Dens	ity, pts/mi	1.0
Dema	and and Capacity					
Directi	onal Demand Flow Rate, veh/h	150	С	pposing Deman	d Flow Rate, veh/h	-
Peak H	lour Factor	0.94	To	Total Trucks, %		7.09
Segme	ent Capacity, veh/h	1700 Dem		Demand/Capacity (D/C)		0.09
Interi	mediate Results					
Segment Vertical Class 5		5	F	ree-Flow Speed,	mi/h	55.8
Speed Slope Coefficient (m) 11.57315		S	peed Power Coef	fficient (p)	0.53307	
PF Slop	PF Slope Coefficient (m) -1.91973		Р	F Power Coefficie	ent (p)	0.81912
In Pass	sing Lane Effective Length?	No Fo		Follower Density, followers/mi/ln		0.9
%lmpr	ovement to Percent Followers	0.0	%Improvement to Speed		Speed	0.0
Subse	egment Data		<u> </u>			
# 5	Segment Type	Length, ft	Radius	s, ft	Superelevation, %	Average Speed, mi/h
1 7	Tangent	5280	-		-	53.5
Vehic	le Results					
Averag	ge Speed, mi/h	53.5	P	Percent Followers, %		33.4
Segment Travel Time, minutes 1.12		А	Adj. Follower Density, followers/mi/ln		0.9	
Vehicle LOS A		А	4			
Facili	ty Results					
Т	VMT veh-mi/AP	VHD veh-h/p		Follower Density, followers/ mi/ln		LOS
1	35	0.03		0.9		А

0.03

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Pike Savion Sta 098015 AM Construction.xuf

	HCS Two-Land				
Project Information					
Analyst		Date	e		2/15/2024
Agency	Palmer Engineering	Ana	lysis Year		2024
Jurisdiction		Tim	e Analyzed		
Project Description	Pike Savion Sta 098015 P Construction	M Unit	:S		U.S. Customary
	Seg	gmen	t 1		
Vehicle Inputs					
Segment Type	Passing Constrained	Len	gth, ft		5280
Lane Width, ft	11	Sho	ulder Width, ft		2
Speed Limit, mi/h	55	Acce	ess Point Dens	ity, pts/mi	1.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	147	Орр	osing Demand	d Flow Rate, veh/h	-
Peak Hour Factor	0.94	Tota	Total Trucks, %		7.25
Segment Capacity, veh/h	1700	Den	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class	5	Free	Free-Flow Speed, mi/h		55.7
Speed Slope Coefficient (m)	11.65139	Spe	Speed Power Coefficient (p)		0.53428
PF Slope Coefficient (m)	-1.91945	PF F	PF Power Coefficient (p)		0.81942
In Passing Lane Effective Length?		Follo	ower Density, f	followers/mi/ln	0.9
%Improvement to Percent Followers	Percent Followers 0.0		provement to	Speed	0.0
Subsegment Data					•
# Segment Type	Length, ft	Radius, ft	t	Superelevation, %	Average Speed, mi/h
1 Tangent	5280 -		-		53.5
Vehicle Results	· ·				
Average Speed, mi/h	53.5	Perc	Percent Followers, %		32.9
Segment Travel Time, minutes	1.12	Adj.	Adj. Follower Density, followers/mi/ln		0.9
Vehicle LOS	A				
Facility Results	•				
T VMT veh-mi/AP	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1 35	0.03			0.9	A

