

Dogwood Solar Project - Traffic Analysis

August 28, 2023

Prepared for:

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Executive Summary

The Dogwood Solar Project development is proposed northeast of Hopkinsville in Christian County, Kentucky on a property located south of KY 189, north of Deason Lane, east of I-69 and west of KY 1682. The petitioner proposes to utilize the existing land to establish a solar facility on the site. The development will have access points along several routes around the facility. Analyses of the 2022 existing conditions (based on most recent counts provided by the Kentucky Transportation Cabinet, KYTC) and the 2027 construction year were performed. The traffic impact study (TIS) evaluated the operating conditions for the AM and PM peak hours at the roadway segments below:

- Station 024007: KY 107 (Greenville Road) from (MP 27.016) to MP (30.288)
- Station 024030: KY 107 (Greenville Road) from (MP 21.642) to MP (27.016)
- Station 024006: KY 189 (Ovil Road) from (MP 0.00) to MP (5.351)
- Station 024029: KY 1682 (Antioch Church Road) from (MP 5.894) to (MP 10.775)
- Station 024050: KY 1682 (Antioch Church Road) from (MP 10.775) to (MP 14.973)
- Station 024240: CR 1015 (Deason Lane)
- Station 024043: CR 1111 (Woodburn Hay Road)
- Station 024129: CR 1111 (Woodburn Hay Road)
- Station 024049: CR 1118 (Old Fruit Hill Road)

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 level of service (LOS) standards during both the peak hours. Therefore, the construction for this project will not adversely affect traffic operations on any of the roadways in and around the project area.
- After construction is complete, the site will be managed with negligible added traffic demand. During the operational phase of the project, the surrounding roadway network will continue to operate at an acceptable LOS during the peak hours.

INTRODUCTION

1.0 INTRODUCTION

The purpose of this study is to estimate the traffic impacts of the proposed Dogwood Solar Project ("Dogwood Solar" or the "Project") which is located approximately six miles northeast of Hopkinsville in Christian County, Kentucky. The project site can be generally described as south of KY 189, north of Deason Lane, east of I-69 and west of KY 1682. The proposed project site is shown in **Figure 1**.

The Project area is a proposed 125-megawatt ("MW") AC solar plus 25 MW AC storage project located near the intersection of Dogwood Kelly and Greenville Roads, north of the city of Hopkinsville, in Christian County on privately-owned property. The Project is proposing to interconnect to the 161kV Hopkinsville-Lost City transmission line via a new 3-ring bus substation. The Project is anticipated to utilize approximately 670 acres for the PV solar array and associated Project components. Project will have access points around the site with major truck deliveries. A construction year of 2027 was evaluated as part of the study.

2.0 DATA COLLECTION

Traffic counts (including both 24-hour and classification counts) were obtained from the Kentucky Transportation Cabinet (KYTC) to establish the existing traffic conditions. **Figure 2** shows the locations of the primary / adjacent count stations used in this analysis. The summarized count data for each of these stations (plus additional stations outside the immediate area) is included in **Appendix A** for the following count stations:

- Station 024007: KY 107 (Greenville Road) from (MP 27.016) to MP (30.288)
- Station 024030: KY 107 (Greenville Road) from (MP 21.642) to MP (27.016)
- Station 024006: KY 189 (Ovil Road) from (MP 0.00) to MP (5.351)
- Station 024029: KY 1682 (Antioch Church Road) from (MP 5.894) to (MP 10.775)
- Station 024050: KY 1682 (Antioch Church Road) from (MP 10.775) to (MP 14.973)
- Station 024240: CR 1015 (Deason Lane)
- Station 024043: CR 1111 (Woodburn Hay Road)
- Station 024129: CR 1111 (Woodburn Hay Road)
- Station 024049: CR 1118 (Old Fruit Hill Road)

DOGWOOD SOLAR PROJECT - TRAFFIC ANALYSIS

DATA COLLECTION



Figure 1: Project Location

DATA COLLECTION



Figure 2: KYTC Count Stations

Christian County population projections remain relatively unchanged since 2019, as shown in **Figure 3**. Therefore, any traffic counts we received, except for the 2009 counts on CR 1015, 1111 and 1118, remained unchanged. The 2009 traffic counts were slightly grown (1%) over the last 13 years.

DOGWOOD SOLAR PROJECT - TRAFFIC ANALYSIS

DATA COLLECTION



Figure 3: Population Projections

KY 189 located directly north of the project site, is classified as a two-lane minor collector with daily traffic volume of 500 vehicles per day (VPD) with a posted speed limit of 55 mph. KY 107 is a two-lane rural major collector with a posted speed limit of 55 mph and daily traffic of ranging from 1700 to 2800 VPD. To the east of the project site, KY 1682 is a two-lane rural local roadway with a posted speed limit of 55 mph.

Two-lane analyses were used to evaluate the roadways based on methods described in the Highway Capacity Manual (HCM) and implemented within the Highway Capacity Software (HCS 2022). The results can be found in **Appendix B**. The analyses were used to estimate capacity and Level of Service (LOS) for given traffic and geometric conditions. LOS provides a measure of 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. For rural areas, LOS C or better is generally considered to be desirable. In urban areas, LOS D or better is generally considered to be desirable.

The two-lane highways method utilizes follower density (followers/mile) as the service measure for LOS, as shown in **Table 1**.

DOGWOOD SOLAR PROJECT - TRAFFIC ANALYSIS

DATA COLLECTION

| LOS | Density (followers/mi) Speed Limit ≥ 50 mph | Density (followers/mi) Speed Limit < 50 mph |
|-----|--|--|
| А | ≤ 2 | ≤ 2.5 |
| В | > 2 - 4 | > 2.5 - 5.5 |
| С | > 4 - 8 | > 5 - 10 |
| D | > 8 - 12 | > 10 - 15 |
| E | > 12 | > 15 |
| F | Demand exceeds capacity | Demand exceeds capacity |

Table 1: Level of Service Criteria for Two-Lane Highways

The results of the existing AM and PM peak hour traffic analyses for two-lane roads are summarized in **Table 2**. The results indicate that all existing project-adjacent two-lane roadways currently operate at acceptable LOS during both the AM and PM peak hours.

| | Existi | ng AM | Existi | ng PM |
|--|-----------|-------|-----------|-------|
| Sormont | Density | | Density | |
| Segment | (follower | LOS | (follower | LOS |
| | s/mi/ln) | | s/mi/ln) | |
| CR 1015 (Deason Lane) | 0.0 | Α | 0.0 | Α |
| CR 1118 (Old Fruit Hill Road) | 0.1 | Α | 0.1 | А |
| KY 189 (Ovil Road) | 0.0 | Α | 0.0 | Α |
| KY 107 (Greenville Road) at: | | | | |
| Foster Lane to north of Deason Lane/Wayne Elgin Road | 0.4 | Α | 0.6 | А |
| North of Deason Lane/Wayne Elgin Road to near Rutland Road | 0.6 | Α | 0.7 | А |
| Near Rutland Road to Rutland Road | 0.4 | Α | 0.5 | Α |
| Rutland Road to south of Woodburn Hay Road | 0.5 | Α | 0.7 | Α |
| South of Woodburn Hay Road to Old Greenville Road | 0.4 | Α | 0.5 | Α |
| Old Greenville Road to 1/4 mile north of Old Greenville Road | 0.5 | Α | 0.6 | Α |
| 1/4 mile north of Old Greenville Road to near Dogwood Kelly Road | 0.4 | Α | 0.5 | Α |
| Near Dogwood Kelly Road to near Goode Road | 0.4 | Α | 0.6 | А |
| Near Goode Road to near Old Fruit Hill Road | 0.4 | Α | 0.6 | Α |
| Near Old Fruit Hill Road to 9190 Greenville Road | 0.5 | Α | 0.6 | Α |
| 9190 Greenville Road to near KY 189 | 0.4 | Α | 0.5 | А |
| KY 1682 (Antioch Road) at: | | | | |
| Owens West Road to Goode Road | 0.0 | Α | 0.0 | А |
| Goode Road to 8301 KY 1682 | 0.0 | Α | 0.0 | А |
| 8301 KY 1682 to 7985 Antioch Road | 0.0 | А | 0.0 | А |
| 7985 Antioch Road to Deason Lane | 0.0 | А | 0.0 | А |
| CR 1111 (Woodburn Hay Road) at: | | | | |
| KY 107 to Johnson Mill Road | 0.0 | Α | 0.0 | Α |
| Johnson Mill Road to I-69 | 0.3 | Α | 0.3 | А |

Table 2: Existing AM/PM Two-Lane Highway Analysis

PROJECT TRIP GENERATION

3.0 PROJECT TRIP GENERATION

3.1 CONSTRUCTION

The trip generation analysis for the construction of the Project would generally be 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/depart from passenger vehicles and trucks daily during the AM (7:00 – 9:00 AM) and PM (3:00 – 6:00 PM) peak hours. Equipment deliveries will occur on trailers, flatbeds, or other large vehicles at various times during the day. While specific details concerning construction duration and intensity are not currently known, this study has employed a sensitivity analysis to demonstrate likely construction traffic levels will not have a significant, adverse effect on peak hour traffic operations. For this analysis, existing AM and PM peak hour traffic volumes on roadways were increased by 50 percent which is far greater than would be anticipated for the actual construction of the Project.

3.1.1 CONSTRUCTION ANALYSIS

The 2027 construction year analysis assumed no changes to the existing roadway network and increases in traffic demand discussed above. The results of the construction year AM and PM peak hour two-lane analysis are summarized in **Table 3**. Complete output reports are included in **Appendix B**. The results indicate that all analyzed roadway segments are anticipated to continue to operate at acceptable LOS during construction for both peak hours.

PROJECT TRIP GENERATION

| | Constru | ction AM | Constru | ction PM |
|--|----------------------------------|----------|----------------------------------|----------|
| Segment | Density (follower s/mi/ln) | LOS | Density (follower s/mi/ln) | LOS |
| CR 1015 (Deason Lane) | 0.0 | Α | 0.0 | Α |
| CR 1118 (Old Fruit Hill Road) | 0.3 | Α | 0.2 | Α |
| KY 189 (Ovil Road) | 0.0 | Α | 0.1 | Α |
| KY 107 (Greenville Road) at: | | | | |
| Foster Lane to north of Deason Lane/Wayne Elgin Road | 0.9 | А | 1.1 | Α |
| North of Deason Lane/Wayne Elgin Road to near Rutland Road | 1.1 | А | 1.4 | Α |
| Near Rutland Road to Rutland Road | 0.8 | А | 1.0 | Α |
| Rutland Road to south of Woodburn Hay Road | 1.0 | А | 1.3 | Α |
| South of Woodburn Hay Road to Old Greenville Road | 0.8 | Α | 1.0 | Α |
| Old Greenville Road to 1/4 mile north of Old Greenville Road | 0.9 | Α | 1.2 | Α |
| 1/4 mile north of Old Greenville Road to near Dogwood Kelly Road | 0.8 | Α | 1.1 | Α |
| Near Dogwood Kelly Road to near Goode Road | 0.9 | Α | 1.1 | Α |
| Near Goode Road to near Old Fruit Hill Road | 0.9 | Α | 1.1 | Α |
| Near Old Fruit Hill Road to 9190 Greenville Road | 1.0 | Α | 1.1 | Α |
| 9190 Greenville Road to near KY 189 | 0.9 | Α | 1.0 | Α |
| KY 1682 (Antioch Road) at: | | | | |
| Owens West Road to Goode Road | 0.0 | Α | 0.0 | Α |
| Goode Road to 8301 KY 1682 | 0.1 | Α | 0.1 | Α |
| 8301 KY 1682 to 7985 Antioch Road | 0.0 | Α | 0.1 | Α |
| 7985 Antioch Road to Deason Lane | 0.0 | Α | 0.1 | Α |
| CR 1111 (Woodburn Hay Road) at: | | | | |
| KY 107 to Johnson Mill Road | 0.1 | Α | 0.1 | Α |
| Johnson Mill Road to I-69 | 0.6 | Α | 0.6 | Α |

Table 3: Construction Year (2027) AM/PM Two-Lane Highway Analysis

3.2 OPERATION

Once operational, the facility will be managed and monitored by a small number of employees. The facility will have one employee on site every day and up to three additional employees for 70 days a year for site inspections and repair. Operations workers are expected to commute to and from the project site individually during the peak AM and PM hours. Work can also be conducted at night up to thirty days a year. This additional volume of daily traffic is considered negligible, and the operational phase of the project will have no measurable impact on the traffic and/or transportation infrastructure.

CONCLUSION

4.0 CONCLUSION

As demonstrated in the traffic analysis, the construction period will not produce significant operational changes to existing roadways. All roadways within the project area will continue to operate at LOS A during peak construction traffic. Although no significant 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 peak hours could be implemented to minimize any potential for delays during the AM and PM peak hours.

DOGWOOD SOLAR PROJECT

Appendix A

Appendix A

TRAFFIC COUNTS AND CLASSIFICATION DATA



Short-term Hourly Traffic Volume for 03/28/2022 through 03/30/2022

| Site names: | 024007, | Seasonal Factor Grp: | 2 |
|--------------|-------------------------------------|----------------------|----|
| County: | Christian | Daily Factor Grp: | 2 |
| Funct Class: | Major Collector | Axle Factor Grp: | 07 |
| Location: | 024-KY-0107 -000 @ 28.652 From: OLD | Growth Factor Grp: | 07 |

| | Su | <u>in, Mar 27</u> | , 2022 | Mo | n, Mar 28, | 2022 | Tue | , Mar 29, 1 | 2022 | Wed, Mar 30, 2022 | | Thu, Mar 31, 2 | | , 2022 | Fri, Apr 1 | | 2022 | Sat, Apr 2 | | 2, 2022 | |
|--------------|------|-------------------|--------|--------|------------|--------|--------|-------------|--------|-------------------|-------|----------------|------|--------|------------|------|------|------------|------|---------|-----|
| | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg |
| 00:00 | | | | | | | 11 | 8 | 3 | 5 | 4 | 1 | | | | | | | | | |
| 01:00 | | | | | | | 5 | 3 | 2 | 7 | 4 | 3 | | | | | | | | | |
| 02:00 | | | | | | | 7 | 3 | 4 | 4 | 1 | 3 | | | | | | | | | |
| 03:00 | | | | | | | 11 | 4 | 7 | 15 | 4 | 11 | | | | | | | | | |
| 04:00 | | | | | | | 35 | 7 | 28 | 26 | 2 | 24 | | | | | | | | | |
| 05:00 | | | | | | | 72 | 8 | 64 | 62 | 4 | 58 | | | | | | | | | |
| 06:00 | | | | | | | 129 | 32 | 97 | 127 | 27 | 100 | | | | | | | | | |
| 07:00 | | | | | | | 127 | 46 | 81 | 126 | 31 | 95 | | | | | | | | | |
| 08:00 | | | | | | | 81 | 33 | 48 | 99 | 45 | 54 | | | | | | | | | |
| 09:00 | | | | | | | 64 | 41 | 23 | 106 | 50 | 56 | | | | | | | | | |
| 10:00 | | | | 81 | 55 | 26 | 82 | 49 | 33 | | | | | | | | | | | | |
| 11:00 | | | | 71 | 48 | 23 | 99 | 65 | 34 | | | | | | | | | | | | l |
| 12:00 | | | | 71 | 50 | 21 | 80 | 35 | 45 | | | | | | | | | | | | |
| 13:00 | | | | 85 | 56 | 29 | 84 | 47 | 37 | | | | | | | | | | | | |
| 14:00 | | | | 99 | 58 | 41 | 75 | 42 | 33 | | | | | | | | | | | | |
| 15:00 | | | | 129 | 95 | 34 | 138 | 93 | 45 | | | | | | | | | | | | |
| 16:00 | | | | 153 | 128 | 25 | 157 | 111 | 46 | | | | | | | | | | | | |
| 17:00 | | | | 135 | 102 | 33 | 136 | 93 | 43 | | | | | | | | | | | | |
| 18:00 | | | | 74 | 52 | 22 | 92 | 64 | 28 | | | | | | | | | | | | |
| 19:00 | | | | 73 | 48 | 25 | 54 | 35 | 19 | | | | | | | | | | | | |
| 20:00 | | | | 63 | 47 | 16 | 35 | 28 | 7 | | | | | | | | | | | | |
| 21:00 | | | | 36 | 21 | 15 | 45 | 32 | 13 | | | | | | | | | | | | ļ |
| 22:00 | | | | 21 | 16 | 5 | 25 | 13 | 12 | | | | | | | | | | | | |
| 23:00 | | | | 7 | 4 | 3 | 14 | 10 | 4 | | | | | | | | | | | | l |
| Total | | | | 1,098 | 780 | 318 | 1,658 | 902 | 756 | 577 | 172 | 405 | | | | | | | | | ļ |
| AM Peak Vol | | | | | | | 145 | 65 | 104 | | | | | | | | | | | | |
| AM Peak Fct | | | | | | | .74 | .813 | .703 | | | | | | | | | | | | ļ |
| AM Peak Hr | | | | : | | : | 6: 30 | 10: 45 | 6: 15 | | | | | | | | | | | | |
| PM Peak Vol | | | | 158 | 128 | 41 | 166 | 122 | 51 | | | | | | | | | | | | |
| PM Peak Fct | | | | .806 | .821 | .732 | .883 | .803 | .708 | | | | | | | | | | | | ļ |
| PM Peak Hr | | | | 15: 45 | 15: 45 | 14: 00 | 16: 30 | 15: 45 | 16: 30 | | | | | | | | | | | | |
| Seasonal Fct | | | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | | | | | | | |
| Daily Fct | | | | 1.012 | 1.012 | 1.012 | .970 | .970 | .970 | .965 | .965 | .965 | | | | | | | | | |
| 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 | | | | | | | | | L |