Dual act Information	HCS Two-La	·			
Project Information	1	1_			2/45/2021
Analyst		Da			2/15/2024
Agency	Palmer Engineering		alysis Year		2024
Jurisdiction		Tir	ne Analyzed		
Project Description	Pike Savion Sta 09876 AM Construction	2 Un	nits		U.S. Customary
	S	egmer	nt 1		
Vehicle Inputs					
Segment Type	Passing Constrained	Lei	ngth, ft		5280
Lane Width, ft	11	Sh	oulder Width, ft	i	2
Speed Limit, mi/h	45	Ac	cess Point Dens	ity, pts/mi	2.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	200	Op	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.94	To	Total Trucks, %		9.36
Segment Capacity, veh/h	1700	De	Demand/Capacity (D/C)		0.12
Intermediate Results					
Segment Vertical Class	4	Fre	Free-Flow Speed, mi/h		46.0
Speed Slope Coefficient (m)	3.72282	Sp	Speed Power Coefficient (p)		0.48962
PF Slope Coefficient (m)	-1.71536		PF Power Coefficient (p)		0.71767
In Passing Lane Effective Length?		Fo	llower Density, 1	followers/mi/In	1.9
%Improvement to Percent Followers	0.0	%I	%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Radius,	ft	Superelevation, %	Average Speed, mi/h
1 Tangent	5280	-	-		44.8
Vehicle Results	-			-	
Average Speed, mi/h	44.8	Pe	Percent Followers, %		41.7
Segment Travel Time, minutes	1.34	Ad	Adj. Follower Density, followers/mi/ln		1.9
Vehicle LOS	A				
Facility Results					
T VMT veh-mi/AP	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1 47	0.03			1.9	А

Project Information					
Analyst		Da	te		2/15/2024
Agency	Palmer Engineering	An	alysis Year		2024
Jurisdiction		Tin	ne Analyzed		
Project Description	Pike Savion Sta 098762 Construction	PM Un	its		U.S. Customary
	Se	gmer	nt 1		
Vehicle Inputs					
Segment Type	Passing Constrained	Ler	ngth, ft		5280
Lane Width, ft	11	Sho	oulder Width, f	t	2
Speed Limit, mi/h	45	Ace	cess Point Dens	ity, pts/mi	2.0
Demand and Capacity					
Directional Demand Flow Rate, veh,	/h 200	Ор	posing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.94	Tot	al Trucks, %		9.36
Segment Capacity, veh/h	1700	De	Demand/Capacity (D/C) 0.12		0.12
Intermediate Results					
Segment Vertical Class	4	Fre	e-Flow Speed,	mi/h	46.0
Speed Slope Coefficient (m)	3.72282	Spe	Speed Power Coefficient (p)		0.48962
PF Slope Coefficient (m)	-1.71536	PF	PF Power Coefficient (p)		0.71767
In Passing Lane Effective Length?	No	Fol	Follower Density, followers/mi/ln		1.9
%Improvement to Percent Follower	s 0.0	%lı	6Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Radius,	ft	Superelevation, %	Average Speed, mi/h
1 Tangent	5280	-		-	44.8
Vehicle Results	·				·
Average Speed, mi/h	44.8	Per	Percent Followers, %		41.7
Segment Travel Time, minutes	1.34	Ad	Adj. Follower Density, followers/mi/ln		1.9
Vehicle LOS A					
Facility Results					
T VMT veh-mi/AP	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1 47	0.03		1.9		А

	HCS Multilane	Highway Report	
Project Information			
Analyst		Date	3/5/2024
Agency	Palmer Engineering	Analysis Year	2024
Jurisdiction		Time Analyzed	
Project Description	Pike Savion Station 098812 AM Construction	Units	U.S. Customary
Direction 1 Geometric Data	·		
Direction 1	Northbound		
Number of Lanes (N), In	2	Terrain Type	Rolling
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	3.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12
<b>Direction 1 Adjustment Factors</b>	•		
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		
Direction 1 Demand and Capaci	ty		
Volume (V) veh/h	231	Heavy Vehicle Adjustment Factor (fHV)	0.828
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	148
Total Trucks, %	10.37	Capacity (c), pc/h/ln	2186
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07
Direction 1 Speed and Density	•		
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А
Access Point Density Adjustment (fA)	0.8		

Direction 2 Geometric Data						
Direction 2	Southbound					
Number of Lanes (N), In	2	Terrain Type	Rolling			
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-			
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-			
Lane Width, ft	12	Access Point Density, pts/mi	3.0			
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6			
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12			
Direction 2 Adjustment Factors						
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975			
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968			
Driver Population CAF	0.968					
<b>Direction 2 Demand and Capacity</b>	1					
Volume (V) veh/h	404	Heavy Vehicle Adjustment Factor (fHV)	0.828			
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	260			
Total Trucks, %	10.37	Capacity (c), pc/h/ln	2186			
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116			
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12			
Direction 2 Speed and Density						
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8			
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.5			
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А			
Access Point Density Adjustment (fA)	0.8					