Short-term Hourly Traffic Volume for 09/09/2019 through 09/11/2019

| Site names: | 024007, | | Seasonal Factor Grp: | 2 |
|--------------|--------------------|------------------|----------------------|----|
| County: | Christian | | Daily Factor Grp: | 2 |
| Funct Class: | Major Collector | | Axle Factor Grp: | 07 |
| Location: | 024-KY-0107 -000 @ | 28.652 From: OLD | Growth Factor Grp: | 07 |

| | Su | un, Sep 8, | 2019 | Mo | n, Sep 9, 2 | 2019 | Tue | e, Sep 10, | 2019 | We | Wed, Sep 11, 2019 | | Thu, Sep 12, 2019 | | Fri, Sep 13, 2019 | | Sat, Sep 14, 20 | | 2019 | | |
|--------------|------|------------|------|--------|-------------|--------|--------|------------|--------|-------|-------------------|-------|-------------------|-----|-------------------|------|-----------------|-----|------|-----|----------|
| | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg |
| 00:00 | | | | | | | 8 | 7 | 1 | 5 | 3 | 2 | | | | | | | | | |
| 01:00 | | | | | | | 4 | 3 | 1 | 7 | 5 | 2 | | | | | | | | | |
| 02:00 | | | | | | | 6 | 1 | 5 | 7 | 2 | 5 | | | | | | | | | |
| 03:00 | | | | | | | 15 | 2 | 13 | 14 | 2 | 12 | | | | | | | | | |
| 04:00 | | | | | | | 34 | 5 | 29 | 25 | 2 | 23 | | | | | | | | | |
| 05:00 | | | | | | | 67 | 12 | 55 | 65 | 15 | 50 | | | | | | | | | |
| 06:00 | | | | | | | 149 | 26 | 123 | 117 | 10 | 107 | | | | | | | | | |
| 07:00 | | | | | | | 134 | 36 | 98 | 151 | 34 | 117 | | | | | | | | | |
| 08:00 | | | | | | | 102 | 28 | 74 | 92 | 33 | 59 | | | | | | | | | |
| 09:00 | | | | 85 | 38 | 47 | 80 | 33 | 47 | | | | | | | | | | | | |
| 10:00 | | | | 99 | 40 | 59 | 92 | 42 | 50 | | | | | | | | | | | | |
| 11:00 | | | | 99 | 47 | 52 | 82 | 43 | 39 | | | | | | | | | | | | |
| 12:00 | | | | 102 | 52 | 50 | 97 | 43 | 54 | | | | | | | | | | | | |
| 13:00 | | | | 100 | 47 | 53 | 113 | 57 | 56 | | | | | | | | | | | | |
| 14:00 | | | | 118 | 74 | 44 | 102 | 57 | 45 | | | | | | | | | | | | |
| 15:00 | | | | 144 | 108 | 36 | 139 | 86 | 53 | | | | | | | | | | | | |
| 16:00 | | | | 160 | 114 | 46 | 164 | 121 | 43 | | | | | | | | | | | | |
| 17:00 | | | | 139 | 89 | 50 | 132 | 98 | 34 | | | | | | | | | | | | |
| 18:00 | | | | 109 | 71 | 38 | 100 | 68 | 32 | | | | | | | | | | | | |
| 19:00 | | | | 61 | 44 | 17 | 74 | 46 | 28 | | | | | | | | | | | | |
| 20:00 | | | | 49 | 40 | 9 | 46 | 30 | 16 | | | | | | | | | | | | |
| 21:00 | | | | 24 | 16 | 8 | 28 | 18 | 10 | | | | | | | | | | | | |
| 22:00 | | | | 16 | 8 | 8 | 24 | 9 | 15 | | | | | | | | | | | | |
| 23:00 | | | | 19 | 16 | 3 | 20 | 17 | 3 | | | | | | | | | | | | |
| Total | | | | 1,324 | 804 | 520 | 1,812 | 888 | 924 | 483 | 106 | 377 | | | | | | | | | |
| AM Peak Vol | | | | | | | 151 | 43 | 123 | | | | | | | | | | | | 1 |
| AM Peak Fct | | | | | | | .726 | .632 | .641 | | | | | | | | | | | | |
| AM Peak Hr | | | | : | : | : | 6: 15 | 11: 00 | 6: 00 | | | | | | | | | | | | |
| PM Peak Vol | | | | 162 | 124 | 57 | 173 | 126 | 63 | | | | | | | | | | | | |
| PM Peak Fct | | | | .88 | .756 | .713 | .816 | .768 | .926 | | | | | | | | | | | | |
| PM Peak Hr | | | | 16: 15 | 15: 45 | 12: 45 | 16: 30 | 16: 30 | 12: 30 | | | | | | | | | | | | |
| Seasonal Fct | | | | .944 | .944 | .944 | .944 | .944 | .944 | .944 | .944 | .944 | | | | | | | | | |
| Daily Fct | | | | 1.044 | 1.044 | 1.044 | .983 | .983 | .983 | .992 | .992 | .992 | | | | | | | | | |
| 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 | | | | | | | | | <u> </u> |

Count Class Distribution for 03/28/2022

| Site names: | 024007 |
|--------------|-----------|
| County: | Christian |
| Funct Class: | Major Co |
| Location: | 024-KY-0 |

Major Collector 024-KY-0107 -000 @ 28.652 From: OLD FRUIT HILL ROAD To:

| | Road | Pos | Neg | Pos Lane1 | Neg Lane1 |
|--------------|---------|---------|---------|-----------|-----------|
| MC | 6 | 3 | 3 | 3 | 3 |
| | .18% | .16% | .20% | .16% | .20% |
| CAR | 1,843 | 843 | 1,000 | 843 | 1,000 |
| | 54.32% | 44.75% | 66.27% | 44.75% | 66.27% |
| PU | 1,048 | 635 | 413 | 635 | 413 |
| | 30.89% | 33.70% | 27.37% | 33.70% | 27.37% |
| BUS | 40 | 28 | 12 | 28 | 12 |
| | 1.18% | 1.49% | .80% | 1.49% | .80% |
| 2D | 313 | 279 | 34 | 279 | 34 |
| | 9.22% | 14.81% | 2.25% | 14.81% | 2.25% |
| SU 3 | 33 | 14 | 19 | 14 | 19 |
| | .97% | .74% | 1.26% | .74% | 1.26% |
| SU 4+ | 22 | 21 | 1 | 21 | 1 |
| | .65% | 1.11% | .07% | 1.11% | .07% |
| ST 4- | 61 | 46 | 15 | 46 | 15 |
| | 1.80% | 2.44% | .99% | 2.44% | .99% |
| ST 5 | 25 | 15 | 10 | 15 | 10 |
| | .74% | .80% | .66% | .80% | .66% |
| ST 6+ | 1 | 0 | 1 | 0 | 1 |
| | .03% | .00% | .07% | .00% | .07% |
| MT 5- | 1 | 0 | 1 | 0 | 1 |
| | .03% | .00% | .07% | .00% | .07% |
| MT 6 | 0 | 0 | 0 | 0 | 0 |
| | .00% | .00% | .00% | .00% | .00% |
| MT 7+ | 0 | 0 | 0 | 0 | 0 |
| | .00% | .00% | .00% | .00% | .00% |
| NA | 0 | 0 | 0 | 0 | 0 |
| | .00% | .00% | .00% | .00% | .00% |
| UNCLS | 0 | 0 | 0 | 0 | 0 |
| | .00% | .00% | .00% | .00% | .00% |
| Trucks | 496 | 403 | 93 | 403 | 93 |
| | 14.62% | 21.39% | 6.16% | 21.39% | 6.16% |
| Combo Trucks | 88 | 61 | 27 | 61 | 27 |
| | 2.59% | 3.24% | 1.79% | 3.24% | 1.79% |
| Classified | 3,393 | 1,884 | 1,509 | 1,884 | 1,509 |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| Unclassified | 0 | 0 | 0 | 0 | 0 |
| | .00% | .00% | .00% | .00% | .00% |
| Total | 3,393 | 1,884 | 1,509 | 1,884 | 1,509 |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

through 03/30/2022

| Seasonal Factor Grp: | 2 |
|----------------------|----|
| Daily Factor Grp: | 2 |
| Axle Factor Grp: | 07 |
| Growth Factor Grp: | 07 |

Kentucky Transportation Cabinet Count Class Distribution for 09/09/2019 through

| Site names: | |
|--------------|--|
| County: | |
| Funct Class: | |
| Location: | |

024007 Christian Major Collector 024-KY-0107 -000 @ 28.652 From: OLD FRUIT HILL ROAD To:

| | Road | Pos | Neg | Pos Lane1 | Neg Lane1 |
|--------------|---------|---------|---------|-----------|-----------|
| МС | 97 | 8 | 89 | 8 | 89 |
| | 2.62% | .44% | 4.76% | .44% | 4.76% |
| CAR | 3,134 | 1,422 | 1,712 | 1,422 | 1,712 |
| | 84.68% | 77.58% | 91.65% | 77.58% | 91.65% |
| PU | 354 | 342 | 12 | 342 | 12 |
| | 9.56% | 18.66% | .64% | 18.66% | .64% |
| BUS | 5 | 3 | 2 | 3 | 2 |
| | .14% | .16% | .11% | .16% | .11% |
| 2D | 44 | 24 | 20 | 24 | 20 |
| | 1.19% | 1.31% | 1.07% | 1.31% | 1.07% |
| SU 3 | 20 | 10 | 10 | 10 | 10 |
| | .54% | .55% | .54% | .55% | .54% |
| SU 4+ | 8 | 4 | 4 | 4 | 4 |
| | .22% | .22% | .21% | .22% | .21% |
| ST 4- | 12 | 6 | 6 | 6 | 6 |
| | .32% | .33% | .32% | .33% | .32% |
| ST 5 | 23 | 11 | 12 | 11 | 12 |
| | .62% | .60% | .64% | .60% | .64% |
| ST 6+ | 2 | 2 | 0 | 2 | 0 |
| | .05% | .11% | .00% | .11% | .00% |
| MT 5- | 0 | 0 | 0 | 0 | 0 |
| | .00% | .00% | .00% | .00% | .00% |
| MT 6 | 0 | 0 | 0 | 0 | 0 |
| | .00% | .00% | .00% | .00% | .00% |
| MT 7+ | 1 | 1 | 0 | 1 | 0 |
| | .03% | .05% | .00% | .05% | .00% |
| NA | 0 | 0 | 0 | 0 | 0 |
| | .00% | .00% | .00% | .00% | .00% |
| UNCLS | 1 | 0 | 1 | 0 | 1 |
| | .03% | .00% | .05% | .00% | .05% |
| Trucks | 115 | 61 | 54 | 61 | 54 |
| | 3.11% | 3.33% | 2.89% | 3.33% | 2.89% |
| Combo Trucks | 38 | 20 | 18 | 20 | 18 |
| | 1.03% | 1.09% | .96% | 1.09% | .96% |
| Classified | 3,700 | 1,833 | 1,867 | 1,833 | 1,867 |
| | 99.97% | 100.00% | 99.95% | 100.00% | 99.95% |
| Unclassified | 1 | 0 | 1 | 0 | 1 |
| | .03% | .00% | .05% | .00% | .05% |
| Total | 3,701 | 1,833 | 1,868 | 1,833 | 1,868 |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

through 09/11/2019

| 2 |
|----|
| 2 |
| 07 |
| 07 |
| |

Short-term Hourly Traffic Volume for 03/21/2022 through 03/22/2022

| Site names: | 024030, | | Seasonal Factor Grp: | 2 |
|--------------|--------------------|----------------------|----------------------|----|
| County: | Christian | | Daily Factor Grp: | 2 |
| Funct Class: | Major Collector | | Axle Factor Grp: | 07 |
| Location: | 024-KY-0107 -000 @ | 24.329 From: KY 1682 | Growth Factor Grp: | 07 |

| | Su | n, Mar 20 | , 2022 | Mo | n, Mar 21 | , 2022 | Tue | e, Mar 22 | r 22, 2022 Wed, Mar 23, 2022 Thu, / | | Thu, Mar 24, 2022 | | Fri, Mar 25, 2022 | | | Sat, Mar 26, 2022 | | | | | |
|--------------|------|-----------|--------|--------|-----------|--------|-------|-----------|-------------------------------------|------|-------------------|-----|-------------------|-----|-----|-------------------|-----|-----|------|-----|-----|
| | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg |
| 00:00 | | | | | | | 8 | | | | | | | | | | | | | | |
| 01:00 | | | | | | | 4 | | | | | | | | | | | | | | |
| 02:00 | | | | | | | 10 | | | | | | | | | | | | | | |
| 03:00 | | | | | | | 16 | | | | | | | | | | | | | | |
| 04:00 | | | | | | | 30 | | | | | | | | | | | | | | |
| 05:00 | | | | | | | 62 | | | | | | | | | | | | | | |
| 06:00 | | | | | | | 154 | | | | | | | | | | | | | | |
| 07:00 | | | | | | | 164 | | | | | | | | | | | | | | |
| 08:00 | | | | | | | 95 | | | | | | | | | | | | | | |
| 09:00 | | | | | | | 100 | | | | | | | | | | | | | | |
| 10:00 | | | | | | | 105 | | | | | | | | | | | | | | |
| 11:00 | | | | 127 | | | 112 | | | | | | | | | | | | | | |
| 12:00 | | | | 117 | | | 102 | | | | | | | | | | | | | | |
| 13:00 | | | | 133 | | | 106 | | | | | | | | | | | | | | |
| 14:00 | | | | 126 | | | 116 | | | | | | | | | | | | | | |
| 15:00 | | | | 168 | | | 183 | | | | | | | | | | | | | | |
| 16:00 | | | | 199 | | | 201 | | | | | | | | | | | | | | |
| 17:00 | | | | 184 | | | 176 | | | | | | | | | | | | | | |
| 18:00 | | | | 115 | | | | | | | | | | | | | | | | | |
| 19:00 | | | | 81 | | | | | | | | | | | | | | | | | |
| 20:00 | | | | 59 | | | | | | | | | | | | | | | | | |
| 21:00 | | | | 38 | | | | | | | | | | | | | | | | | |
| 22:00 | | | | 18 | | | | | | | | | | | | | | | | | |
| 23:00 | | | | 13 | | | | | | | | | | | | | | | | | |
| Total | | | | 1,378 | | | 1,744 | | | | | | | | | | | | | | |
| AM Peak Vol | | | | | | | 172 | | | | | | | | | | | | | | |
| AM Peak Fct | | | | | | | .86 | | | | | | | | | | | | | | |
| AM Peak Hr | | | | : | | | 6: 30 | | | | | | | | | | | | | | |
| PM Peak Vol | | | | 211 | | | | | | | | | | | | | | | | | |
| PM Peak Fct | | | | .879 | | | | | | | | | | | | | | | | | |
| PM Peak Hr | | | | 16: 30 | | | : | | | | | | | | | | | | | | |
| Seasonal Fct | | | | 1.074 | | | 1.074 | | | | | | | | | | | | | | |
| Daily Fct | | | | .969 | | | 1.002 | | | | | | | | | | | | | | |
| Axle Fct | | | | .500 | | | .500 | | | | | | | | | | | | | | |
| Pulse Fct | | | | 2.000 | | | 2.000 | | | | | | | | | | | | | | |

Short-term Hourly Traffic Volume for 09/09/2019 through 09/11/2019

| Site names: | 024030, | Seasonal Factor Grp: | 2 |
|--------------|--|-----------------------|----|
| County: | Christian | Daily Factor Grp: | 2 |
| Funct Class: | Major Collector | Axle Factor Grp: | 07 |
| Location: | 024-KY-0107 -000 @ 24.329 From: KY 168 | 32 Growth Factor Grp: | 07 |

| | Su | un, Sep 8, | 2019 | Mo | on, Sep 9, | 2019 | Tue, Sep | <u>10, 2019</u> | We | ed, Sep 11 | <u>, 2019</u> | Th | <u>u, Sep 12</u> | , 2019 | Fi | r <u>i, Sep 13,</u> | 2019 | Sat, So | | ep 14, 2019 | |
|--------------|------|------------|------|--------|------------|------|----------|-----------------|-------|------------|---------------|------|------------------|--------|------|---------------------|------|---------|-----|-------------|--|
| | Road | Pos | Neg | Road | Pos | Neg | Road Po | s Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | |
| 00:00 | | | | | | | 8 | | 6 | | | | | | | | | | | | |
| 01:00 | | | | | | | 10 | | 7 | | | | | | | | | | | | |
| 02:00 | | | | | | | 8 | | 8 | | | | | | | | | | | | |
| 03:00 | | | | | | | 18 | | 26 | | | | | | | | | | | | |
| 04:00 | | | | | | | 56 | | 49 | | | | | | | | | | | | |
| 05:00 | | | | | | | 97 | | 100 | | | | | | | | | | | | |
| 06:00 | | | | | | | 232 | | 194 | | | | | | | | | | | | |
| 07:00 | | | | | | | 248 | | 282 | | | | | | | | | | | | |
| 08:00 | | | | | | | 189 | | 172 | | | | | | | | | | | | |
| 09:00 | | | | | | | 136 | | 138 | | | | | | | | | | | | |
| 10:00 | | | | 164 | | | 136 | | | | | | | | | | | | | | |
| 11:00 | | | | 162 | | | 135 | | | | | | | | | | | | | | |
| 12:00 | | | | 170 | | | 154 | | | | | | | | | | | | | | |
| 13:00 | | | | 180 | | | 164 | | | | | | | | | | | | | | |
| 14:00 | | | | 196 | | | 172 | | | | | | | | | | | | | | |
| 15:00 | | | | 213 | | | 270 | | | | | | | | | | | | | | |
| 16:00 | | | | 257 | | | 288 | | | | | | | | | | | | | | |
| 17:00 | | | | 236 | | | 223 | | | | | | | | | | | | | | |
| 18:00 | | | | 180 | | | 168 | | | | | | | | | | | | | | |
| 19:00 | | | | 124 | | | 134 | | | | | | | | | | | | | | |
| 20:00 | | | | 83 | | | 90 | | | | | | | | | | | | | | |
| 21:00 | | | | 43 | | | 43 | | | | | | | | | | | | | | |
| 22:00 | | | | 28 | | | 45 | | | | | | | | | | | | | | |
| 23:00 | | | | 26 | | | 25 | | | | | | | | | | | | | | |
| Total | | | | 2,062 | | | 3,049 | | 982 | | | | | | | | | | | | |
| AM Peak Vol | | | | | | | 266 | | | | | | | | | | | | | | |
| AM Peak Fct | | | | | | | .801 | | | | | | | | | | | | | | |
| AM Peak Hr | | | | : | | | 6: 45 | | | | | | | | | | | | | | |
| PM Peak Vol | | | | 271 | | | 302 | | | | | | | | | | | | | | |
| PM Peak Fct | | | | .916 | | | .848 | | | | | | | | | | | | | | |
| PM Peak Hr | | | | 15: 45 | | | 16: 30 | | | | | | | | | | | | | | |
| Seasonal Fct | | | | .944 | | | .944 | | .944 | | | | | | | | | | | | |
| Daily Fct | | | | 1.044 | | | .983 | | .992 | | | | | | | | | | | | |
| Axle Fct | | | | .490 | | | .490 | | .490 | | | | | | | | | | | | |
| Pulse Fct | | | | 2.000 | | | 2.000 | | 2.000 | | | | | | | | | | | | |

Short-term Hourly Traffic Volume for 09/29/2020 through 10/02/2020

| Site names: | 024006, | | Seasonal Factor Grp: | 2 |
|--------------|-------------------|---------------------|----------------------|----|
| County: | Christian | | Daily Factor Grp: | 2 |
| Funct Class: | Minor Collector | | Axle Factor Grp: | 08 |
| Location: | 024-KY-0189 -000@ | 4.646 From: KY 1682 | Growth Factor Grp: | 08 |

| | Su | n, Sep 27 | , 2020 | Mo | n, Sep 28 | , 2020 | Tu | e, Sep 29, | 2020 | Wed, Sep 3 | 0, 2020 | Th | <u>u, Oct 1,</u> | 2020 | F | ri, Oct 2, 2 | 2020 | Sat, C | | ct 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 | | | | | | | | | | 1 | | 2 | | | 5 | | | | | | |
| 01:00 | | | | | | | | | | 0 | | 1 | | | 3 | 8 | | | | | |
| 02:00 | | | | | | | | | | 1 | | 1 | | | 2 | | | | | | |
| 03:00 | | | | | | | | | | 1 | | 1 | | | 1 | | | | | | |
| 04:00 | | | | | | | | | | 6 | | 6 | | | 8 | 8 | | | | | |
| 05:00 | | | | | | | | | | 5 | | 12 | | | 13 | 8 | | | | | |
| 06:00 | | | | | | | | | | 19 | | 20 | | | 13 | 8 | | | | | |
| 07:00 | | | | | | | | | | 22 | | 22 | | | 26 | ò | | | | | |
| 08:00 | | | | | | | | | | 18 | | 28 | | | 29 |) | | | | | |
| 09:00 | | | | | | | | | | 32 | | 21 | | | | | | | | | |
| 10:00 | | | | | | | | | | 23 | | 30 | | | | | | | | | |
| 11:00 | | | | | | | | | | 27 | | 35 | | | | | | | | | |
| 12:00 | | | | | | | | | | 37 | | 43 | | | | | | | | | |
| 13:00 | | | | | | | | | | 49 | | 35 | | | | | | | | | |
| 14:00 | | | | | | | | | | 35 | | 44 | | | | | | | | | |
| 15:00 | | | | | | | 39 | | | 36 | | 51 | | | | | | | | | |
| 16:00 | | | | | | | 32 | | | 46 | | 53 | | | | | | | | | |
| 17:00 | | | | | | | 38 | | | 55 | | 45 | | | | | | | | | |
| 18:00 | | | | | | | 37 | | | 39 | | 47 | | | | | | | | | |
| 19:00 | | | | | | | 22 | | | 21 | | 35 | | | | | | | | | |
| 20:00 | | | | | | | 22 | | | 20 | | 18 | | | | | | | | | |
| 21:00 | | | | | | | 12 | | | 11 | | 10 | | | | | | | | | |
| 22:00 | | | | | | | 11 | | | 13 | | 3 | | | | | | | | | |
| 23:00 | | | | | | | 4 | | | 4 | | 4 | | | | | | | | | |
| Total | | | | | | | 217 | | | 521 | | 567 | | | 100 |) | | | | | |
| AM Peak Vol | | | | | | | | | | 32 | | 35 | | | | | | | | | |
| AM Peak Fct | | | | | | | | | | .615 | | .795 | | | | | | | | | |
| AM Peak Hr | | | | | | | | | | 9: 00 | | 11:00 | | | | | | | | | |
| PM Peak Vol | | | | | | | | | | 58 | | 55 | | | | | | | | | |
| PM Peak Fct | | | | | | | | | | .763 | | .764 | | | | | | | | | |
| PM Peak Hr | | | | | | | | | | 17: 30 | | 16: 15 | | | | | | | | | |
| Seasonal Fct | | | | | | | .924 | | | .924 | | .941 | | | .941 | | | | | | |
| Daily Fct | | | | | | | .989 | | | .986 | | .949 | | | .860 |) | | | | | |
| Axle Fct | | | | | | | .489 | | | .489 | | .494 | | | .494 | | | | | | |
| Pulse Fct | | | | | | | 2.000 | | | 2.000 | | 2.000 | | | 2.000 | | | | | | |