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	HCS Multilane	Highway Report	
Drainet Information	Thes watthane		
Project Information  Analyst	T	Date	3/5/2024
Agency	Palmer Engineering	Analysis Year	2024
Jurisdiction	Tunner Engineering	Time Analyzed	LOCT
Project Description	Pike Savion Station 098812 PM Construction	Units	U.S. Customary
Direction 1 Geometric Data		'	
Direction 1	Northbound		
Number of Lanes (N), In	2	Terrain Type	Rolling
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	3.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12
<b>Direction 1 Adjustment Factors</b>			
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		
Direction 1 Demand and Capacit	ty	·	
Volume (V) veh/h	397	Heavy Vehicle Adjustment Factor (fHV)	0.828
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	255
Total Trucks, %	10.41	Capacity (c), pc/h/ln	2186
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12
Direction 1 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln 4.4	
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		

Direction 2 Geometric Data						
Direction 2	Southbound					
Number of Lanes (N), In	2	Terrain Type	Rolling			
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-			
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-			
Lane Width, ft	12	Access Point Density, pts/mi	3.0			
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6			
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12			
Direction 2 Adjustment Factors						
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975			
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968			
Driver Population CAF	0.968					
<b>Direction 2 Demand and Capacity</b>						
Volume (V) veh/h	340	Heavy Vehicle Adjustment Factor (fHV)	0.828			
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	218			
Total Trucks, %	10.41	Capacity (c), pc/h/ln	2186			
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116			
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10			
Direction 2 Speed and Density						
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8			
Total Lateral Clearance Adj. (fllc)	0.0	Density (D), pc/mi/ln	3.8			
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А			
Access Point Density Adjustment (fA)	0.8					

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	HCS Multilane	Highway Report	
Project Information	Tres marchane	The state of the s	
Analyst	Τ	Date	3/5/2024
Agency	Palmer Engineering	Analysis Year	2024
Jurisdiction		Time Analyzed	
Project Description	Pike Savion Station 098813 AM Construction	Units	U.S. Customary
Direction 1 Geometric Data			·
Direction 1	Northbound		
Number of Lanes (N), In	2	Terrain Type	Rolling
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	3.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12
<b>Direction 1 Adjustment Factors</b>			
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		
Direction 1 Demand and Capacit	ty		
Volume (V) veh/h	318	Heavy Vehicle Adjustment Factor (fHV)	0.843
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	200
Total Trucks, %	9.29	Capacity (c), pc/h/ln	2186
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09
Direction 1 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		

Direction 2 Geometric Data			
Direction 2	Southbound		
Number of Lanes (N), In	2	Terrain Type	Rolling
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	3.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		
<b>Direction 2 Demand and Capacit</b>	у		
Volume (V) veh/h	493	Heavy Vehicle Adjustment Factor (fHV)	0.843
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	311
Total Trucks, %	9.29	Capacity (c), pc/h/ln	2186
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.15
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А
Access Point Density Adjustment (fA)	0.8		

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	HCS Multilane	Highway Report	
Project Information			
Analyst	T	Date	3/5/2024
Agency	Palmer Engineering	Analysis Year	2024
Jurisdiction		Time Analyzed	
Project Description	Pike Savion Station 098813 PM Construction	Units	U.S. Customary
Direction 1 Geometric Data	·		
Direction 1	Northbound		
Number of Lanes (N), In	2	Terrain Type	Rolling
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	3.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12
<b>Direction 1 Adjustment Factors</b>		·	
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		
Direction 1 Demand and Capaci	ty		
Volume (V) veh/h	485	Heavy Vehicle Adjustment Factor (fHV)	0.843
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	306
Total Trucks, %	9.29	Capacity (c), pc/h/ln	2186
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14
Direction 1 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		

Direction 2 Geometric Data						
Direction 2	Southbound					
Number of Lanes (N), In	2	Terrain Type	Rolling			
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-			
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-			
Lane Width, ft	12	Access Point Density, pts/mi	3.0			
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6			
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12			
Direction 2 Adjustment Factors						
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975			
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968			
Driver Population CAF	0.968					
<b>Direction 2 Demand and Capacity</b>	1					
Volume (V) veh/h	352	Heavy Vehicle Adjustment Factor (fHV)	0.843			
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	222			
Total Trucks, %	9.29	Capacity (c), pc/h/ln	2186			
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116			
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10			
Direction 2 Speed and Density						
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8			
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.8			
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А			
Access Point Density Adjustment (fA)	0.8					

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		HCS Two-La	ne Hi	ghway Re	port	
Project	t Information					
Analyst			Da	ate		2/23/2024
Agency		Palmer Engineering	An	nalysis Year		2024
Jurisdict	ion		Tir	me Analyzed		
Project [	Description	Pike Savion Sta 098015 AM Post Construction	5 Ur	nits		U.S. Customary
		Se	egmei	nt 1		
Vehicle	e Inputs					
Segmen	nt Type	Passing Constrained	Le	ngth, ft		5280
Lane Wi	dth, ft	11	Sh	oulder Width, ft	t	2
Speed L	imit, mi/h	55	Ac	cess Point Dens	ity, pts/mi	1.0
Demar	nd and Capacity					
Direction	nal Demand Flow Rate, veh/h	34	Op	oposing Deman	d Flow Rate, veh/h	-
Peak Ho	our Factor	0.94	To	tal Trucks, %		0.00
Segmen	nt Capacity, veh/h	1700	De	emand/Capacity	(D/C)	0.02
Interm	nediate Results					
Segmen	nt Vertical Class	5	Fre	ee-Flow Speed,	mi/h	59.1
Speed S	ilope Coefficient (m)	3.51150	Sp	eed Power Coet	fficient (p)	0.36356
PF Slope	e Coefficient (m)	-1.92758	PF	Power Coefficie	ent (p)	0.80211
In Passir	ng Lane Effective Length?	No	Fo	llower Density,	followers/mi/ln	0.1
%lmpro	vement to Percent Followers	0.0	%I	mprovement to	Speed	0.0
Subsec	gment Data					
# Se	egment Type	Length, ft	Radius,	ft	Superelevation, %	Average Speed, mi/h
1 Ta	ingent	5280	-		-	59.1
Vehicle	e Results					
Average	e Speed, mi/h	59.1	Percent Followers, %		12.0	
Segmen	nt Travel Time, minutes	1.02	Adj. Follower Density, followers/mi/ln		0.1	
Vehicle I	LOS	А				
Facility	y Results					
Т	VMT veh-mi/AP	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1	8	0.00			0.1	А

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		HCS Two-Lan	e Hi	ghway Re	port	
Projec	t Information		_			
Analyst			Da	nte		2/23/2024
Agency		Palmer Engineering	An	nalysis Year		2024
Jurisdict	tion		Tir	me Analyzed		
Project	Description	Pike Savion Sta 098015 Post Construction	PM Un	nits		U.S. Customary
		Seg	gmer	nt 1		
Vehicle	e Inputs					
Segmen	nt Type	Passing Constrained	Lei	ngth, ft		5280
Lane Wi	idth, ft	11	Sh	oulder Width, ft	t	2
Speed L	imit, mi/h	55	Ac	cess Point Dens	ity, pts/mi	1.0
Demai	nd and Capacity	•				
Directio	nal Demand Flow Rate, veh/h	31	Op	pposing Deman	d Flow Rate, veh/h	-
Peak Ho	our Factor	0.94	To	tal Trucks, %		0.00
Segmen	nt Capacity, veh/h	1700	De	emand/Capacity	(D/C)	0.02
Interm	nediate Results					
Segmen	nt Vertical Class	5	Free-Flow Speed, mi/h		59.1	
Speed S	Slope Coefficient (m)	3.51150	Sp	eed Power Coef	0.36356	
PF Slope	e Coefficient (m)	-1.92758	PF	Power Coefficie	ent (p)	0.80211
In Passir	ng Lane Effective Length?	No	Fo	llower Density,	followers/mi/ln	0.1
%lmpro	vement to Percent Followers	0.0	%I	mprovement to	Speed	0.0
Subse	gment Data					
# Se	egment Type	Length, ft	Radius,	ius, ft Superelevation, %		Average Speed, mi/h
1 Ta	angent	5280	-		-	59.1
Vehicle	e Results					
Average	e Speed, mi/h	59.1	Pe	rcent Followers,	%	11.2
Segmen	nt Travel Time, minutes	1.02	Ad	Adj. Follower Density, followers/mi/ln		0.1
Vehicle	LOS	А				
Facility	y Results					
Т	VMT veh-mi/AP	VHD veh-h/p		Follower Density, followers/ mi/ln		LOS
1	7	0.00		0.1		А