0

Short-term Hourly Traffic Volume for 08/02/2017 through 08/04/2017

| Site names: | 024006, | | Seasonal Factor Grp: | 2 |
|--------------|-------------------|---------------------|----------------------|----|
| County: | Christian | | Daily Factor Grp: | 2 |
| Funct Class: | Minor Collector | | Axle Factor Grp: | 08 |
| Location: | 024-KY-0189 -000@ | 4.646 From: KY 1682 | Growth Factor Grp: | 08 |

| | Su | un, Jul 30, | 2017 | Mc | on, Jul 31, | 2017 | Τι | ue, Aug 1, | 2017 | We | ed, Aug 2 | 2017 | Thu | i, Aug 3, | 2017 | F | ri, Aug 4, | 2017 | Sa | at, Aug 5, | 2017 |
|--------------|------|-------------|------|------|-------------|------|------|------------|------|--------|-----------|------|--------|-----------|------|-------|------------|------|------|------------|------|
| | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg |
| 00:00 | | | | | | | | | | | | | 1 | | | C |) | | | | |
| 01:00 | | | | | | | | | | | | | 0 | | | C |) | | | | |
| 02:00 | | | | | | | | | | | | | 1 | | | 1 | | | | | |
| 03:00 | | | | | | | | | | | | | 3 | | | 1 | | | | | |
| 04:00 | | | | | | | | | | | | | 4 | | | 5 | 5 | | | | |
| 05:00 | | | | | | | | | | | | | 2 | | | 4 | 1 | | | | |
| 06:00 | | | | | | | | | | | | | 15 | | | 14 | Į | | | | |
| 07:00 | | | | | | | | | | 22 | | | 16 | | | 17 | 7 | | | | |
| 08:00 | | | | | | | | | | 15 | | | 17 | | | 21 | | | | | |
| 09:00 | | | | | | | | | | 21 | | | 16 | | | | | | | | |
| 10:00 | | | | | | | | | | 28 | | | 12 | | | | | | | | |
| 11:00 | | | | | | | | | | 21 | | | 33 | | | | | | | | |
| 12:00 | | | | | | | | | | 22 | | | 20 | | | | | | | | |
| 13:00 | | | | | | | | | | 19 | | | 25 | | | | | | | | |
| 14:00 | | | | | | | | | | 19 | | | 24 | | | | | | | | |
| 15:00 | | | | | | | | | | 45 | | | 30 | | | | | | | | |
| 16:00 | | | | | | | | | | 35 | | | 41 | | | | | | | | |
| 17:00 | | | | | | | | | | 24 | | | 33 | | | | | | | | |
| 18:00 | | | | | | | | | | 34 | | | 34 | | | | | | | | |
| 19:00 | | | | | | | | | | 19 | | | 18 | | | | | | | | |
| 20:00 | | | | | | | | | | 20 | | | 24 | | | | | | | | |
| 21:00 | | | | | | | | | | 5 | | | 15 | | | | | | | | |
| 22:00 | | | | | | | | | | 3 | | | 8 | | | | | | | | |
| 23:00 | | | | | | | | | | 4 | | | 2 | | | | | | | | |
| Total | | | | | | | | | | 356 | | | 394 | | | 63 | 3 | | | | |
| AM Peak Vol | | | | | | | | | | 0 | | | 33 | | | C | | | | | |
| AM Peak Fct | | | | | | | | | | 0 | | | 1 | | | C |) | | | | |
| AM Peak Hr | | | | | | | | | | : | | | 11: 00 | | | | | | | | |
| PM Peak Vol | | | | | | | | | | 45 | | | 41 | | | 0 |) | | | | |
| PM Peak Fct | | | | | | | | | | 1 | | | 1 | | | C |) | | | | |
| PM Peak Hr | | | | | | | | | | 15: 00 | | | 16: 00 | | | | | | | | |
| Seasonal Fct | | | | | | | | | | .957 | | | .957 | | | .957 | 7 | | | | |
| Daily Fct | | | | | | | | | | .990 | | | .939 | | | .867 | 7 | | | | |
| Axle Fct | | | | | | | | | | .489 | | | .489 | | | .489 |) | | | | |
| Pulse Fct | | | | | | | | | | 2.000 | | | 2.000 | | | 2.000 | þ | | | | |

Short-term Hourly Traffic Volume for 11/10/2020 through 11/12/2020

| Site names: | 024029, | | Seasonal Factor Grp: | 2 |
|--------------|--------------------|--------------------|----------------------|----|
| County: | Christian | | Daily Factor Grp: | 2 |
| Funct Class: | Local | | Axle Factor Grp: | 09 |
| Location: | 024-KY-1682 -000 @ | 8.335 From: KY 107 | Growth Factor Grp: | 09 |

| | Su | un, Nov 8, | 2020 | Mo | on, Nov 9, | 2020 | Tu | e, Nov 10 | , 2020 | Weo | d, Nov 11 | , 2020 | Thu | u, Nov 12 | , 2020 | F | ri, Nov 13, | 2020 | Sa | t, Nov 14, | , 2020 |
|--------------|------|------------|------|------|------------|------|--------|-----------|--------|--------|-----------|--------|-------|-----------|--------|------|-------------|------|------|------------|--------|
| | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg |
| 00:00 | | | | | | | | | | 4 | | | 3 | | | | | | | | |
| 01:00 | | | | | | | | | | 1 | | | 1 | | | | | | | | |
| 02:00 | | | | | | | | | | 0 | | | 1 | | | | | | | | |
| 03:00 | | | | | | | | | | 4 | | | 5 | | | | | | | | |
| 04:00 | | | | | | | | | | 10 | | | 5 | | | | | | | | |
| 05:00 | | | | | | | | | | 10 | | | 16 | | | | | | | | |
| 06:00 | | | | | | | | | | 34 | | | 37 | | | | | | | | |
| 07:00 | | | | | | | | | | 34 | | | 45 | | | | | | | | |
| 08:00 | | | | | | | 32 | | | 31 | | | | | | | | | | | |
| 09:00 | | | | | | | 32 | | | 20 | | | | | | | | | | | |
| 10:00 | | | | | | | 24 | | | 37 | | | | | | | | | | | |
| 11:00 | | | | | | | 31 | | | 35 | | | | | | | | | | | |
| 12:00 | | | | | | | 28 | | | 41 | | | | | | | | | | | |
| 13:00 | | | | | | | 28 | | | 27 | | | | | | | | | | | |
| 14:00 | | | | | | | 40 | | | 38 | | | | | | | | | | | |
| 15:00 | | | | | | | 49 | | | 65 | | | | | | | | | | | |
| 16:00 | | | | | | | 46 | | | 62 | | | | | | | | | | | |
| 17:00 | | | | | | | 51 | | | 38 | | | | | | | | | | | |
| 18:00 | | | | | | | 18 | | | 26 | | | | | | | | | | | |
| 19:00 | | | | | | | 22 | | | 21 | | | | | | | | | | | |
| 20:00 | | | | | | | 16 | | | 9 | | | | | | | | | | | |
| 21:00 | | | | | | | 4 | | | 15 | | | | | | | | | | | |
| 22:00 | | | | | | | 2 | | | 1 | | | | | | | | | | | |
| 23:00 | | | | | | | 3 | | | 2 | | | | | | | | | | | |
| Total | | | | | | | 426 | | | 565 | | | 113 | | | | | | | | |
| AM Peak Vol | | | | | | | | | | 42 | | | | | | | | | | | |
| AM Peak Fct | | | | | | | | | | .618 | | | | | | | | | | | |
| AM Peak Hr | | | | | | | | | | 7: 15 | | | | | | | | | | | |
| PM Peak Vol | | | | | | | 55 | | | 67 | | | | | | | | | | | |
| PM Peak Fct | | | | | | | .809 | | | .931 | | | | | | | | | | | |
| PM Peak Hr | | | | | | | 16: 30 | | | 15: 15 | | | | | | | | | | | |
| Seasonal Fct | | | | | | | 1.012 | | | 1.012 | | | 1.012 | | | | | | | | |
| Daily Fct | | | | | | | .940 | | | .958 | | | 1.012 | | | | | | | | |
| Axle Fct | | | | | | | .500 | | | .500 | | | .500 | | | | | | | | |
| Pulse Fct | | | | | | | 2.000 | | | 2.000 | | | 2.000 | | | | | | | | |

0

Short-term Hourly Traffic Volume for 08/02/2017 through 08/04/2017

| Site names: | 024029, | | Seasonal Factor Grp: | 2 |
|--------------|--------------------|--------------------|----------------------|----|
| County: | Christian | | Daily Factor Grp: | 2 |
| Funct Class: | Local | | Axle Factor Grp: | 09 |
| Location: | 024-KY-1682 -000 @ | 8.335 From: KY 107 | Growth Factor Grp: | 09 |

| | Su | un, Jul 30, | 2017 | Mo | on, Jul 31, | 2017 | Τι | .ue, Aug 1, | 2017 | We | d, Aug 2, | 2017 | Th | u, Aug 3, | 2017 | F | ri, Aug 4, | 2017 | Sa | at, Aug 5, | 2017 |
|--------------|------|-------------|------|------|-------------|------|------|-------------|------|--------|-----------|------|--------|-----------|------|-------|------------|------|------|------------|------|
| | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg |
| 00:00 | | | | | | | | | | | | | 3 | | | C |) | | | | |
| 01:00 | | | | | | | | | | | | | 1 | | | 2 | | | | | |
| 02:00 | | | | | | | | | | | | | 2 | | | 1 | | | | | |
| 03:00 | | | | | | | | | | | | | 1 | | | 1 | | | | | |
| 04:00 | | | | | | | | | | | | | 3 | | | 5 | | | | | |
| 05:00 | | | | | | | | | | | | | 15 | | | 10 | | | | | |
| 06:00 | | | | | | | | | | | | | 22 | | | 19 |) | | | | |
| 07:00 | | | | | | | | | | 26 | | | 31 | | | 29 |) | | | | |
| 08:00 | | | | | | | | | | 20 | | | 27 | | | 23 | 8 | | | | |
| 09:00 | | | | | | | | | | 24 | | | 22 | | | | | | | | |
| 10:00 | | | | | | | | | | 22 | | | 17 | | | | | | | | |
| 11:00 | | | | | | | | | | 19 | | | 21 | | | | | | | | |
| 12:00 | | | | | | | | | | 34 | | | 21 | | | | | | | | |
| 13:00 | | | | | | | | | | 24 | | | 31 | | | | | | | | |
| 14:00 | | | | | | | | | | 33 | | | 27 | | | | | | | | |
| 15:00 | | | | | | | | | | 43 | | | 38 | | | | | | | | |
| 16:00 | | | | | | | | | | 40 | | | 45 | | | | | | | | |
| 17:00 | | | | | | | | | | 47 | | | 39 | | | | | | | | |
| 18:00 | | | | | | | | | | 42 | | | 34 | | | | | | | | |
| 19:00 | | | | | | | | | | 27 | | | 30 | | | | | | | | |
| 20:00 | | | | | | | | | | 21 | | | 16 | | | | | | | | |
| 21:00 | | | | | | | | | | 21 | | | 11 | | | | | | | | |
| 22:00 | | | | | | | | | | 6 | | | 10 | | | | | | | | |
| 23:00 | | | | | | | | | | 5 | | | 6 | | | | | | | | |
| Total | | | | | | | | | | 454 | | | 473 | | | 90 |) | | | | |
| AM Peak Vol | | | | | | | | | | 0 | | | 31 | | | C | | | | | |
| AM Peak Fct | | | | | | | | | | 0 | | | 1 | | | C |) | | | | |
| AM Peak Hr | | | | | | | | | | : | | | 7: 00 | | | : | | | | | |
| PM Peak Vol | | | | | | | | | | 47 | | | 45 | | | C | | | | | |
| PM Peak Fct | | | | | | | | | | 1 | | | 1 | | | C | | | | | |
| PM Peak Hr | | | | | | | | | | 17: 00 | | | 16: 00 | | | : | | | | | |
| Seasonal Fct | | | | | | | | | | .957 | | | .957 | | | .957 | , | | | | |
| Daily Fct | | | | | | | | | | .990 | | | .939 | | | .867 | 7 | | | | |
| Axle Fct | | | | | | | | | | .486 | | | .486 | | | .486 | ò | | | | |
| Pulse Fct | | | | | | | | | | 2.000 | | | 2.000 | | | 2.000 |) | | | | |

Short-term Hourly Traffic Volume for 03/28/2022 through 03/30/2022

| Site names: | 024050, | | Seasonal Factor Grp: | 2 |
|--------------|--------------------|--------------------|----------------------|----|
| County: | Christian | | Daily Factor Grp: | 2 |
| Funct Class: | Local | | Axle Factor Grp: | 09 |
| Location: | 024-KY-1682 -000 @ | 12.874 From: GOODE | Growth Factor Grp: | 09 |

| | Su | n, Mar 27 | , 2022 | Мо | on, Mar 28 | , 2022 | Tue | e, Mar 29 | , 2022 | We | d, Mar 30 | , 2022 | Th | u, Mar 31 | , 2022 | F | ri, Apr 1, 2 | 2022 | S | at, Apr 2, 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 | | | | | | | 0 | | | 1 | | | | | | | | | | | |
| 01:00 | | | | | | | 1 | | | 0 | | | | | | | | | | | |
| 02:00 | | | | | | | 0 | | | 0 | | | | | | | | | | | |
| 03:00 | | | | | | | 1 | | | 1 | | | | | | | | | | | |
| 04:00 | | | | | | | 0 | | | 1 | | | | | | | | | | | |
| 05:00 | | | | | | | 5 | | | 11 | | | | | | | | | | | |
| 06:00 | | | | | | | 3 | | | 4 | | | | | | | | | | | |
| 07:00 | | | | | | | 14 | | | 20 | | | | | | | | | | | |
| 08:00 | | | | | | | 12 | | | 4 | | | | | | | | | | | |
| 09:00 | | | | | | | 4 | | | 7 | | | | | | | | | | | |
| 10:00 | | | | 5 | | | 12 | | | | | | | | | | | | | | |
| 11:00 | | | | 10 | | | 4 | | | | | | | | | | | | | | |
| 12:00 | | | | 5 | | | 11 | | | | | | | | | | | | | | |
| 13:00 | | | | 8 | | | 9 | | | | | | | | | | | | | | |
| 14:00 | | | | 12 | | | 10 | | | | | | | | | | | | | | |
| 15:00 | | | | 18 | | | 13 | | | | | | | | | | | | | | |
| 16:00 | | | | 7 | | | 9 | | | | | | | | | | | | | | |
| 17:00 | | | | 16 | | | 18 | | | | | | | | | | | | | | |
| 18:00 | | | | 10 | | | 22 | | | | | | | | | | | | | | |
| 19:00 | | | | 12 | | | 8 | | | | | | | | | | | | | | |
| 20:00 | | | | 4 | | | 5 | | | | | | | | | | | | | | |
| 21:00 | | | | 5 | | | 3 | | | | | | | | | | | | | | |
| 22:00 | | | | 3 | | | 2 | | | | | | | | | | | | | | |
| 23:00 | | | | 2 | | | 3 | | | | | | | | | | | | | | |
| Total | | | | 117 | | | 169 | | | 49 | | | | | | | | | | | |
| AM Peak Vol | | | | | | | 15 | | | | | | | | | | | | | | |
| AM Peak Fct | | | | | | | .536 | | | | | | | | | | | | | | |
| AM Peak Hr | | | | : | | | 7: 15 | | | | | | | | | | | | | | |
| PM Peak Vol | | | | 19 | | | 24 | | | | | | | | | | | | | | |
| PM Peak Fct | | | | .594 | | | .857 | | | | | | | | | | | | | | |
| PM Peak Hr | | | | 15: 15 | | | 17: 45 | | | | | | | | | | | | | | |
| Seasonal Fct | | | | 1.000 | | | 1.000 | | | 1.000 | | | | | | | | | | | |
| Daily Fct | | | | 1.012 | | | .970 | | | .965 | | | | | | | | | | | |
| Axle Fct | | | | .500 | | | .500 | | | .500 | | | | | | | | | | | |
| Pulse Fct | | | | 2.000 | | | 2.000 | | | 2.000 | | | | | | | | | | | |

0

Short-term Hourly Traffic Volume for 09/09/2019 through 09/11/2019

| Site names: | 024050, | | Seasonal Factor Grp: | 2 |
|--------------|--------------------|--------------------|----------------------|----|
| County: | Christian | | Daily Factor Grp: | 2 |
| Funct Class: | Local | | Axle Factor Grp: | 09 |
| Location: | 024-KY-1682 -000 @ | 12.874 From: GOODE | Growth Factor Grp: | 09 |

| | Su | un, Sep 8, | 2019 | Mo | on, Sep 9, | , 2019 | Tu | e, Sep 10, | , 2019 | We | ed, Sep 11 | , 2019 | Th | <u>u, Sep 12</u> | , 2019 | Fr | <u>ri, Sep 13,</u> | 2019 | Sa | t, Sep 14, | , 2019 |
|--------------|------|------------|------|--------|------------|--------|--------|------------|--------|-------|------------|--------|------|------------------|--------|------|--------------------|------|------|------------|--------|
| | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg | Road | Pos | Neg |
| 00:00 | | | | | | | 1 | | | 0 | | | | | | | | | | | |
| 01:00 | | | | | | | 1 | | | 2 | | | | | | | | | | | |
| 02:00 | | | | | | | 0 | | | 0 | | | | | | | | | | | |
| 03:00 | | | | | | | 0 | | | 0 | | | | | | | | | | | |
| 04:00 | | | | | | | 2 | | | 2 | | | | | | | | | | | |
| 05:00 | | | | | | | 2 | | | 4 | | | | | | | | | | | |
| 06:00 | | | | | | | 13 | | | 10 | | | | | | | | | | | |
| 07:00 | | | | | | | 10 | | | 9 | | | | | | | | | | | |
| 08:00 | | | | | | | 7 | | | 5 | | | | | | | | | | | |
| 09:00 | | | | 6 | | | 10 | | | | | | | | | | | | | | |
| 10:00 | | | | 12 | | | 15 | | | | | | | | | | | | | | |
| 11:00 | | | | 15 | | | 8 | | | | | | | | | | | | | | |
| 12:00 | | | | 9 | | | 11 | | | | | | | | | | | | | | |
| 13:00 | | | | 7 | | | 5 | | | | | | | | | | | | | | |
| 14:00 | | | | 12 | | | 16 | | | | | | | | | | | | | | |
| 15:00 | | | | 3 | | | 7 | | | | | | | | | | | | | | |
| 16:00 | | | | 12 | | | 14 | | | | | | | | | | | | | | |
| 17:00 | | | | 24 | | | 27 | | | | | | | | | | | | | | |
| 18:00 | | | | 17 | | | 16 | | | | | | | | | | | | | | |
| 19:00 | | | | 16 | | | 8 | | | | | | | | | | | | | | |
| 20:00 | | | | 8 | | | 7 | | | | | | | | | | | | | | |
| 21:00 | | | | 0 | | | 4 | | | | | | | | | | | | | | |
| 22:00 | | | | 6 | | | 7 | | | | | | | | | | | | | | |
| 23:00 | | | | 2 | | | 2 | | | | | | | | | | | | | | |
| Total | | | | 149 | | | 193 | | | 32 | | | | | | | | | | | |
| AM Peak Vol | | | | | | | 18 | | | | | | | | | | | | | | |
| AM Peak Fct | | | | | | | .5 | | | | | | | | | | | | | | |
| AM Peak Hr | | | | : | | | 10: 30 | | | | | | | | | | | | | | |
| PM Peak Vol | | | | 24 | | | 31 | | | | | | | | | | | | | | |
| PM Peak Fct | | | | .545 | | | .861 | | | | | | | | | | | | | | |
| PM Peak Hr | | | | 16: 45 | | | 17: 15 | | | | | | | | | | | | | | |
| Seasonal Fct | | | | .944 | | | .944 | | | .944 | | | | | | | | | | | |
| Daily Fct | | | | 1.044 | | | .983 | | | .992 | | | | | | | | | | | |
| Axle Fct | | | | .500 | | | .500 | | | .500 | | | | | | | | | | | |
| Pulse Fct | | | | 2.000 | | | 2.000 | | | 2.000 | | | | | | | | | | | |

DOGWOOD SOLAR PROJECT

Appendix B

Appendix B

HIGHWAY CAPACITY SOFTWARE (HCS 2022) FILES

EXISTING

CONSTRUCTION PERIOD



| | | HCS Two | -Lane H | ighway Re | eport | |
|-------------|----------------------------|-------------------|------------|-------------------|-----------------------------|---------------------|
| Projec | t Information | | | | | |
| Analyst | | ATW | C | Date | | 10/18/22 |
| Agency | | Stantec | Δ | Analysis Year | | 2022 |
| Jurisdictio | on | | Т | ime Analyzed | | Existing AM |
| Project D | escription | Deason Lane | L | Jnits | | U.S. Customary |
| | | | Segme | ent 1 | | |
| Vehicle | e Inputs | | | | | |
| Segment | Туре | Passing Constrain | ned L | ength, ft | | 7971 |
| Lane Wid | lth, ft | 9 | S | houlder Width, f | ft | 0 |
| Speed Lir | nit, mi/h | 35 | Α | Access Point Den | sity, pts/mi | 19.9 |
| Demar | nd and Capacity | | | | | |
| Direction | al Demand Flow Rate, veh/h | 3 | C | Opposing Demar | nd Flow Rate, veh/h | - |
| Peak Hou | ır Factor | 0.94 | Т | otal Trucks, % | | 2.00 |
| Segment | Capacity, veh/h | 1700 | C | Demand/Capacity | y (D/C) | 0.00 |
| Interm | ediate Results | | | | | |
| Segment | Vertical Class | 1 | F | ree-Flow Speed, | mi/h | 28.9 |
| Speed Slo | ope Coefficient (m) | 2.14827 | S | peed Power Coe | efficient (p) | 0.41674 |
| PF Slope | Coefficient (m) | -1.35216 | Р | PF Power Coeffici | ent (p) | 0.63549 |
| In Passing | g Lane Effective Length? | No | Т | otal Segment De | ensity, veh/mi/ln | 0.0 |
| %Improv | ement to Percent Followers | 0.0 | 9 | 6Improvement to | o Speed | 0.0 |
| Subseg | gment Data | | | | | |
| # Seg | gment Type | Length, ft | Radius | s, ft | Superelevation, % | Average Speed, mi/h |
| 1 Tan | ngent | 7971 | - | | - | 28.9 |
| Vehicle | e Results | · | | | - | · |
| Average S | Speed, mi/h | 28.9 | P | Percent Followers | 5, % | 3.4 |
| Segment | Travel Time, minutes | 3.14 | F | ollower Density | (FD), followers/mi/In | 0.0 |
| Vehicle L | OS | A | | | | |
| Facility | y Results | | | | | |
| т | VMT veh-mi/p | VH veh- | ID ·h/p | Follower D | ensity, followers/ mi/ln | LOS |
| 1 | 1 | 0.0 | 00 | | 0.0 | А |

HCSTM Highways Version 2022 Existing AM Deason Lane.Xuf

| | | HCS Two | -Lane H | Hig | hway Re | port | |
|------------|-----------------------------|------------------|------------|--------|-----------------|-----------------------------|---------------------|
| Projec | t Information | | | | | | |
| Analyst | | ATW | | Date | 5 | | 10/18/22 |
| Agency | | Stantec | | Anal | ysis Year | | 2022 |
| Jurisdicti | on | | | Time | e Analyzed | | Existing PM |
| Project D | Description | Deason Lane | | Unit | S | | U.S. Customary |
| | | | Segm | ent | t 1 | | |
| Vehicl | e Inputs | | | | | | |
| Segment | t Туре | Passing Constrai | ned | Leng | gth, ft | | 7971 |
| Lane Wid | dth, ft | 9 | | Shou | ulder Width, fi | t | 0 |
| Speed Li | mit, mi/h | 35 | | Acce | ess Point Dens | sity, pts/mi | 19.9 |
| Dema | nd and Capacity | | | | | | |
| Direction | nal Demand Flow Rate, veh/h | 4 | | Орр | osing Deman | d Flow Rate, veh/h | - |
| Peak Hou | ur Factor | 0.94 | | Tota | l Trucks, % | | 2.00 |
| Segment | t Capacity, veh/h | 1700 | | Dem | nand/Capacity | r (D/C) | 0.00 |
| Interm | nediate Results | | | | | | |
| Segment | t Vertical Class | 1 | | Free | -Flow Speed, | mi/h | 28.9 |
| Speed SI | ope Coefficient (m) | 2.14827 | | Spee | ed Power Coe | fficient (p) | 0.41674 |
| PF Slope | Coefficient (m) | -1.35216 | | PF P | ower Coefficie | ent (p) | 0.63549 |
| In Passin | g Lane Effective Length? | No | | Tota | l Segment De | nsity, veh/mi/ln | 0.0 |
| %Improv | vement to Percent Followers | 0.0 | | %lm | provement to | Speed | 0.0 |
| Subse | gment Data | | | | | | |
| # Se | gment Type | Length, ft | Radi | us, ft | : | Superelevation, % | Average Speed, mi/h |
| 1 Tar | ngent | 7971 | - | | | - | 28.9 |
| Vehicl | e Results | | | | | | |
| Average | Speed, mi/h | 28.9 | | Perc | ent Followers, | , % | 4.1 |
| Segment | t Travel Time, minutes | 3.14 | | Follo | ower Density (| FD), followers/mi/In | 0.0 |
| Vehicle L | .OS | A | | | | | |
| Facilit | y Results | | | | | | |
| т | VMT veh-mi/p | VH veh- | ID ·h/p | | Follower Do | ensity, followers/ mi/ln | LOS |
| 1 | 2 | 0.0 | 00 | | | 0.0 | А |

HCSTM Highways Version 2022 Existing PM Deason Lane.Xuf

| | | HCS Two-La | ne Hig | ghway Re | port | |
|------------|-----------------------------|---------------------|-------------|-----------------------------|-----------------------|---------------------|
| Projec | t Information | | | | | |
| Analyst | | ATW | Dat | te | | 10/18/22 |
| Agency | | Stantec | Ana | alysis Year | | 2022 |
| Jurisdicti | on | | Tim | ne Analyzed | | Existing AM |
| Project D | Description | Old Fruit Hill Road | Uni | its | | U.S. Customary |
| | | Se | egmen | nt 1 | | |
| Vehicl | e Inputs | | | | | |
| Segment | т Туре | Passing Constrained | Len | ngth, ft | | 12173 |
| Lane Wic | dth, ft | 9 | Sho | oulder Width, f | t | 0 |
| Speed Li | mit, mi/h | 35 | Acc | cess Point Dens | sity, pts/mi | 10.8 |
| Dema | nd and Capacity | | | | | |
| Direction | nal Demand Flow Rate, veh/h | 30 | Ор | posing Deman | d Flow Rate, veh/h | - |
| Peak Hou | ur Factor | 0.94 | Tot | al Trucks, % | | 2.00 |
| Segment | t Capacity, veh/h | 1700 | Der | mand/Capacity | r (D/C) | 0.02 |
| Interm | nediate Results | | | | | |
| Segment | t Vertical Class | 1 | Fre | e-Flow Speed, | mi/h | 31.1 |
| Speed SI | ope Coefficient (m) | 2.30094 | Spe | eed Power Coe | fficient (p) | 0.41674 |
| PF Slope | Coefficient (m) | -1.39785 | PF | Power Coefficie | ent (p) | 0.61601 |
| In Passin | g Lane Effective Length? | No | Tot | al Segment De | nsity, veh/mi/ln | 0.1 |
| %Improv | vement to Percent Followers | 0.0 | %lr | mprovement to | o Speed | 0.0 |
| Subse | gment Data | | | | | |
| # Se | gment Type | Length, ft | Radius, f | ft | Superelevation, % | Average Speed, mi/h |
| 1 Tar | ngent | 12173 | - | | - | 31.1 |
| Vehicl | e Results | | | | - | |
| Average | Speed, mi/h | 31.1 | Per | cent Followers, | , % | 14.8 |
| Segment | t Travel Time, minutes | 4.44 | Fol | lower Density (| (FD), followers/mi/In | 0.1 |
| Vehicle L | OS | A | | | | |
| Facility | y Results | | | | | |
| т | VMT veh-mi/p | | Follower De | ensity, followers/ mi/ln | LOS | |
| 1 | 16 | 0.00 | | 1 | 0.1 | Δ |

HCSTM Highways Version 2022 Existing AM Old Fruit Hill Road.Xuf

| HCS Two-Lane Highway Report | | | | | | | |
|--------------------------------------|---|---------------------|-----------|--|-----------------------------|---------------------|--|
| Projec | t Information | | | | | | |
| Analyst | | ATW | Dat | te | | 10/18/22 | |
| Agency | | Stantec | Ana | alysis Year | | 2022 | |
| Jurisdicti | on | | Tim | Time Analyzed | | Existing PM | |
| Project D | Description | Old Fruit Hill Road | Uni | its | | U.S. Customary | |
| | | Se | egmen | nt 1 | | | |
| Vehicl | e Inputs | | | | | | |
| Segment | : Туре | Passing Constrained | Ler | ngth, ft | | 12173 | |
| Lane Wic | dth, ft | 9 | Sho | oulder Width, f | t | 0 | |
| Speed Li | mit, mi/h | 35 | Acc | cess Point Dens | sity, pts/mi | 10.8 | |
| Dema | nd and Capacity | | | | | | |
| Direction | Directional Demand Flow Rate, veh/h 28 Opposing Demand Flow Rate, veh/h - | | | | - | | |
| Peak Hou | ur Factor | 0.94 | Tot | Total Trucks, % | | 2.00 | |
| Segment Capacity, veh/h | | 1700 | | Demand/Capacity (D/C) | | 0.02 | |
| Interm | nediate Results | | | | | | |
| Segment | Vertical Class | 1 | Fre | e-Flow Speed, | mi/h | 31.1 | |
| Speed Slope Coefficient (m) | | 2.30094 | Spe | eed Power Coe | fficient (p) | 0.41674 | |
| PF Slope | Coefficient (m) | -1.39785 | PF | Power Coefficie | ent (p) | 0.61601 | |
| In Passing Lane Effective Length? No | | No | Tot | Total Segment Density, veh/mi/ln | | 0.1 | |
| %Improv | vement to Percent Followers | 0.0 | | %Improvement to Speed | | 0.0 | |
| Subse | gment Data | | | | | | |
| # Seg | gment Type | Length, ft | Radius, t | ft | Superelevation, % | Average Speed, mi/h | |
| 1 Tar | ngent | 12173 | 12173 - | | - | 31.1 | |
| Vehicle | e Results | | - | | • | | |
| Average | Speed, mi/h | 31.1 | 31.1 Perc | | , % | 14.2 | |
| Segment Travel Time, minutes | | 4.44 | Fol | Follower Density (FD), followers/mi/ln | | 0.1 | |
| Vehicle L | Vehicle LOS A | | | | | | |
| Facility | y Results | | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS | |
| 1 | 15 | 0.00 | | 1 | 0.1 | Δ | |

HCS TM Highways Version 2022 Existing PM Old Fruit Hill Road.Xuf

| HCS Two-Lane H | Highway Report |
|----------------|----------------|
|----------------|----------------|

Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2022 Jurisdiction Time Analyzed Existing AM **Project Description** KY 189 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Constrained Length, ft 7450 Segment Type 9 Lane Width, ft Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 17.0 **Demand and Capacity** 12 Opposing Demand Flow Rate, veh/h Directional Demand Flow Rate, veh/h _ Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.01 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 53.1 Speed Slope Coefficient (m) 3.45635 Speed Power Coefficient (p) 0.41674 -1.34281 0.73462 PF Slope Coefficient (m) PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.0 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 7450 53.1 **Vehicle Results** 5.0 Percent Followers, % Average Speed, mi/h 53.1 Segment Travel Time, minutes 1.59 Follower Density (FD), followers/mi/In 0.0 Vehicle LOS А **Facility Results**

| т | VMT veh-mi/p | VHD veh-h/p | Follower Density, followers/ mi/ln | LOS |
|---|-----------------|----------------|---------------------------------------|-----|
| 1 | 4 | 0.00 | 0.0 | А |

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| HCS Two-Lane I | Highway | Report |
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Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2022 Existing PM Jurisdiction Time Analyzed **Project Description** KY 189 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Constrained Length, ft 7450 Segment Type 9 Lane Width, ft Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 17.0 **Demand and Capacity** 22 Opposing Demand Flow Rate, veh/h Directional Demand Flow Rate, veh/h _ Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.01 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 53.1 Speed Slope Coefficient (m) 3.45635 Speed Power Coefficient (p) 0.41674 -1.34281 0.73462 PF Slope Coefficient (m) PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.0 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 7450 53.1 **Vehicle Results** 7.9 Percent Followers, % Average Speed, mi/h 53.1 0.0 Segment Travel Time, minutes 1.59 Follower Density (FD), followers/mi/In Vehicle LOS А

Facility Results

| т | VMT veh-mi/p | VHD veh-h/p | Follower Density, followers/ mi/ln | LOS |
|---|-----------------|----------------|---------------------------------------|-----|
| 1 | 7 | 0.00 | 0.0 | А |

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HCS M Highways Version 2022 Existing PM KY 189.Xuf

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| HCS Two-Lane | Highway | Report |
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Project Information ATW Date 10/18/22 Analyst Agency Stantec Analysis Year 2022 Jurisdiction Time Analyzed Existing AM **Project Description** KY 107 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Zone Length, ft 1425 Segment Type Lane Width, ft 10 Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 29.6 **Demand and Capacity** 106 Opposing Demand Flow Rate, veh/h 77 Directional Demand Flow Rate, veh/h Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.06 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 50.5 Speed Slope Coefficient (m) 2.93848 Speed Power Coefficient (p) 0.58559 PF Slope Coefficient (m) -1,28308 PF Power Coefficient (p) 0.76706 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.4 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h Tangent 1425 50.4 1 **Vehicle Results** 50.4 20.6 Percent Followers, % Average Speed, mi/h 0.32 0.4 Segment Travel Time, minutes Follower Density (FD), followers/mi/In А Vehicle LOS Segment 2 **Vehicle Inputs**

| Segment Type | Passing Constrained | Length, ft | 1742 | | | |
|-------------------------------------|---------------------|----------------------------------|------|--|--|--|
| Lane Width, ft 10 | | Shoulder Width, ft | 1 | | | |
| Speed Limit, mi/h | 55 | Access Point Density, pts/mi | 27.3 | | | |
| Demand and Capacity | | | | | | |
| Directional Demand Flow Rate, veh/h | 106 | Opposing Demand Flow Rate, veh/h | - | | | |
| Peak Hour Factor 0.94 | | Total Trucks, % | 2.00 | | | |

| Segment Capacity, veh/h | | 1700 | | Demand/Capacity (D/C) | | 0.06 |
|-------------------------------|-----------------------------|-----------------|-------------------|----------------------------------|----------------------|---------------------|
| Intermediate Results | | | | | | |
| Segment Vertical Class 2 | | | | Free-Flow Speed, mi/h | | 51.0 |
| Speed Slope Coefficient (m) | | 3.11550 | | Speed Power Coef | ficient (p) | 0.41622 |
| PF Slope Coefficient (m) | | -1.54091 | | PF Power Coefficie | ent (p) | 0.70305 |
| In Passing Lane Effective | Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.6 |
| %Improvement to Percer | nt Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Subsegment Data | I | | | | | |
| # Segment Type | | Length, ft Rad | | ius, ft Superelevation, % | | Average Speed, mi/h |
| 1 Tangent | | 1742 | - | | - | 50.6 |
| Vehicle Results | | | | | | |
| Average Speed, mi/h | | 50.6 | | Percent Followers, | % | 27.3 |
| Segment Travel Time, mi | nutes | 0.39 | | Follower Density (| FD), followers/mi/ln | 0.6 |
| Vehicle LOS | | A | | | | |
| | | Se | egn | nent 3 | | |
| Vehicle Inputs | | | | | | |
| Segment Type | | Passing Zone | Passing Zone | | | 3854 |
| Lane Width, ft | | 10 | | Shoulder Width, ft | | 1 |
| Speed Limit, mi/h 55 | | | Access Point Dens | ity, pts/mi | 19.2 | |
| Demand and Cap | acity | | | | | |
| Directional Demand Flow | Demand Flow Rate, veh/h 106 | | Opposing Demand | d Flow Rate, veh/h | 77 | |
| Peak Hour Factor 0.94 | | Total Trucks, % | | 2.00 | | |
| Segment Capacity, veh/h | | 1700 | | Demand/Capacity (D/C) | | 0.06 |
| Intermediate Res | ults | | | | | |
| Segment Vertical Class | | 1 | | Free-Flow Speed, mi/h | | 53.1 |
| Speed Slope Coefficient | (m) | 3.11454 | | Speed Power Coefficient (p) | | 0.58559 |
| PF Slope Coefficient (m) | | -1.20833 | 1.20833 | | ent (p) | 0.80056 |
| In Passing Lane Effective | Length? | No | | Total Segment Density, veh/mi/ln | | 0.4 |
| %Improvement to Percer | nt Followers | 0.0 | | %Improvement to Speed | | 0.0 |
| Subsegment Data | I | | | | | |
| # Segment Type Length, ft Rad | | lius, ft | Superelevation, % | Average Speed, mi/h | | |
| 1 Tangent 3854 - | | | - | 53.0 | | |
| Vehicle Results | | | | | | |
| Average Speed, mi/h | | 53.0 | | Percent Followers, | % | 18.2 |
| Segment Travel Time, mi | nutes | 0.83 | | Follower Density (| FD), followers/mi/ln | 0.4 |
| Vehicle LOS | | A | | | | |
| | | Se | egn | nent 4 | | |