0.00

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Pike Savion Sta 098015 PM Post.xuf

	HCS Two-La	ne H	ligl	hway Re	port	
Project Information						
Analyst		D	Date			2/23/2024
Agency	Palmer Engineering	А	Analy	ysis Year		2024
Jurisdiction		Т	Γime	Analyzed		
Project Description	Pike Savion Sta 09876 AM Post Construction		Jnits	5		U.S. Customary
	S	egme	ent	: 1		
Vehicle Inputs						
Segment Type	Passing Constrained	L	eng	th, ft		5280
ane Width, ft	11	S	Shou	ılder Width, ft	ī	2
Speed Limit, mi/h	45	А	Acce	ss Point Dens	ity, pts/mi	2.0
Demand and Capacity						
Directional Demand Flow Rate, veh/h	84	С	Орро	osing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.94	To	Total	Trucks, %		9.73
Segment Capacity, veh/h	1700	D	Dem	and/Capacity	(D/C)	0.05
Intermediate Results						
Segment Vertical Class	4	F	ree-	-Flow Speed,	mi/h	46.0
Speed Slope Coefficient (m)	3.74240	S	Spee	d Power Coet	fficient (p)	0.49094
PF Slope Coefficient (m)	-1.71466	Р	PF Po	ower Coefficie	ent (p)	0.71798
n Passing Lane Effective Length?	No	F	ollo	wer Density,	followers/mi/ln	0.5
%Improvement to Percent Followers	0.0	%	%lm <sub>l</sub>	provement to	Speed	0.0
Subsegment Data						
# Segment Type	Length, ft	Radius	s, ft		Superelevation, %	Average Speed, mi/h
1 Tangent	5280	-			-	46.0
Vehicle Results						
Average Speed, mi/h	46.0	Р	Perce	ent Followers,	%	25.2
Segment Travel Time, minutes	1.31	Α	Adj. Follower Density, followers/mi/ln		0.5	
Vehicle LOS	A					
Facility Results						
T VMT veh-mi/AP	VHD veh-h/p				ensity, followers/ mi/ln	LOS
1 20	0.00				0.5	А

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		HCS Two-Lar	ne H	lig	hway Re	port		
Project	t Information			_			_	
Analyst			С	Date				2/23/2024
Agency		Palmer Engineering	Α	Anal	ysis Year			2024
Jurisdict	ion		Т	Time	Analyzed			
Project [	Description	Pike Savion Sta 098762 Post Construction	PM U	Jnit	5			U.S. Customary
		Se	gme	ent	: 1			
Vehicle	e Inputs							
Segmen	t Type	Passing Constrained	L	_eng	th, ft			5280
Lane Wi	dth, ft	11	S	Shou	ılder Width, ft	:		2
Speed Li	imit, mi/h	45	Α	Acce	ss Point Dens	ity, pts/mi		2.0
Demar	nd and Capacity							
Direction	nal Demand Flow Rate, veh/h	84	C	Эрр	osing Demand	d Flow Rate, veh/h		-
Peak Hour Factor 0.94		0.94	T	Total Trucks, %		9.73		
Segment Capacity, veh/h 1700		1700	Demand/Capacity (D/C)		0.05			
Interm	ediate Results							
Segment Vertical Class		4	F	ree	-Flow Speed,	mi/h		46.0
Speed S	lope Coefficient (m)	3.74240	S	Speed Power Coefficient (p)		0.49094		
PF Slope	e Coefficient (m)	-1.71466	Р	PF P	ower Coefficie	ent (p)		0.71798
In Passir	ng Lane Effective Length?	No	F	Follower Density, followers/mi/ln			0.5	
%Improv	vement to Percent Followers	0.0	%	%Improvement to Speed		0.0		
Subsec	gment Data							
# Se	egment Type	Length, ft	Radius	ıs, ft		Superelevation, %		Average Speed, mi/h
1 Ta	ngent	5280	-			-		46.0
Vehicle	e Results							
Average Speed, mi/h		46.0	P	Perc	ent Followers,	%		25.2
Segment Travel Time, minutes		1.31		Adj. Follower Density, followers/mi/ln		0.5		
Vehicle LOS A		A						
Facility Results								
Т	VMT veh-mi/AP	VHD veh-h/p				ensity, followers/ mi/ln		LOS
1	20	0.00				0.5		А