| Veł | nicle Inputs | | | | | |
|---------------------------------------|----------------------------------|----------------------------------|--------------------------|----------------------------------|----------------------|---------------------|
| Segr | Segment Type Passing Constrained | | Length, ft | | 977 | |
| Lane | Lane Width, ft 10 | | Shoulder Width, ft | | 1 | |
| Spee | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.0 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 106 | 106 | | d Flow Rate, veh/h | - |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.06 |
| Int | ermediate Results | | | | | |
| Segr | nent Vertical Class | 1 | | Free-Flow Speed, | mi/h | 51.9 |
| Spee | ed Slope Coefficient (m) | 3.32351 | | Speed Power Coet | fficient (p) | 0.41674 |
| PF S | lope Coefficient (m) | -1.46187 | | PF Power Coefficie | ent (p) | 0.71687 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.5 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | osegment Data | | | | | |
| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 977 | - | | - | 51.5 |
| Veł | nicle Results | | | | <u></u> | |
| Average Speed, mi/h 51.5 | | 51.5 | I.5 Percent Followe | | % | 25.4 |
| Segment Travel Time, minutes | | 0.22 | | Follower Density (| FD), followers/mi/ln | 0.5 |
| Vehicle LOS | | A | | | | |
| | | S | egn | nent 5 | | |
| Veł | nicle Inputs | | | | | |
| Segr | nent Type | Passing Zone | | Length, ft | | 4297 |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | | 1 |
| Spee | ed Limit, mi/h | 55 | | Access Point Density, pts/mi | | 24.7 |
| De | mand and Capacity | | | - | | |
| Dire | ctional Demand Flow Rate, veh/h | 106 | | Opposing Demand Flow Rate, veh/h | | 77 |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.06 |
| Int | ermediate Results | | | | | |
| Segment Vertical Class 2 | | Free-Flow Speed, mi/h | | 51.7 | | |
| Speed Slope Coefficient (m) 3.11550 | | Speed Power Coefficient (p) | | 0.59333 | | |
| PF Slope Coefficient (m) -1.18777 | | | PF Power Coefficient (p) | | 0.78584 | |
| In Passing Lane Effective Length? No | | Total Segment Density, veh/mi/ln | | 0.4 | | |
| %Improvement to Percent Followers 0.0 | | | | %Improvement to Speed 0.0 | | |
| Sul | osegment Data | | | | | |
| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h |
|-------------------|---------------------------------|--------------------|------------------|-----------------------|----------------------|---------------------|
| 1 | Tangent | 4297 | - | | - | 51.5 |
| Vel | nicle Results | | | | | |
| Ave | rage Speed, mi/h | 51.5 | | Percent Followers, | % | 18.5 |
| Seg | ment Travel Time, minutes | 0.95 | | Follower Density (| FD), followers/mi/ln | 0.4 |
| Vehi | cle LOS | A | | | | |
| | | | Segn | nent 6 | | |
| Vel | hicle Inputs | | | | | |
| Seg | ment Type | Passing Constrair | ned | Length, ft | | 1320 |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | I. | 1 |
| Spe | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 12.0 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 106 | | Opposing Deman | d Flow Rate, veh/h | - |
| Peal | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.06 |
| Int | ermediate Results | | | | | |
| Seg | ment Vertical Class | 1 | Free-Flow Spee | | mi/h | 54.9 |
| Spe | ed Slope Coefficient (m) | 3.48611 | Speed Power Coef | | fficient (p) | 0.41674 |
| PF S | lope Coefficient (m) | -1.44027 | | PF Power Coefficie | ent (p) | 0.72456 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.5 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | bsegment Data | | | | | |
| # | Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 1320 | - | | - | 54.5 |
| Vel | nicle Results | | | | - | |
| Ave | rage Speed, mi/h | 54.5 | | Percent Followers, | % | 24.7 |
| Seg | ment Travel Time, minutes | 0.28 | | Follower Density (| FD), followers/mi/ln | 0.5 |
| Vehi | cle LOS | A | | | | |
| | | | Segn | nent 7 | | |
| Vel | hicle Inputs | | | | | |
| Seg | ment Type | Passing Zone | | Length, ft | | 903 |
| Lane Width, ft 10 | | Shoulder Width, ft | t | 1 | | |
| Spe | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 16.0 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 106 | | Opposing Deman | d Flow Rate, veh/h | 77 |
| Peal | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.06 |

| Inte | ermediate Results | | | | | | |
|-------|---------------------------------------|-----------------|------------------|-----------------------|----------------------|---------------------|--|
| Segn | nent Vertical Class | 1 | | Free-Flow Speed, | mi/h | 53.9 | |
| Spee | Speed Slope Coefficient (m) 3.12116 5 | | Speed Power Coet | fficient (p) | 0.58559 | | |
| PF SI | ope Coefficient (m) | -1.28155 | | PF Power Coefficie | ent (p) | 0.77530 | |
| In Pa | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.4 | |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Sub | segment Data | | | | | | |
| # | Segment Type | Length, ft Radi | | adius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 903 | - | | - | 53.8 | |
| Veh | icle Results | | | | <u>~</u> | | |
| Avera | age Speed, mi/h | 53.8 | | Percent Followers, | % | 20.2 | |
| Segn | nent Travel Time, minutes | 0.19 | | Follower Density (| FD), followers/mi/ln | 0.4 | |
| Vehic | le LOS | A | | | | | |
| | | - | Seg | jment 8 | | · | |
| Veh | icle Inputs | | | | | | |
| Segn | nent Type | Passing Constra | ined | Length, ft | | 4308 | |
| Lane | Width, ft | 10 | | Shoulder Width, ft | t | 1 | |
| Spee | d Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 13.4 | |
| Der | nand and Capacity | | | | | | |
| Direc | tional Demand Flow Rate, veh/h | 106 | | Opposing Deman | d Flow Rate, veh/h | - | |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Segn | nent Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.06 | |
| Inte | ermediate Results | | | | | | |
| Segn | nent Vertical Class | 1 | | Free-Flow Speed, mi/h | | 54.6 | |
| Spee | d Slope Coefficient (m) | 3.50851 | | Speed Power Coet | fficient (p) | 0.41674 | |
| PF SI | ope Coefficient (m) | -1.34913 | | PF Power Coefficie | ent (p) | 0.74640 | |
| In Pa | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.4 | |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Sub | segment Data | | | | | | |
| # | Segment Type | Length, ft | R | adius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 4308 | - | | - | 54.2 | |
| Veh | icle Results | | | | | | |
| Avera | age Speed, mi/h | 54.2 | | Percent Followers, | % | 22.4 | |
| Segn | nent Travel Time, minutes | 0.90 | | Follower Density (| FD), followers/mi/ln | 0.4 | |
| Vehic | le LOS | A | | | | | |
| | Segment 9 | | | | | | |

| Vel | hicle Inputs | | | | | |
|-------|---------------------------------|---------------------|-----|--|--------------------|---------------------|
| Seg | ment Type | Passing Zone | | Length, ft | | 1140 |
| Lane | e Width, ft | , ft 10 | | Shoulder Width, f | t | 1 |
| Spe | ed Limit, mi/h | 55 | | Access Point Density, pts/mi | | 24.0 |
| De | mand and Capacity | | | - | | |
| Dire | ctional Demand Flow Rate, veh/h | 106 | | Opposing Deman | d Flow Rate, veh/h | 77 |
| Peal | k Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.06 |
| Int | ermediate Results | | | | | |
| Seg | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 51.9 |
| Spe | ed Slope Coefficient (m) | 3.01276 | | Speed Power Coet | fficient (p) | 0.58559 |
| PF S | lope Coefficient (m) | -1.28636 | | PF Power Coefficie | ent (p) | 0.76919 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.4 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Su | bsegment Data | | | | | |
| # | Segment Type | Length, ft | Rac | lius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 1140 | - | | - | 51.8 |
| Vel | hicle Results | | | | | |
| Ave | rage Speed, mi/h | 51.8 | | Percent Followers, | % | 20.5 |
| Seg | ment Travel Time, minutes | 0.25 | | Follower Density (FD), followers/mi/ln | | 0.4 |
| Vehi | icle LOS | A | | | | |
| Bic | ycle Results | | | | | |
| Perc | ent Occupied Parking | 0 | | Pavement Conditi | on Rating | 4 |
| Flow | v Rate Outside Lane, veh/h | 106 | | Bicycle Effective Width, ft | | 16 |
| Bicy | cle LOS Score | 3.68 | | Bicycle Effective Speed Factor | | 4.79 |
| Bicy | cle LOS | D | | | | |
| | | Se | egm | ent 10 | | |
| Vel | hicle Inputs | | | | | |
| Seg | ment Type | Passing Constrained | | Length, ft | | 1690 |
| Lane | e Width, ft | 10 | | Shoulder Width, f | t | 1 |
| Spe | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 6.3 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 114 | | Opposing Deman | d Flow Rate, veh/h | - |
| Peal | K Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.07 |
| Int | ermediate Results | | | | | |
| Seg | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 56.4 |

| 1 | 111 | 0.01 | | | 0.4 | A | |
|--------------------|-----------------------------|----------------|----------------|----------------------------------|-----------------------------|---------------------|--|
| Т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS | |
| Facilit | y Results | 1 | | | | | |
| Vehicle L | LOS | A | | | | | |
| Segment | t Travel Time, minutes | 0.33 | Follo | ower Density (| FD), followers/mi/ln | 0.4 | |
| Average | Speed, mi/h | 54.4 | Perc | ent Followers, | % | 20.1 | |
| Vehicl | e Results | | | | | | |
| 1 Tai | ngent | 1584 | - | | - | 54.4 | |
| # Se | egment Type | Length, ft | Radius, ft | t | Superelevation, % | Average Speed, mi/h | |
| Subse | gment Data | | | | | | |
| ³⁰ mpro | | 0.0 | ~ifr | | speeu | 0.0 | |
| %Impro | | | lota %I~ | Vimprovement to Speed | | 0.4 | |
| Pr Siope | e Coemicient (m) | -1.24375 | | Pr Power Coefficient (p) | | 0.78792 | |
| Speed Sl | Iope Coefficient (m) | 3.13784 | Spe | Speed Power Coefficient (p) | | 0.60842 | |
| Segment | t Vertical Class | 1 | Free | Free-Flow Speed, mi/h | | 54.6 | |
| Intern | nediate Kesults | | | _ | | | |
| Segmen | | 1700 | Den | | | | |
| Segment | ur racior | 1700 | Iota | n Irucks, % | | 2.00 | |
| | | 0.94 | Total Trucks % | | 2.00 | | |
| Denia | | 114 | | Opposing Domand Flow Pate web /b | | 40 | |
| Domo | nd and Canacity | I | | | | | |
| Speed Limit mi/h | | Acce | ess Point Dens | ity, pts/mi | 13.3 | | |
| Lane Wig | dth. ft | 10 | Sho | ulder Width ft | t | 1 | |
| Segment | t Type | Passing Zono | Long | ath ft | | 1584 | |
| Vehicl | e Inputs | | | | | | |
| | | Se | gment | : 11 | | | |
| Vehicle L | LOS | A | | | | | |
| Segment | t Travel Time, minutes | 0.34 | Follo | ower Density (| FD), followers/mi/ln | 0.5 | |
| Average | Speed, mi/h | 55.8 | Perc | ent Followers, | % | 24.8 | |
| Vehicl | e Results | | | | | | |
| 1 Tai | ngent | 1690 | - | | - | 55.8 | |
| # Se | egment Type | Length, ft | Radius, ft | ius, ft Superelevation, % | | Average Speed, mi/h | |
| Subse | gment Data | | | | | | |
| %Improv | vement to Percent Followers | 0.0 | %Im | %Improvement to Speed 0.0 | | | |
| In Passin | ng Lane Effective Length? | No | Tota | I Segment De | nsity, veh/mi/ln | 0.5 | |
| PF Slope | e Coefficient (m) | -1.40749 | PF P | ower Coefficie | ent (p) | 0.73425 | |
| Speed S | lope Coefficient (m) | 3.57078 | | Speed Power Coefficient (p) | | 0.41674 | |





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| HCS Two-Lane | Highway | Report |
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Project Information ATW Date 10/18/22 Analyst Agency Stantec Analysis Year 2022 Existing PM Jurisdiction Time Analyzed **Project Description** KY 107 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Zone Length, ft 1425 Segment Type Lane Width, ft 10 Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 29.6 **Demand and Capacity** 124 Opposing Demand Flow Rate, veh/h 89 Directional Demand Flow Rate, veh/h Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.07 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 50.5 Speed Slope Coefficient (m) 2.94575 Speed Power Coefficient (p) 0.57916 PF Slope Coefficient (m) -1.28959 0.76568 PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.6 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1425 50.2 **Vehicle Results** 50.2 23.0 Percent Followers, % Average Speed, mi/h 0.32 Segment Travel Time, minutes Follower Density (FD), followers/mi/In 0.6 Vehicle LOS А Segment 2 **Vehicle Inputs**

| Segment Type | Passing Constrained | Length, ft | 1742 | |
|---|---------------------|----------------------------------|------|--|
| Lane Width, ft | 10 | Shoulder Width, ft | 1 | |
| Speed Limit, mi/h | 55 | Access Point Density, pts/mi | 27.3 | |
| Demand and Capacity | | | | |
| Demand and Capacity | | | | |
| Demand and Capacity Directional Demand Flow Rate, veh/h | 124 | Opposing Demand Flow Rate, veh/h | - | |

| Segment Capacity, veh/h 1700 1 | | Demand/Capacity (D/C) | | 0.07 | | | |
|--------------------------------|------------|-----------------------|-------------|-----------------------------|----------------------|---------------------|--|
| Intermediate Result | S | | | | | | |
| Segment Vertical Class | | 2 | | Free-Flow Speed, I | mi/h | 51.0 | |
| Speed Slope Coefficient (m) | , | 3.11550 | | Speed Power Coefficient (p) | | 0.41622 | |
| PF Slope Coefficient (m) | | -1.54091 | | PF Power Coefficie | ent (p) | 0.70305 | |
| In Passing Lane Effective Le | ngth? | No | | Total Segment Der | nsity, veh/mi/ln | 0.7 | |
| %Improvement to Percent F | ollowers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Subsegment Data | | | | | | | |
| # Segment Type | | Length, ft Radi | | lius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 Tangent | | 1742 | - | | - | 50.3 | |
| Vehicle Results | | | | | | | |
| Average Speed, mi/h | | 50.3 | | Percent Followers, | % | 30.0 | |
| Segment Travel Time, minut | es | 0.39 | | Follower Density (| FD), followers/mi/ln | 0.7 | |
| Vehicle LOS | | Α | | | | | |
| | | S | egn | nent 3 | | | |
| Vehicle Inputs | | | | | | | |
| Segment Type | | Passing Zone | | Length, ft | | 3854 | |
| Lane Width, ft | | 10 | | Shoulder Width, ft | : | 1 | |
| Speed Limit, mi/h 55 | | Access Point Dens | ity, pts/mi | 19.2 | | | |
| Demand and Capac | ity | | | | | | |
| Directional Demand Flow Ra | ate, veh/h | 124 | | Opposing Demand | d Flow Rate, veh/h | 89 | |
| Peak Hour Factor | | 0.94 | | Total Trucks, % | | 2.00 | |
| Segment Capacity, veh/h | | 1700 | | Demand/Capacity (D/C) | | 0.07 | |
| Intermediate Result | S | | | | | | |
| Segment Vertical Class | | 1 | | Free-Flow Speed, mi/h | | 53.1 | |
| Speed Slope Coefficient (m) |) | 3.12181 | | Speed Power Coefficient (p) | | 0.57916 | |
| PF Slope Coefficient (m) | | -1.21432 | | PF Power Coefficie | ent (p) | 0.79895 | |
| In Passing Lane Effective Le | ngth? | No | | Total Segment Der | nsity, veh/mi/ln | 0.5 | |
| %Improvement to Percent F | ollowers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Subsegment Data | | | | | | | |
| # Segment Type | | Length, ft | Rad | lius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 Tangent | | 3854 | - | | - | 52.8 | |
| Vehicle Results | | | | | | | |
| Average Speed, mi/h | | 52.8 | | Percent Followers, | % | 20.5 | |
| Segment Travel Time, minut | es | 0.83 | | Follower Density (| FD), followers/mi/ln | 0.5 | |
| Vehicle LOS | | A | | | | | |
| | | S | egn | nent 4 | | | |

| Veł | nicle Inputs | | | | | |
|--------------------------|---------------------------------|---------------------|--------------------|--|--------------------|---------------------|
| Segr | nent Type | Passing Constrained | | Length, ft | | 977 |
| Lane | ne Width, ft 10 | | Shoulder Width, ft | | 1 | |
| Spee | ed Limit, mi/h | 55 | | Access Point Density, pts/mi | | 24.0 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 124 | | Opposing Deman | d Flow Rate, veh/h | - |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.07 |
| Int | ermediate Results | | | | | |
| Segr | nent Vertical Class | 1 | | Free-Flow Speed, | mi/h | 51.9 |
| Spee | ed Slope Coefficient (m) | 3.32351 | | Speed Power Coet | fficient (p) | 0.41674 |
| PF S | lope Coefficient (m) | -1.46187 | | PF Power Coefficie | ent (p) | 0.71687 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.7 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | osegment Data | | | | | |
| # | Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 977 | - | | - | 51.2 |
| Veł | nicle Results | | | | - | |
| Aver | age Speed, mi/h | 51.2 | | Percent Followers, | % | 28.0 |
| Segr | nent Travel Time, minutes | 0.22 | | Follower Density (FD), followers/mi/In | | 0.7 |
| Vehi | cle LOS | A | | | | |
| | | S | egn | nent 5 | | |
| Veł | nicle Inputs | | | | | |
| Segr | nent Type | Passing Zone | | Length, ft | | 4297 |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | | 1 |
| Spee | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.7 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 124 | | Opposing Deman | d Flow Rate, veh/h | 89 |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.07 |
| Int | ermediate Results | | | | | |
| Segment Vertical Class 2 | | Free-Flow Speed, | mi/h | 51.7 | | |
| Spee | ed Slope Coefficient (m) | 3.11550 | | Speed Power Coet | fficient (p) | 0.58552 |
| PF S | lope Coefficient (m) | -1.19420 | | PF Power Coefficie | ent (p) | 0.78409 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.5 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | osegment Data | | | | | |

| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h |
|-------------------|---------------------------------|--------------------|-----------------|--------------------|----------------------|---------------------|
| 1 | Tangent | 4297 | - | | - | 51.3 |
| Vel | nicle Results | | | | | |
| Ave | rage Speed, mi/h | 51.3 | | Percent Followers, | % | 20.8 |
| Seg | ment Travel Time, minutes | 0.95 | | Follower Density (| FD), followers/mi/ln | 0.5 |
| Vehi | cle LOS | A | | | | |
| | | | Segn | nent 6 | | |
| Vel | hicle Inputs | | | | | |
| Seg | ment Type | Passing Constrair | ned | Length, ft | | 1320 |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | I. | 1 |
| Spe | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 12.0 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 124 | | Opposing Deman | d Flow Rate, veh/h | - |
| Peal | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.07 |
| Int | ermediate Results | | | | | |
| Seg | ment Vertical Class | 1 | Free-Flow Speed | | mi/h | 54.9 |
| Spe | ed Slope Coefficient (m) | 3.48611 | | Speed Power Coef | fficient (p) | 0.41674 |
| PF S | lope Coefficient (m) | -1.44027 | | PF Power Coefficie | ent (p) | 0.72456 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.6 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | bsegment Data | | | | | |
| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 1320 | - | | - | 54.2 |
| Vel | nicle Results | | | | | |
| Ave | rage Speed, mi/h | 54.2 | | Percent Followers, | % | 27.3 |
| Seg | ment Travel Time, minutes | 0.28 | | Follower Density (| FD), followers/mi/ln | 0.6 |
| Vehi | cle LOS | А | | | | |
| | | | Segn | nent 7 | | |
| Vel | hicle Inputs | | | | | |
| Seg | ment Type | Passing Zone | | Length, ft | | 903 |
| Lane Width, ft 10 | | Shoulder Width, ft | t | 1 | | |
| Spe | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 16.0 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 124 | | Opposing Deman | d Flow Rate, veh/h | 89 |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.07 |