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	HCS Multilane	Highway Report			
Project Information	The Striate land	Trigitway report			
Project Information  Analyst		Date	3/5/2024		
Agency	Palmer Engineering	Analysis Year	2024		
Jurisdiction	Tumer Engineering	Time Analyzed			
Project Description	Pike Savion Station 098812 AM Operation	Units	U.S. Customary		
Direction 1 Geometric Data					
Direction 1	Northbound				
Number of Lanes (N), In	2	Terrain Type	Rolling		
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-		
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-		
Lane Width, ft	12	Access Point Density, pts/mi	3.0		
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6		
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12		
<b>Direction 1 Adjustment Factors</b>					
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975		
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968		
Driver Population CAF	0.968				
Direction 1 Demand and Capaci	ty		·		
Volume (V) veh/h	177	Heavy Vehicle Adjustment Factor (fHV)	0.825		
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	114		
Total Trucks, %	10.64	Capacity (c), pc/h/ln	2186		
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116		
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05		
Direction 1 Speed and Density					
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8		
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.0		
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A		
Access Point Density Adjustment (fA)	0.8				

Direction 2 Geometric Data							
Direction 2	Southbound	Southbound					
Number of Lanes (N), In	2	Terrain Type	Rolling				
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-				
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-				
Lane Width, ft	12	Access Point Density, pts/mi	3.0				
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6				
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12				
Direction 2 Adjustment Factors	Direction 2 Adjustment Factors						
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975				
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968				
Driver Population CAF	0.968						
Direction 2 Demand and Capacity							
Volume (V) veh/h	349	Heavy Vehicle Adjustment Factor (fHV)	0.825				
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	225				
Total Trucks, %	10.64	Capacity (c), pc/h/ln	2186				
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116				
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11				
Direction 2 Speed and Density							
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8				
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.9				
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А				
Access Point Density Adjustment (fA)	0.8						

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	HCS Multilane	Highway Report			
Project Information					
Analyst	T	Date	3/5/2024		
Agency	Palmer Engineering	Analysis Year	2024		
Jurisdiction		Time Analyzed			
Project Description	Pike Savion Station 098812 PM Operation	Units	U.S. Customary		
Direction 1 Geometric Data	•		·		
Direction 1	Northbound				
Number of Lanes (N), In	2	Terrain Type	Rolling		
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-		
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-		
Lane Width, ft	12	Access Point Density, pts/mi	3.0		
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6		
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12		
Direction 1 Adjustment Factors					
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975		
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968		
Driver Population CAF	0.968				
Direction 1 Demand and Capaci	ty				
Volume (V) veh/h	342	Heavy Vehicle Adjustment Factor (fHV)	0.825		
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	220		
Total Trucks, %	10.64	Capacity (c), pc/h/ln	2186		
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116		
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10		
Direction 1 Speed and Density					
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8		
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.8		
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А		
Access Point Density Adjustment (fA)	0.8				

Direction 2 Geometric Data						
Direction 2	Southbound	Southbound				
Number of Lanes (N), In	2	Terrain Type	Rolling			
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-			
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-			
Lane Width, ft	12	Access Point Density, pts/mi	3.0			
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6			
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12			
Direction 2 Adjustment Factors						
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975			
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968			
Driver Population CAF	0.968					
Direction 2 Demand and Capacity						
Volume (V) veh/h	286	Heavy Vehicle Adjustment Factor (fHV)	0.825			
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	184			
Total Trucks, %	10.64	Capacity (c), pc/h/ln	2186			
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116			
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09			
Direction 2 Speed and Density						
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8			
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.2			
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А			
Access Point Density Adjustment (fA)	0.8					