| Inte | rmediate Results | | | | | | |
|-------|---------------------------------------|-----------------|------------------|-----------------------|----------------------|---------------------|--|
| Segn | nent Vertical Class | 1 | | Free-Flow Speed, | mi/h | 53.9 | |
| Spee | Speed Slope Coefficient (m) 3.12843 S | | Speed Power Coef | ficient (p) | 0.57916 | | |
| PF SI | ope Coefficient (m) | -1.28797 | | PF Power Coefficie | ent (p) | 0.77392 | |
| In Pa | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.5 | |
| %lmp | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Sub | segment Data | | | | | | |
| # | Segment Type | Length, ft Radi | | adius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 903 | - | | - | 53.6 | |
| Veh | icle Results | | | | | | |
| Avera | age Speed, mi/h | 53.6 | | Percent Followers, | % | 22.6 | |
| Segm | ent Travel Time, minutes | 0.19 | | Follower Density (| FD), followers/mi/ln | 0.5 | |
| Vehic | le LOS | A | | | | | |
| | | | Seg | ment 8 | | | |
| Veh | icle Inputs | | | | | | |
| Segn | nent Type | Passing Constra | ined | Length, ft | | 4308 | |
| Lane | Width, ft | 10 | | Shoulder Width, ft | : | 1 | |
| Spee | d Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 13.4 | |
| Den | nand and Capacity | | | | | | |
| Direc | tional Demand Flow Rate, veh/h | 124 | | Opposing Demand | d Flow Rate, veh/h | - | |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Segm | ent Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.07 | |
| Inte | rmediate Results | | | | | | |
| Segn | nent Vertical Class | 1 | | Free-Flow Speed, mi/h | | 54.6 | |
| Spee | d Slope Coefficient (m) | 3.50851 | | Speed Power Coef | ficient (p) | 0.41674 | |
| PF SI | ope Coefficient (m) | -1.34913 | | PF Power Coefficie | ent (p) | 0.74640 | |
| In Pa | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.6 | |
| %lmp | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Sub | segment Data | | | | | | |
| # | Segment Type | Length, ft | Ra | adius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 4308 | - | | - | 53.8 | |
| Veh | icle Results | · | | | | | |
| Avera | ige Speed, mi/h | 53.8 | | Percent Followers, | % | 24.8 | |
| Segm | ent Travel Time, minutes | 0.91 | | Follower Density (| FD), followers/mi/ln | 0.6 | |
| Vehic | le LOS | А | | | | | |
| | Segment 9 | | | | | | |

| Veł | nicle Inputs | | | | | |
|--------------------------------|---------------------------------|---------------------|-----|--------------------------------|----------------------|---------------------|
| Segr | ment Type | Passing Zone | | Length, ft | | 1140 |
| Lane | e Width, ft | n, ft 10 | | Shoulder Width, ft | | 1 |
| Spee | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.0 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 124 | | Opposing Deman | d Flow Rate, veh/h | 89 |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.07 |
| Int | ermediate Results | | | | | |
| Segr | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 51.9 |
| Spee | ed Slope Coefficient (m) | 3.02003 | | Speed Power Coef | ficient (p) | 0.57916 |
| PF S | lope Coefficient (m) | -1.29286 | | PF Power Coefficie | ent (p) | 0.76782 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.6 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | osegment Data | | | | | |
| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 1140 | - | | - | 51.6 |
| Veł | nicle Results | | | | | |
| Aver | rage Speed, mi/h | 51.6 | | Percent Followers, | % | 23.0 |
| Segr | ment Travel Time, minutes | 0.25 | | Follower Density (| FD), followers/mi/ln | 0.6 |
| Vehi | cle LOS | A | | | | |
| Bic | ycle Results | | | | | |
| Perc | ent Occupied Parking | 0 | | Pavement Condition | on Rating | 4 |
| Flow | / Rate Outside Lane, veh/h | 124 | | Bicycle Effective Width, ft | | 16 |
| Bicy | cle LOS Score | 3.76 | | Bicycle Effective Speed Factor | | 4.79 |
| Bicy | cle LOS | D | | | | |
| | | Se | gm | nent 10 | | |
| Veł | nicle Inputs | | | | | |
| Segr | ment Type | Passing Constrained | | Length, ft | | 1690 |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | : | 1 |
| Spee | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 6.3 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 123 | | Opposing Deman | d Flow Rate, veh/h | - |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.07 |
| Int | ermediate Results | | | | | |
| Segment Vertical Class 1 Free- | | | | Free-Flow Speed, | mi/h | 56.4 |

| 1 | 129 | 0.02 | | | 0.6 | A |
|----------------------|-----------------------------|----------------|-----------|----------------------------------|-----------------------------|---------------------|
| T | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS |
| Facilit | y Results | 1 | | | | |
| Vehicle | LOS | A | | | | |
| Segmen | t Travel Time, minutes | 0.33 | Folle | ower Density (| FD), followers/mi/ln | 0.5 |
| Average | Speed, mi/h | 54.3 | Perc | cent Followers, | % | 21.3 |
| Vehic | le Results | | | | | |
| 1 Ta | ngent | 1584 | - | | - | 54.3 |
| # Se | egment Type | Length, ft | Radius, f | t | Superelevation, % | Average Speed, mi/h |
| Subse | gment Data | | | | | |
| %Impro | vement to Percent Followers | 0.0 | %Im | nprovement to | Speed | 0.0 |
| In Passir | ng Lane Effective Length? | No | Tota | Total Segment Density, veh/mi/ln | | 0.5 |
| PF Slope | e Coefficient (m) | -1.24608 | PF F | PF Power Coefficient (p) | | 0.78739 |
| Speed S | lope Coefficient (m) | 3.14040 | Spe | Speed Power Coefficient (p) | | 0.60600 |
| Segmen | t Vertical Class | 1 | Free | Free-Flow Speed, mi/h | | 54.6 |
| Intern | nediate Results | 1 | | | | |
| Segmen | t Capacity, veh/h | 1700 | Den | Demand/Capacity (D/C) 0.07 | | |
| Peak Ho | bur Factor | 0.94 | Tota | Iotal Irucks, % | | 2.00 |
| Directio | nal Demand Flow Rate, veh/h | 123 | Орр | oosing Deman | d Flow Rate, veh/h | 44 |
| Dema | nd and Capacity | | | | | |
| Speea Limit, mi/n 55 | | | | | | |
| | imit mi/h | 55 | Δcc | ess Point Dens | ity pts/mi | 13.3 |
| Segmen | dth ft | Passing Zone | Leng | yth, ft ulder Width, ft | - | 1 |
| Soame | | Dessing Zone | 1 | ath ft | | 1504 |
| Vehic | le Innuts | | | | | |
| | | Se | gment | : 11 | | |
| Vehicle I | LOS | А | | | | |
| Segmen | t Travel Time, minutes | 0.35 | Folle | ower Density (| FD), followers/mi/ln | 0.6 |
| Average | Speed, mi/h | 55.6 | Perc | cent Followers, | % | 26.1 |
| Vehic | le Results | | | | | |
| 1 Ta | ngent | 1690 | - | | - | 55.6 |
| # Se | egment Type | Length, ft | Radius, f | t | Superelevation, % | Average Speed, mi/h |
| Subse | egment Data | | | | | |
| %Impro | vement to Percent Followers | 0.0 | %Im | %Improvement to Speed 0.0 | | |
| In Passir | ng Lane Effective Length? | No | Tota | Total Segment Density, veh/mi/ln | | 0.6 |
| PF Slope | e Coefficient (m) | -1.40749 | PF F | Power Coefficie | ent (p) | 0.73425 |
| Speed S | lope Coefficient (m) | 3.57078 | | ed Power Coet | fficient (p) | 0.41674 |





Existing PM KY 107.xuf

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| HCS Two-Lane F | lighway | Report |
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Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2022 Jurisdiction Time Analyzed Existing AM **Project Description** KY 1682 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Constrained Length, ft 11019 Segment Type 9 Lane Width, ft Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 6.7 **Demand and Capacity** 11 Opposing Demand Flow Rate, veh/h Directional Demand Flow Rate, veh/h _ Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.01 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 55.7 Speed Slope Coefficient (m) 3.62268 Speed Power Coefficient (p) 0.41674 0.71736 PF Slope Coefficient (m) -1.34359 PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.0 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h Tangent 11019 55.7 1 **Vehicle Results** 5.0 55.7 Percent Followers, % Average Speed, mi/h 2.25 0.0 Segment Travel Time, minutes Follower Density (FD), followers/mi/In А Vehicle LOS

Segment 2

Vehicle Inputs

| Segment Type | Passing Constrained | Length, ft | 1320 |
|---|---------------------|----------------------------------|------|
| Lane Width, ft | 9 | Shoulder Width, ft | 1 |
| Speed Limit, mi/h | 55 | Access Point Density, pts/mi | 16.0 |
| | 1 | | |
| Demand and Capacity | | | |
| Demand and Capacity Directional Demand Flow Rate, veh/h | 18 | Opposing Demand Flow Rate, veh/h | - |

| Segment Capacity, veh/h | ent Capacity, veh/h 1700 | | Demand/Capacity (D/C) | | 0.01 | | | |
|-------------------------------------|--------------------------|-----|-----------------------------|---------------------------|---------------------|--|--|--|
| Intermediate Results | | | | | | | | |
| Segment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 53.3 | | | |
| Speed Slope Coefficient (m) | 3.39939 | | Speed Power Coet | fficient (p) | 0.41674 | | | |
| PF Slope Coefficient (m) | -1.45222 | | PF Power Coefficie | ent (p) | 0.72054 | | | |
| In Passing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.0 | | | |
| %Improvement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | | | |
| Subsegment Data | | | | | | | | |
| # Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h | | | |
| 1 Tangent | 1320 | - | | - | 53.3 | | | |
| Vehicle Results | | | | | | | | |
| Average Speed, mi/h | 53.3 | | Percent Followers, | % | 7.7 | | | |
| Segment Travel Time, minutes | 0.28 | | Follower Density (| FD), followers/mi/ln | 0.0 | | | |
| Vehicle LOS | A | | | | | | | |
| | Segment 3 | | | | | | | |
| Vehicle Inputs | | | | | | | | |
| Segment Type | Passing Zone | | Length, ft | | 1742 | | | |
| Lane Width, ft | 9 | | Shoulder Width, ft | | 1 | | | |
| Speed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.2 | | | |
| Demand and Capacity | | | | | | | | |
| Directional Demand Flow Rate, veh/h | า 18 | 18 | | d Flow Rate, veh/h | 14 | | | |
| Peak Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | | | |
| Segment Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.01 | | | |
| Intermediate Results | | | | | | | | |
| Segment Vertical Class | 1 | | Free-Flow Speed, mi/h | | 51.3 | | | |
| Speed Slope Coefficient (m) | 2.93247 | | Speed Power Coefficient (p) | | 0.63519 | | | |
| PF Slope Coefficient (m) | -1.21845 | | PF Power Coefficie | ent (p) | 0.78649 | | | |
| In Passing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.0 | | | |
| %Improvement to Percent Followers | 0.0 | | %Improvement to | %Improvement to Speed 0.0 | | | | |
| Subsegment Data | | | | | | | | |
| # Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h | | | |
| 1 Tangent | 1742 | - | | - | 51.3 | | | |
| Vehicle Results | | | | | | | | |
| Average Speed, mi/h | 51.3 | | Percent Followers, | % | 5.1 | | | |
| Segment Travel Time, minutes | 0.39 | | Follower Density (| FD), followers/mi/ln | 0.0 | | | |
| Vehicle LOS | A | | | | | | | |
| Segment 4 | | | | | | | | |

| Vehicle | e Inputs | | | | | | | |
|------------|----------------------------|---------------------|---------|--|-----------------------------|---------------------|--|--|
| Segment | Туре | Passing Constrained | Ler | Length, ft | | 7586 | | |
| Lane Wid | lth, ft | 9 | Sho | oulder Width, ft | : | 1 | | |
| Speed Lir | mit, mi/h | 55 | Aco | cess Point Dens | ity, pts/mi | 17.4 | | |
| Demai | nd and Capacity | | | | | | | |
| Direction | al Demand Flow Rate, veh/h | 18 | Ор | posing Deman | d Flow Rate, veh/h | - | | |
| Peak Hou | ur Factor | 0.94 | Tot | al Trucks, % | | 2.00 | | |
| Segment | Capacity, veh/h | 1700 | De | mand/Capacity | (D/C) | 0.01 | | |
| Interm | Intermediate Results | | | | | | | |
| Segment | Vertical Class | 1 | Fre | e-Flow Speed, | mi/h | 53.0 | | |
| Speed Slo | ope Coefficient (m) | 3.45285 | Spe | Speed Power Coefficient (p) | | 0.41674 | | |
| PF Slope | Coefficient (m) | cient (m) -1.34349 | | PF Power Coefficient (p) | | 0.73368 | | |
| In Passing | g Lane Effective Length? | ective Length? No | | Total Segment Density, veh/mi/ln | | 0.0 | | |
| %Improv | ement to Percent Followers | 0.0 | %Ir | %Improvement to Speed | | 0.0 | | |
| Subse | gment Data | | | | | | | |
| # Seg | gment Type | Length, ft | Radius, | ft | Superelevation, % | Average Speed, mi/h | | |
| 1 Tar | ngent | 7586 | - | | - | 53.0 | | |
| Vehicle | e Results | | | | | | | |
| Average | Speed, mi/h | 53.0 | Per | Percent Followers, % | | 6.8 | | |
| Segment | Travel Time, minutes | 1.63 | Fol | Follower Density (FD), followers/mi/ln | | 0.0 | | |
| Vehicle L | OS | A | | | | | | |
| Facility | y Results | | | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS | | |
| 1 | 14 | 0.00 | | | 0.0 | А | | |





| HCS Two-Lane H | Highway Report |
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Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2022 Existing PM Jurisdiction Time Analyzed **Project Description** KY 1682 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Constrained Length, ft 11019 Segment Type 9 Lane Width, ft Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 6.7 **Demand and Capacity** 14 Opposing Demand Flow Rate, veh/h Directional Demand Flow Rate, veh/h _ Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.01 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 55.7 Speed Slope Coefficient (m) 3.62268 Speed Power Coefficient (p) 0.41674 0.71736 PF Slope Coefficient (m) -1.34359 PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.0 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h Tangent 11019 55.7 1 **Vehicle Results** 55.7 Percent Followers, % 6.0 Average Speed, mi/h 2.25 0.0 Segment Travel Time, minutes Follower Density (FD), followers/mi/In А Vehicle LOS Segment 2

Vehicle Inputs

| Segment Type | Passing Constrained | Length, ft | 1320 | | | | |
|-------------------------------------|---------------------|----------------------------------|------|--|--|--|--|
| Lane Width, ft | 9 | Shoulder Width, ft | 1 | | | | |
| Speed Limit, mi/h | 55 | Access Point Density, pts/mi | 16.0 | | | | |
| Demand and Capacity | | | | | | | |
| Directional Demand Flow Rate, veh/h | 26 | Opposing Demand Flow Rate, veh/h | - | | | | |
| | | | | | | | |

| Segment Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.02 | | |
|-------------------------------------|--------------|--------------|----------------------------------|----------------------|---------------------|--|--|
| Intermediate Results | | | | | | | |
| Segment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 53.3 | | |
| Speed Slope Coefficient (m) | 3.39939 | | Speed Power Coe | fficient (p) | 0.41674 | | |
| PF Slope Coefficient (m) | -1.45222 | | PF Power Coefficie | ent (p) | 0.72054 | | |
| In Passing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.0 | | |
| %Improvement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | | |
| Subsegment Data | | | | | | | |
| # Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h | | |
| 1 Tangent | 1320 | - | | - | 53.3 | | |
| Vehicle Results | | | | | | | |
| Average Speed, mi/h | 53.3 | | Percent Followers, | % | 9.8 | | |
| Segment Travel Time, minutes | 0.28 | | Follower Density (| FD), followers/mi/ln | 0.0 | | |
| Vehicle LOS | A | | | | | | |
| Segment 3 | | | | | | | |
| Vehicle Inputs | | | | | | | |
| Segment Type | Passing Zone | Passing Zone | | | 1742 | | |
| Lane Width, ft | 9 | | Shoulder Width, ft | | 1 | | |
| Speed Limit, mi/h | 55 | 55 | | ity, pts/mi | 24.2 | | |
| Demand and Capacity | | | | | | | |
| Directional Demand Flow Rate, veh/h | n 26 | | Opposing Deman | d Flow Rate, veh/h | 20 | | |
| Peak Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | | |
| Segment Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.02 | | |
| Intermediate Results | | | | | | | |
| Segment Vertical Class | 1 | | Free-Flow Speed, mi/h | | 51.3 | | |
| Speed Slope Coefficient (m) | 2.94053 | | Speed Power Coefficient (p) | | 0.62713 | | |
| PF Slope Coefficient (m) | -1.22614 | | PF Power Coefficie | ent (p) | 0.78469 | | |
| In Passing Lane Effective Length? | No | | Total Segment Density, veh/mi/ln | | 0.0 | | |
| %Improvement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | | |
| Subsegment Data | | | | | | | |
| # Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h | | |
| 1 Tangent | 1742 | - | | - | 51.3 | | |
| Vehicle Results | | | | | | | |
| Average Speed, mi/h | 51.3 | | Percent Followers, | % | 6.7 | | |
| Segment Travel Time, minutes | 0.39 | | Follower Density (| FD), followers/mi/ln | 0.0 | | |
| Vehicle LOS | A | | | | | | |
| Segment 4 | | | | | | | |

| Vehicle | e Inputs | | | | | | |
|----------------------|----------------------------|---------------------|---------|----------------------------------|-----------------------------|---------------------|--|
| Segment | Туре | Passing Constrained | Ler | ngth, ft | | 7586 | |
| Lane Wid | lth, ft | 9 | Sho | oulder Width, ft | t | 1 | |
| Speed Lir | mit, mi/h | 55 | Aco | cess Point Dens | ity, pts/mi | 17.4 | |
| Demai | nd and Capacity | | | | | | |
| Direction | al Demand Flow Rate, veh/h | 26 | Ор | posing Deman | d Flow Rate, veh/h | - | |
| Peak Hou | ur Factor | 0.94 | Tot | al Trucks, % | | 2.00 | |
| Segment | Capacity, veh/h | 1700 | De | mand/Capacity | (D/C) | 0.02 | |
| Intermediate Results | | | | | | | |
| Segment | Vertical Class | 1 | Fre | e-Flow Speed, | mi/h | 53.0 | |
| Speed Slo | ope Coefficient (m) | 3.45285 | Spe | Speed Power Coefficient (p) | | 0.41674 | |
| PF Slope | Coefficient (m) | t (m) -1.34349 | | PF Power Coefficient (p) | | 0.73368 | |
| In Passing | g Lane Effective Length? | ve Length? No | | Total Segment Density, veh/mi/ln | | 0.0 | |
| %Improv | ement to Percent Followers | 0.0 | %Ir | %Improvement to Speed | | 0.0 | |
| Subse | gment Data | | | | | | |
| # Seg | gment Type | Length, ft | Radius, | ft | Superelevation, % | Average Speed, mi/h | |
| 1 Tar | ngent | 7586 | - | - | | 53.0 | |
| Vehicle | e Results | | | | | | |
| Average | Speed, mi/h | 53.0 | Per | Percent Followers, % | | 8.7 | |
| Segment | Travel Time, minutes | 1.63 | Fol | lower Density (| FD), followers/mi/In | 0.0 | |
| Vehicle L | OS | A | | | | | |
| Facility | y Results | | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS | |
| 1 | 19 | 0.00 | | | 0.0 | А | |





| | HCS Two-Lane Highway Report | | | | | | | |
|-------|---------------------------------|---------------------|--------------------------------------|--|--------------------|---------------------|--|--|
| Pro | oject Information | | | | | | | |
| Ana | lyst | ATW | | Date | | 10/18/22 | | |
| Age | ncy | Stantec | | Analysis Year | | 2022 | | |
| Juris | diction | | | Time Analyzed | | Existing AM | | |
| Proj | ect Description | Woodburn Hay Road | | Units | | U.S. Customary | | |
| | | S | egn | nent 1 | | | | |
| Ve | nicle Inputs | | | | | | | |
| Seg | ment Type | Passing Constrained | Passing Constrained Length, ft 13257 | | | | | |
| Lane | e Width, ft | 9 | | Shoulder Width, f | t | 0 | | |
| Spe | ed Limit, mi/h | 35 | | Access Point Dens | sity, pts/mi | 14.3 | | |
| De | mand and Capacity | | | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 10 | | Opposing Deman | d Flow Rate, veh/h | - | | |
| Peal | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | | |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | r (D/C) | 0.01 | | |
| Int | ermediate Results | | | | | | | |
| Seg | ment Vertical Class | 1 | | Free-Flow Speed, mi/h | | 30.2 | | |
| Spe | ed Slope Coefficient (m) | 2.25978 | | Speed Power Coefficient (p) | | 0.41674 | | |
| PF S | lope Coefficient (m) | -1.40543 | -1.40543 | | ent (p) | 0.60145 | | |
| In P | assing Lane Effective Length? | No | | Total Segment Density, veh/mi/ln | | 0.0 | | |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to Speed | | 0.0 | | |
| Su | bsegment Data | | | | | | | |
| # | Segment Type | Length, ft | Rac | lius, ft | Superelevation, % | Average Speed, mi/h | | |
| 1 | Tangent | 13257 | - | - | | 30.2 | | |
| Ve | nicle Results | | | | | | | |
| Ave | rage Speed, mi/h | 30.2 | | Percent Followers, % | | 8.2 | | |
| Seg | ment Travel Time, minutes | 4.98 | | Follower Density (FD), followers/mi/In | | 0.0 | | |
| Veh | cle LOS | A | | | | | | |
| | | S | egn | nent 2 | | | | |
| Ve | nicle Inputs | | | | | | | |
| Seg | ment Type | Passing Constrained | | Length, ft | | 435 | | |
| Lane | e Width, ft | 9 | | Shoulder Width, f | t | 0 | | |
| Spe | ed Limit, mi/h | 35 | | Access Point Dens | sity, pts/mi | 0.0 | | |
| De | mand and Capacity | | | • | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 51 | | Opposing Deman | d Flow Rate, veh/h | - | | |
| Peal | K Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | | |

| Segme | nt Capacity, veh/h | 1700 | Den | Demand/Capacity (D/C) | | 0.03 | | |
|----------------------|------------------------------|----------------|-----------|--|-----------------------------|---------------------|--|--|
| Intermediate Results | | | | | | | | |
| Segme | nt Vertical Class | 1 | Free | e-Flow Speed, | mi/h | 33.8 | | |
| Speed | Slope Coefficient (m) | 2.34249 | Spe | ed Power Coef | ficient (p) | 0.41674 | | |
| PF Slop | pe Coefficient (m) | -1.49222 | PF F | Power Coefficie | ent (p) | 0.64889 | | |
| In Pass | ing Lane Effective Length? | No | Tota | al Segment Dei | nsity, veh/mi/ln | 0.3 | | |
| %Impr | ovement to Percent Followers | 0.0 | %In | nprovement to | Speed | 0.0 | | |
| Subs | Subsegment Data | | | | | | | |
| # 5 | Segment Type | Length, ft | Radius, f | ť | Superelevation, % | Average Speed, mi/h | | |
| 1 T | angent | 435 | - | | - | 33.8 | | |
| Vehio | cle Results | | | | | | | |
| Averag | e Speed, mi/h | 33.8 | Perc | Percent Followers, % | | 19.5 | | |
| Segme | nt Travel Time, minutes | 0.15 | Foll | Follower Density (FD), followers/mi/ln | | 0.3 | | |
| Vehicle | LOS | А | | | | | | |
| Facility Results | | | | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS | | |
| 1 | 7 | 0.00 | | 0.0 | | А | | |





| | | HCS Two-La | ine | Highway Re | port | | | | |
|-------|---------------------------------|---------------------|-----|--|--------------------|---------------------|--|--|--|
| Pro | oject Information | | | | | | | | |
| Ana | lyst | ATW | | Date | | 10/18/22 | | | |
| Age | ncy | Stantec | | Analysis Year | | 2022 | | | |
| Juris | diction | | | Time Analyzed | | Existing PM | | | |
| Proj | ect Description | Woodburn Hay Road | | Units | | U.S. Customary | | | |
| | Segment 1 | | | | | | | | |
| Vel | hicle Inputs | | | | | | | | |
| Seg | ment Type | Passing Constrained | | Length, ft | | 13257 | | | |
| Lane | e Width, ft | 9 | | Shoulder Width, f | t | 0 | | | |
| Spe | ed Limit, mi/h | 35 | | Access Point Dens | sity, pts/mi | 14.3 | | | |
| De | mand and Capacity | | | | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 11 | | Opposing Deman | d Flow Rate, veh/h | - | | | |
| Peal | K Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | | | |
| Segi | ment Capacity, veh/h | 1700 | | Demand/Capacity | r (D/C) | 0.01 | | | |
| Int | ermediate Results | | | | | | | | |
| Seg | ment Vertical Class | 1 | | Free-Flow Speed, mi/h | | 30.2 | | | |
| Spee | ed Slope Coefficient (m) | 2.25978 | | Speed Power Coe | fficient (p) | 0.41674 | | | |
| PF S | lope Coefficient (m) | -1.40543 | | PF Power Coefficient (p) | | 0.60145 | | | |
| In Pa | assing Lane Effective Length? | No | | Total Segment Density, veh/mi/ln | | 0.0 | | | |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to Speed | | 0.0 | | | |
| Sul | bsegment Data | | | | | | | | |
| # | Segment Type | Length, ft | Rac | lius, ft | Superelevation, % | Average Speed, mi/h | | | |
| 1 | Tangent | 13257 | - | - | | 30.2 | | | |
| Vel | hicle Results | | | | | | | | |
| Ave | rage Speed, mi/h | 30.2 | | Percent Followers | , % | 8.7 | | | |
| Seg | ment Travel Time, minutes | 4.98 | | Follower Density (FD), followers/mi/In | | 0.0 | | | |
| Vehi | icle LOS | A | | | | | | | |
| | | S | egn | nent 2 | | | | | |
| Vel | hicle Inputs | | | | | | | | |
| Seg | ment Type | Passing Constrained | | Length, ft | | 435 | | | |
| Lane | e Width, ft | 9 | | Shoulder Width, f | t | 0 | | | |
| Spe | ed Limit, mi/h | 35 | | Access Point Dens | ity, pts/mi | 0.0 | | | |
| De | mand and Capacity | | | | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 51 | | Opposing Deman | d Flow Rate, veh/h | - | | | |
| Peal | K Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | | | |

| Segme | nt Capacity, veh/h | 1700 | Den | Demand/Capacity (D/C) | | 0.03 | | |
|----------------------|------------------------------|----------------|-----------|--|-----------------------------|---------------------|--|--|
| Intermediate Results | | | | | | | | |
| Segme | nt Vertical Class | 1 | Free | e-Flow Speed, | mi/h | 33.8 | | |
| Speed | Slope Coefficient (m) | 2.34249 | Spe | ed Power Coef | ficient (p) | 0.41674 | | |
| PF Slop | pe Coefficient (m) | -1.49222 | PF F | Power Coefficie | ent (p) | 0.64889 | | |
| In Pass | ing Lane Effective Length? | No | Tota | al Segment Dei | nsity, veh/mi/ln | 0.3 | | |
| %Impr | ovement to Percent Followers | 0.0 | %In | nprovement to | Speed | 0.0 | | |
| Subs | Subsegment Data | | | | | | | |
| # 5 | Segment Type | Length, ft | Radius, f | ť | Superelevation, % | Average Speed, mi/h | | |
| 1 T | angent | 435 | - | | - | 33.8 | | |
| Vehio | cle Results | | | | | | | |
| Averag | e Speed, mi/h | 33.8 | Perc | Percent Followers, % | | 19.5 | | |
| Segme | nt Travel Time, minutes | 0.15 | Foll | Follower Density (FD), followers/mi/ln | | 0.3 | | |
| Vehicle | LOS | А | | | | | | |
| Facility Results | | | | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS | | |
| 1 | 7 | 0.00 | | 0.0 | | А | | |





| | | HCS Two- | Lane H | lighw | vay Re | port | |
|------------|-----------------------------|--------------------|---------|--------------------------|--------------------|-----------------------------|---------------------|
| Projec | t Information | | | | | | |
| Analyst | | ATW | [| Date | | | 10/18/22 |
| Agency | | Stantec | 4 | Analysis | Year | | 2027 |
| Jurisdicti | ion | | 1 | Time An | alyzed | | Construction AM |
| Project D | Description | Deason Lane | ι | Units | | | U.S. Customary |
| | | | Segme | ent 1 | | | |
| Vehicl | e Inputs | | | | | | |
| Segment | t Туре | Passing Constraine | ed L | Length, | ft | | 7971 |
| Lane Wie | dth, ft | 9 | 9 | Shoulde | er Width, ft | t | 0 |
| Speed Li | mit, mi/h | 35 | ŀ | Access F | Point Dens | ity, pts/mi | 19.9 |
| Dema | nd and Capacity | | | | | | |
| Directior | nal Demand Flow Rate, veh/h | 6 | (| Opposir | ng Demano | d Flow Rate, veh/h | - |
| Peak Ho | ur Factor | 0.94 | | Total Trucks, % | | | 2.00 |
| Segment | t Capacity, veh/h | 1700 | [| Demand/Capacity (D/C) | | | 0.00 |
| Intern | nediate Results | | | | | | |
| Segment | Segment Vertical Class 1 | | F | Free-Flo | w Speed, | mi/h | 28.9 |
| Speed Sl | lope Coefficient (m) | 2.14827 | | Speed P | ower Coef | fficient (p) | 0.41674 |
| PF Slope | Coefficient (m) | -1.35216 | F | PF Power Coefficient (p) | | | 0.63549 |
| In Passin | g Lane Effective Length? | No | 1 | Total Se | gment De | nsity, veh/mi/ln | 0.0 |
| %Improv | vement to Percent Followers | 0.0 | ç | %Impro | provement to Speed | | 0.0 |
| Subse | gment Data | | | | | | |
| # Se | gment Type | Length, ft | Radiu | us, ft | | Superelevation, % | Average Speed, mi/h |
| 1 Tai | ngent | 7971 | - | | | - | 28.9 |
| Vehicl | e Results | | | | | <u>-</u> | |
| Average | Speed, mi/h | 28.9 | F | Percent | Followers, | % | 5.3 |
| Segment | t Travel Time, minutes | 3.14 | F | Follower | r Density (| FD), followers/mi/In | 0.0 |
| Vehicle L | .OS | A | | | | | |
| Facilit | y Results | | | | | | • |
| т | VMT veh-mi/p | VHD veh-h |) /p | Fo | ollower De | ensity, followers/ mi/ln | LOS |
| 1 | 2 | 0.00 |) | | | 0.0 | А |

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| | | HCS Two | -Lane H | lig | hway Re | port | |
|------------|-----------------------------|-------------------|-----------------------|--------------------------|----------------|-----------------------------|---------------------|
| Projec | t Information | | | | | | |
| Analyst | | ATW | | Date | 2 | | 10/18/22 |
| Agency | | Stantec | | Anal | ysis Year | | 2027 |
| Jurisdicti | ion | | | Time | e Analyzed | | Construction PM |
| Project D | Description | Deason Lane | | Unit | s | | U.S. Customary |
| | | | Segm | ent | t 1 | | |
| Vehicl | e Inputs | | | | | | |
| Segment | t Туре | Passing Constrain | ned | Leng | gth, ft | | 7971 |
| Lane Wie | dth, ft | 9 | | Shou | ulder Width, f | t | 0 |
| Speed Li | mit, mi/h | 35 | | Acce | ess Point Dens | sity, pts/mi | 19.9 |
| Dema | nd and Capacity | · | | | | | |
| Direction | nal Demand Flow Rate, veh/h | 6 | | Орр | osing Deman | d Flow Rate, veh/h | - |
| Peak Ho | ur Factor | 0.94 | | Total Trucks, % | | | 2.00 |
| Segment | t Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | | 0.00 |
| Intern | nediate Results | | | | | | |
| Segment | Segment Vertical Class 1 | | Free-Flow Speed, mi/h | | 28.9 | | |
| Speed Sl | lope Coefficient (m) | 2.14827 | | Spee | ed Power Coe | fficient (p) | 0.41674 |
| PF Slope | e Coefficient (m) | -1.35216 | | PF Power Coefficient (p) | | ent (p) | 0.63549 |
| In Passin | g Lane Effective Length? | No | | Tota | l Segment De | nsity, veh/mi/ln | 0.0 |
| %Improv | vement to Percent Followers | 0.0 | | %lm | provement to | Speed | 0.0 |
| Subse | gment Data | | | | | | |
| # Se | gment Type | Length, ft | Radiu | us, ft | | Superelevation, % | Average Speed, mi/h |
| 1 Tai | ngent | 7971 | - | | | - | 28.9 |
| Vehicl | e Results | | | | | | |
| Average | Speed, mi/h | 28.9 | | Perc | ent Followers, | , % | 5.3 |
| Segment | t Travel Time, minutes | 3.14 | | Follo | ower Density (| (FD), followers/mi/In | 0.0 |
| Vehicle L | Vehicle LOS A | | | | | | |
| Facilit | y Results | | | | | | |
| т | VMT veh-mi/p | VH veh- | D h/p | | Follower De | ensity, followers/ mi/ln | LOS |
| 1 | 2 | 0.0 | 00 | | | 0.0 | А |

HCS TM Highways Version 2022 Construction PM Deason Lane.Xuf

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| | | HCS Two-La | ne Hig | jhway Re | port | | | | | |
|------------|-----------------------------|---------------------|-----------|--------------------------|-----------------------------|---------------------|--|--|--|--|
| Projec | t Information | | | | | | | | | |
| Analyst | | ATW | Dat | e | | 10/18/22 | | | | |
| Agency | | Stantec | Ana | alysis Year | | 2027 | | | | |
| Jurisdicti | on | | Tim | e Analyzed | | Construction AM | | | | |
| Project D | Description | Old Fruit Hill Road | Uni | ts | | U.S. Customary | | | | |
| | Segment 1 | | | | | | | | | |
| Vehicl | e Inputs | | | | | | | | | |
| Segment | t Туре | Passing Constrained | Len | gth, ft | | 12173 | | | | |
| Lane Wic | dth, ft | 9 | Sho | oulder Width, f | t | 0 | | | | |
| Speed Li | mit, mi/h | 35 | Acc | ess Point Dens | sity, pts/mi | 10.8 | | | | |
| Dema | nd and Capacity | | | | | | | | | |
| Direction | nal Demand Flow Rate, veh/h | 44 | Ор | posing Deman | d Flow Rate, veh/h | - | | | | |
| Peak Hou | ur Factor | 0.94 | Tota | Total Trucks, % | | 2.00 | | | | |
| Segment | t Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.03 | | | | |
| Interm | nediate Results | | | | | | | | | |
| Segment | t Vertical Class | 1 | Fre | e-Flow Speed, | mi/h | 31.1 | | | | |
| Speed SI | ope Coefficient (m) | 2.30094 | Spe | ed Power Coe | fficient (p) | 0.41674 | | | | |
| PF Slope | Coefficient (m) | -1.39785 | PF | PF Power Coefficient (p) | | 0.61601 | | | | |
| In Passin | g Lane Effective Length? | No T | | al Segment De | nsity, veh/mi/ln | 0.3 | | | | |
| %Improv | vement to Percent Followers | 0.0 | | %Improvement to Speed | | 0.0 | | | | |
| Subse | gment Data | | | | | | | | | |
| # Se | gment Type | Length, ft | Radius, f | īt . | Superelevation, % | Average Speed, mi/h | | | | |
| 1 Tar | ngent | 12173 | - | | - | 31.1 | | | | |
| Vehicl | e Results | - | | | • | | | | | |
| Average | Speed, mi/h | 31.1 | Per | cent Followers, | , % | 18.4 | | | | |
| Segment | t Travel Time, minutes | 4.44 | Foll | ower Density (| FD), followers/mi/In | 0.3 | | | | |
| Vehicle L | OS | A | | | | | | | | |
| Facility | y Results | · | | | | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS | | | | |
| 1 | 24 | 0.00 | | | 0.3 | Α | | | | |

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| 1 | 22 | 0.00 | | | 02 | Δ | | |
|-----------|-----------------------------|---------------------|------------|----------------------------------|-----------------------------|---------------------|--|--|
| т | VMT veh-mi/p | VHD veh-h/p | | Follower D | ensity, followers/ mi/ln | LOS | | |
| Facility | y Results | | | | | | | |
| Vehicle L | OS | A | | | | | | |
| Segment | t Travel Time, minutes | 4.44 | Fol | lower Density (| (FD), followers/mi/In | 0.2 | | |
| Average | Speed, mi/h | 31.1 | Per | cent Followers, | , % | 17.9 | | |
| Vehicle | e Results | | | | | | | |
| 1 Tar | ngent | 12173 | - | - | | 31.1 | | |
| # Seg | gment Type | Length, ft | Radius, | ft | Superelevation, % | Average Speed, mi/h | | |
| Subse | gment Data | | | | | | | |
| %Improv | vement to Percent Followers | 0.0 | %Ir | %Improvement to Speed | | 0.0 | | |
| In Passin | g Lane Effective Length? | No | Tot | Total Segment Density, veh/mi/ln | | 0.2 | | |
| PF Slope | Coefficient (m) | -1.39785 | PF | PF Power Coefficient (p) | | 0.61601 | | |
| Speed SI | ope Coefficient (m) | 2.30094 | Spe | eed Power Coe | fficient (p) | 0.41674 | | |
| Segment | t Vertical Class | 1 | Fre | e-Flow Speed, | mi/h | 31.1 | | |
| Interm | nediate Results | | | | | | | |
| Segment | t Capacity, veh/h | 1700 | Dei | Demand/Capacity (D/C) | | 0.02 | | |
| Peak Hou | ur Factor | 0.94 | Tot | Total Trucks, % | | 2.00 | | |
| Direction | nal Demand Flow Rate, veh/h | 41 | Ор | Opposing Demand Flow Rate, veh/h | | - | | |
| Dema | Demand and Capacity | | | | | | | |
| Speed Li | mit, mi/h | 35 | Acc | cess Point Dens | sity, pts/mi | 10.8 | | |
| Lane Wic | dth, ft | 9 | Sho | oulder Width, f | t | 0 | | |
| Segment | t Туре | Passing Constrained | Ler | ngth, ft | | 12173 | | |
| Vehicl | e Inputs | | | | | | | |
| | | 50 | egmen | it 1 | | | | |
| Project D | Description | | Un | | | U.S. Customary | | |
| Droject D | | Old Fruit Hill Bood | lin Uni | ite Analyzed | | | | |
| Agency | | Stantec | Ana | alysis Year | | 2027 | | |
| Analyst | | AIW | Dat | te | | 10/18/22 | | |
| Projec | t Information | 1 | | | | | | |
| | | | | | | _ | | |
| | | HCS Two-La | ne Hic | uhwav Re | nort | | | |
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HCSTM Highways Version 2022 Construction PM Old Fruit Hill Road.Xuf