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	HCS Multilane	Highway Report					
Project Information	The striction is	Trigitway report					
Analyst		Date	3/5/2024				
Agency	Palmer Engineering	Analysis Year	2024				
Jurisdiction		Time Analyzed					
Project Description	Pike Savion Station 098813 AM Operation	Units	U.S. Customary				
Direction 1 Geometric Data							
Direction 1	Northbound						
Number of Lanes (N), In	2	Terrain Type	Rolling				
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-				
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-				
Lane Width, ft	12	Access Point Density, pts/mi	3.0				
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6				
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12				
<b>Direction 1 Adjustment Factors</b>	Direction 1 Adjustment Factors						
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975				
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968				
Driver Population CAF	0.968						
Direction 1 Demand and Capacit	ty						
Volume (V) veh/h	264	Heavy Vehicle Adjustment Factor (fHV)	0.843				
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	166				
Total Trucks, %	9.32	Capacity (c), pc/h/ln	2186				
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116				
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08				
Direction 1 Speed and Density							
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8				
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.9				
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А				
Access Point Density Adjustment (fA)	0.8						

Direction 2 Geometric Data							
Direction 2	Southbound						
Number of Lanes (N), In	2	Terrain Type	Rolling				
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-				
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-				
Lane Width, ft	12	Access Point Density, pts/mi	3.0				
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6				
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12				
Direction 2 Adjustment Factors							
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975				
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968				
Driver Population CAF	0.968						
<b>Direction 2 Demand and Capacity</b>	Direction 2 Demand and Capacity						
Volume (V) veh/h	438	Heavy Vehicle Adjustment Factor (fHV)	0.843				
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	276				
Total Trucks, %	9.32	Capacity (c), pc/h/ln	2186				
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116				
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13				
Direction 2 Speed and Density							
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8				
Total Lateral Clearance Adj. (fllc)	0.0	Density (D), pc/mi/ln	4.8				
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А				
Access Point Density Adjustment (fA)	0.8						

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	HCS Multilane	Highway Report			
Project Information	The striction in	Trigitway report			
Project Information  Analyst	T	Date	3/5/2024		
Agency	Palmer Engineering	Analysis Year	2024		
Jurisdiction	Tumer Engineering	Time Analyzed			
Project Description	Pike Savion Station 098813 PM Operation	Units	U.S. Customary		
Direction 1 Geometric Data					
Direction 1	Northbound				
Number of Lanes (N), In	2	Terrain Type	Rolling		
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-		
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-		
Lane Width, ft	12	Access Point Density, pts/mi	3.0		
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6		
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12		
<b>Direction 1 Adjustment Factors</b>					
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975		
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968		
Driver Population CAF	0.968				
Direction 1 Demand and Capacit	ty				
Volume (V) veh/h	430	Heavy Vehicle Adjustment Factor (fHV)	0.843		
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	272		
Total Trucks, %	9.32	Capacity (c), pc/h/ln	2186		
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116		
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13		
Direction 1 Speed and Density					
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8		
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.7		
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А		
Access Point Density Adjustment (fA)	0.8				

Direction 2 Geometric Data							
Direction 2	Southbound						
Number of Lanes (N), In	2	Terrain Type	Rolling				
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-				
Base Free-Flow Speed (BFFS), mi/h	60.0	Grade Length, mi	-				
Lane Width, ft	12	Access Point Density, pts/mi	3.0				
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6				
Free-Flow Speed (FFS), mi/h	59.3	Total Lateral Clearance (TLC), ft	12				
Direction 2 Adjustment Factors							
Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975				
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968				
Driver Population CAF	0.968						
<b>Direction 2 Demand and Capacity</b>	Direction 2 Demand and Capacity						
Volume (V) veh/h	298	Heavy Vehicle Adjustment Factor (fHV)	0.843				
Peak Hour Factor	0.94	Flow Rate (V <sub>p</sub> ), pc/h/ln	188				
Total Trucks, %	9.32	Capacity (c), pc/h/ln	2186				
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2116				
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09				
Direction 2 Speed and Density							
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	57.8				
Total Lateral Clearance Adj. (fllc)	0.0	Density (D), pc/mi/ln	3.3				
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	А				
Access Point Density Adjustment (fA)	0.8						

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