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Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2027 Jurisdiction Time Analyzed Construction AM **Project Description** KY 189 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Constrained Length, ft 7450 Segment Type 9 Lane Width, ft Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 17.0 **Demand and Capacity** 17 Opposing Demand Flow Rate, veh/h Directional Demand Flow Rate, veh/h _ Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.01 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 53.1 Speed Slope Coefficient (m) 3.45635 Speed Power Coefficient (p) 0.41674 -1.34281 PF Slope Coefficient (m) 0.73462 PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.0 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 7450 53.1 **Vehicle Results** Percent Followers, % 6.5 Average Speed, mi/h 53.1 Segment Travel Time, minutes 1.59 Follower Density (FD), followers/mi/ln 0.0 Vehicle LOS А **Facility Results**

| Т | VMT veh-mi/p | VHD veh-h/p | Follower Density, followers/ mi/ln | LOS |
|---|-----------------|----------------|---------------------------------------|-----|
| 1 | 6 | 0.00 | 0.0 | А |

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HCS M Highways Version 2022 Construction AM KY 189.Xuf Generated: 11/08/2022 08:34:02

| HCS Two-Lane H | lighway | Report |
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Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2027 Jurisdiction Time Analyzed Construction PM **Project Description** KY 189 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Constrained Length, ft 7450 Segment Type 9 Lane Width, ft Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 17.0 **Demand and Capacity** Opposing Demand Flow Rate, veh/h Directional Demand Flow Rate, veh/h 34 _ Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.02 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 53.1 Speed Slope Coefficient (m) 3.45635 Speed Power Coefficient (p) 0.41674 PF Slope Coefficient (m) -1.34281 0.73462 PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.1 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 7450 53.1 **Vehicle Results** 10.6 Average Speed, mi/h 53.1 Percent Followers, % Segment Travel Time, minutes 1.59 Follower Density (FD), followers/mi/In 0.1 Vehicle LOS А **Facility Results**

| т | VMT veh-mi/p | VHD veh-h/p | Follower Density, followers/ mi/ln | LOS |
|---|-----------------|----------------|---------------------------------------|-----|
| 1 | 11 | 0.00 | 0.1 | А |

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HCS M Highways Version 2022 Construction PM KY 189.Xuf Generated: 11/08/2022 08:35:37

| HCS Two-Lane | Highway | Report |
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Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2027 Jurisdiction Time Analyzed Construction AM **Project Description** KY 107 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Zone Length, ft 1425 Segment Type Lane Width, ft 10 Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 29.6 **Demand and Capacity** 160 Opposing Demand Flow Rate, veh/h 115 Directional Demand Flow Rate, veh/h Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.09 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 50.5 Speed Slope Coefficient (m) 2.95887 Speed Power Coefficient (p) 0.56787 0.76324 PF Slope Coefficient (m) -1.30115 PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.9 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h Tangent 1425 49.9 1 **Vehicle Results** 27.4 49.9 Average Speed, mi/h Percent Followers, % Segment Travel Time, minutes 0.32 Follower Density (FD), followers/mi/In 0.9 A Vehicle LOS Segment 2 **Vehicle Inputs**

| Segment Type | Passing Constrained | Length, ft | 1742 | | | |
|---|---------------------|-----------------------------------|------|--|--|--|
| Lane Width, ft | 10 | Shoulder Width, ft | 1 | | | |
| Speed Limit, mi/h 55 Access Point Density, pts/mi | | Access Point Density, pts/mi 27.3 | | | | |
| Demand and Capacity | | | | | | |
| Directional Demand Flow Rate, veh/h | 160 | Opposing Demand Flow Rate, veh/h | - | | | |
| Peak Hour Factor | 0.94 | Total Trucks, % | 2.00 | | | |

| Segment Capacity, veh/h 1700 | | | Demand/Capacity (D/C) | | 0.09 | | | |
|------------------------------|--------------------------------|--------------|-----------------------|----------------------------------|---------------------------|---------------------|--|--|
| Inte | rmediate Results | | | | | | | |
| Segment Vertical Class 2 | | | Free-Flow Speed, | mi/h | 51.0 | | | |
| Speed | d Slope Coefficient (m) | 3.11550 | | Speed Power Coe | fficient (p) | 0.41622 | | |
| PF Slo | ope Coefficient (m) | -1.54091 | | PF Power Coefficie | ent (p) | 0.70305 | | |
| In Pas | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 1.1 | | |
| %lmp | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | | |
| Sub | segment Data | | | | | | | |
| # | Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h | | |
| 1 | Tangent | 1742 | - | | - | 50.0 | | |
| Veh | icle Results | | | | | | | |
| Avera | ige Speed, mi/h | 50.0 | | Percent Followers, | , % | 34.6 | | |
| Segm | ent Travel Time, minutes | 0.40 | | Follower Density (| FD), followers/mi/ln | 1.1 | | |
| Vehic | le LOS | А | | | | | | |
| | Segment 3 | | | | | | | |
| Veh | icle Inputs | | | | | | | |
| Segm | ent Type | Passing Zone | | Length, ft | | 3854 | | |
| Lane | Width, ft | 10 | | Shoulder Width, f | t | 1 | | |
| Speed | Speed Limit, mi/h 55 | | Access Point Dens | sity, pts/mi | 19.2 | | | |
| Den | nand and Capacity | | | | | | | |
| Direc | tional Demand Flow Rate, veh/h | 160 | | Opposing Deman | d Flow Rate, veh/h | 115 | | |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | | |
| Segm | ent Capacity, veh/h | 1700 | | Demand/Capacity | r (D/C) | 0.09 | | |
| Inte | rmediate Results | | | | | | | |
| Segm | ent Vertical Class | 1 | | Free-Flow Speed, | mi/h | 53.1 | | |
| Speed | d Slope Coefficient (m) | 3.13493 | | Speed Power Coefficient (p) | | 0.56787 | | |
| PF Slo | ope Coefficient (m) | -1.22491 | | PF Power Coefficient (p) | | 0.79609 | | |
| In Pas | ssing Lane Effective Length? | No | | Total Segment Density, veh/mi/ln | | 0.8 | | |
| %lmp | provement to Percent Followers | 0.0 | | %Improvement to | %Improvement to Speed 0.0 | | | |
| Sub | segment Data | | | | | | | |
| # | Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h | | |
| 1 | Tangent | 3854 | - | | - | 52.5 | | |
| Veh | icle Results | | | | | | | |
| Avera | ige Speed, mi/h | 52.5 | | Percent Followers, | , % | 24.7 | | |
| Segm | ent Travel Time, minutes | 0.83 | | Follower Density (| FD), followers/mi/ln | 0.8 | | |
| Vehic | le LOS | A | | | | | | |
| | Segment 4 | | | | | | | |

| Veł | nicle Inputs | | | | | | |
|-------------------------------------|---------------------------------|------------------|--------------|--------------------|----------------------|---------------------|--|
| Segr | egment Type Passing Constrained | | Length, ft | | 977 | | |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | t | 1 | |
| Spee | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.0 | |
| De | mand and Capacity | | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 160 | | Opposing Deman | d Flow Rate, veh/h | - | |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.09 | |
| Int | ermediate Results | | | | | | |
| Segr | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 51.9 | |
| Spee | ed Slope Coefficient (m) | 3.32351 | | Speed Power Coet | fficient (p) | 0.41674 | |
| PF S | lope Coefficient (m) | -1.46187 | | PF Power Coefficie | ent (p) | 0.71687 | |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 1.0 | |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Sul | osegment Data | | | | | | |
| # | Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 977 | - | | - | 50.9 | |
| Veł | nicle Results | | | | - | | |
| Aver | rage Speed, mi/h | 50.9 | | Percent Followers, | % | 32.4 | |
| Segr | ment Travel Time, minutes | 0.22 | | Follower Density (| FD), followers/mi/ln | 1.0 | |
| Vehi | cle LOS | A | | | | | |
| | | S | egn | nent 5 | | | |
| Veł | nicle Inputs | | | | | | |
| Segr | ment Type | Passing Zone | | Length, ft | | 4297 | |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | t | 1 | |
| Spee | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.7 | |
| De | mand and Capacity | | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 160 | | Opposing Deman | d Flow Rate, veh/h | 115 | |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.09 | |
| Int | ermediate Results | | | | | | |
| Segment Vertical Class 2 | | Free-Flow Speed, | mi/h | 51.7 | | | |
| Speed Slope Coefficient (m) 3.11550 | | Speed Power Coet | fficient (p) | 0.57180 | | | |
| PF S | lope Coefficient (m) | -1.20573 | | PF Power Coefficie | ent (p) | 0.78097 | |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.8 | |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Sul | osegment Data | | | | | | |
| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h | |
|---------------------------|----------------------------------|--------------------|-------------|-----------------------|----------------------|---------------------|--|
| 1 | Tangent | 4297 | - | | - | 51.1 | |
| Ve | hicle Results | | | | | | |
| Ave | rage Speed, mi/h | 51.1 | | Percent Followers, | % | 25.0 | |
| Seg | ment Travel Time, minutes | 0.96 | | Follower Density (| FD), followers/mi/ln | 0.8 | |
| Veh | icle LOS | A | | | | | |
| | | | Segn | nent 6 | | | |
| Ve | hicle Inputs | | | | | | |
| Seg | ment Type | Passing Constrain | ned | Length, ft | | 1320 | |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | I. | 1 | |
| Spe | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 12.0 | |
| De | mand and Capacity | | | | | | |
| Dire | ectional Demand Flow Rate, veh/h | 160 | | Opposing Deman | d Flow Rate, veh/h | - | |
| Peal | k Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.09 | |
| Int | Intermediate Results | | | | | | |
| Seg | ment Vertical Class | 1 | 1 | | mi/h | 54.9 | |
| Spe | ed Slope Coefficient (m) | 3.48611 | 3.48611 | | fficient (p) | 0.41674 | |
| PF S | lope Coefficient (m) | -1.44027 | | PF Power Coefficie | ent (p) | 0.72456 | |
| In P | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.9 | |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Su | bsegment Data | | | | | | |
| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 1320 | - | | - | 53.9 | |
| Ve | hicle Results | | | | | | |
| Ave | rage Speed, mi/h | 53.9 | | Percent Followers, | % | 31.7 | |
| Seg | ment Travel Time, minutes | 0.28 | | Follower Density (| FD), followers/mi/ln | 0.9 | |
| Veh | icle LOS | А | | | | | |
| | | | Segn | nent 7 | | | |
| Ve | hicle Inputs | | | | | | |
| Segment Type Passing Zone | | Length, ft | | 903 | | | |
| Lane Width, ft 10 | | Shoulder Width, ft | t | 1 | | | |
| Speed Limit, mi/h 55 | | Access Point Dens | ity, pts/mi | 16.0 | | | |
| De | mand and Capacity | | | | | | |
| Dire | ectional Demand Flow Rate, veh/h | 160 | | Opposing Deman | d Flow Rate, veh/h | 115 | |
| Peal | k Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.09 | |

| Inte | ermediate Results | | | | | | |
|-------|--------------------------------|-----------------|-------|-----------------|-------------------------|---------------------|--|
| Segn | nent Vertical Class | 1 | | Free-Flow Spee | d, mi/h | 53.9 | |
| Spee | d Slope Coefficient (m) | 3.14155 | | Speed Power C | oefficient (p) | 0.56787 | |
| PF SI | ope Coefficient (m) | -1.29930 | | PF Power Coeff | icient (p) | 0.77148 | |
| In Pa | ssing Lane Effective Length? | No | | Total Segment | Density, veh/mi/ln | 0.8 | |
| %lm | provement to Percent Followers | 0.0 | | %Improvemen | to Speed | 0.0 | |
| Sub | osegment Data | | | | | | |
| # | Segment Type | Length, ft Radi | | Radius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 903 | • | - | - | 53.3 | |
| Veh | icle Results | | | | - | | |
| Aver | age Speed, mi/h | 53.3 | | Percent Follow | ers, % | 27.0 | |
| Segn | nent Travel Time, minutes | 0.19 | | Follower Densi | y (FD), followers/mi/ln | 0.8 | |
| Vehio | cle LOS | A | | | | | |
| | | | Seg | gment 8 | | - | |
| Veh | icle Innuts | | | | | | |
| Sean | | Passing Constra | ained | Length ft | | 4308 | |
| Lane | Width ft | 10 | | Shoulder Widtl |) ft | 1 | |
| Snee | d limit mi/h | 55 | | Access Point D | ensity pts/mi | 13.4 | |
| Dor | mand and Canacity | | | | | | |
| Der | | | | | | | |
| Direc | tional Demand Flow Rate, veh/h | 160 | | Opposing Dem | and Flow Rate, veh/h | - | |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Segn | nent Capacity, veh/h | 1700 | | Demand/Capa | ity (D/C) | 0.09 | |
| Inte | ermediate Results | | | | | | |
| Segn | nent Vertical Class | 1 | | Free-Flow Spee | d, mi/h | 54.6 | |
| Spee | d Slope Coefficient (m) | 3.50851 | | Speed Power C | oefficient (p) | 0.41674 | |
| PF SI | ope Coefficient (m) | -1.34913 | | PF Power Coef | icient (p) | 0.74640 | |
| In Pa | ssing Lane Effective Length? | No | | Total Segment | Density, veh/mi/ln | 0.9 | |
| %lm | provement to Percent Followers | 0.0 | | %Improvemen | to Speed | 0.0 | |
| Sub | osegment Data | | | | | | |
| # | Segment Type | Length, ft | 1 | Radius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | t 4308 - | | - | - | 53.5 | |
| Veh | icle Results | · | | | | | |
| Aver | age Speed, mi/h | 53.5 | | Percent Follow | ers, % | 29.0 | |
| Segn | nent Travel Time, minutes | 0.92 | | Follower Densi | y (FD), followers/mi/ln | 0.9 | |
| Vehio | cle LOS | A | | | | | |
| | | | 5 | amont 0 | | | |
| | Segment 9 | | | | | | |

| Vel | nicle Inputs | | | | | |
|----------------------|---------------------------------|---------------------|-------------|--------------------------------|----------------------|---------------------|
| Seg | ment Type | Passing Zone | | Length, ft | | 1140 |
| Lane | e Width, ft | 10 5 | | Shoulder Width, ft | | 1 |
| Spe | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.0 |
| De | mand and Capacity | | | | | · |
| Dire | ctional Demand Flow Rate, veh/h | 160 | | Opposing Deman | d Flow Rate, veh/h | 115 |
| Peal | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segi | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.09 |
| Int | ermediate Results | | | - | | |
| Seg | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 51.9 |
| Spe | ed Slope Coefficient (m) | 3.03315 | | Speed Power Coef | ficient (p) | 0.56787 |
| PF S | lope Coefficient (m) | -1.30436 | | PF Power Coefficie | ent (p) | 0.76541 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.9 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | bsegment Data | | | | | |
| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 1140 | - | | - | 51.3 |
| Vel | nicle Results | | | | | |
| Ave | rage Speed, mi/h | 51.3 | | Percent Followers, | % | 27.4 |
| Seg | ment Travel Time, minutes | 0.25 | | Follower Density (| FD), followers/mi/ln | 0.9 |
| Vehi | cle LOS | A | | | | |
| Bic | ycle Results | | | | | |
| Perc | ent Occupied Parking | 0 | | Pavement Condition | on Rating | 4 |
| Flow | / Rate Outside Lane, veh/h | 160 | | Bicycle Effective Width, ft | | 14 |
| Bicy | cle LOS Score | 4.19 | | Bicycle Effective Speed Factor | | 4.79 |
| Bicy | cle LOS | D | | | | |
| | | Se | gm | nent 10 | | |
| Vel | nicle Inputs | | | | | |
| Seg | ment Type | Passing Constrained | | Length, ft | | 1690 |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | : | 1 |
| Speed Limit, mi/h 55 | | Access Point Dens | ity, pts/mi | 6.3 | | |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 171 | | Opposing Deman | d Flow Rate, veh/h | - |
| Peal | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.10 |
| Int | ermediate Results | | | | | |
| Seg | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 56.4 |

| PF Slope Coefficient (m) -1.40749 P | | PF P | ower Coefficie | ent (p) | 0.73425 | |
|--------------------------------------|-----------------------------|----------------|----------------|----------------------------------|-----------------------------|---------------------|
| In Passing Lane Effective Length? No | | No | Tota | Total Segment Density, veh/mi/ln | | 1.0 |
| %Improv | vement to Percent Followers | 0.0 | | provement to | Speed | 0.0 |
| Subse | gment Data | | | | | |
| # Se | gment Type | Length, ft | Radius, ft | ius, ft Superelevation, % | | Average Speed, mi/h |
| 1 Tar | ngent | 1690 | - | | - | 55.2 |
| Vehicl | e Results | | | | | |
| Average | Speed, mi/h | 55.2 | Perc | ent Followers, | % | 32.0 |
| Segment | t Travel Time, minutes | 0.35 | Follo | ower Density (| FD), followers/mi/ln | 1.0 |
| Vehicle L | .OS | А | | | | |
| | | Se | gment | 11 | | |
| Vehicl | e Inputs | | | | | |
| Segment | t Туре | Passing Zone | Leng | gth, ft | | 1584 |
| Lane Wio | dth, ft | 10 | Sho | ulder Width, ft | t | 1 |
| Speed Li | mit, mi/h | 55 | | Access Point Density, pts/mi | | 13.3 |
| Dema | nd and Capacity | | | | | |
| Directior | nal Demand Flow Rate, veh/h | 171 | Орр | osing Deman | d Flow Rate, veh/h | 61 |
| Peak Hou | ur Factor | 0.94 | Tota | l Trucks, % | | 2.00 |
| Segment | t Capacity, veh/h | 1700 | Dem | nand/Capacity | (D/C) | 0.10 |
| Intern | nediate Results | | | | | |
| Segment | t Vertical Class | 1 | Free | Free-Flow Speed, mi/h | | 54.6 |
| Speed SI | ope Coefficient (m) | 3.15266 | Spe | Speed Power Coefficient (p) | | 0.59462 |
| PF Slope | Coefficient (m) | -1.25712 | PF P | PF Power Coefficient (p) | | 0.78487 |
| In Passin | g Lane Effective Length? | No | Tota | Total Segment Density, veh/mi/ln | | 0.9 |
| %Improv | vement to Percent Followers | 0.0 | %Im | provement to | Speed | 0.0 |
| Subse | gment Data | | | | | |
| # Se | gment Type | Length, ft | Radius, ft | : | Superelevation, % | Average Speed, mi/h |
| 1 Tar | ngent | 1584 | - | | - | 54.0 |
| Vehicl | e Results | | | | | |
| Average | Speed, mi/h | 54.0 | Perc | ent Followers, | % | 27.0 |
| Segment | t Travel Time, minutes | 0.33 | Follo | ower Density (| FD), followers/mi/ln | 0.9 |
| Vehicle L | .OS | А | | | | |
| Facilit | y Results | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS |
| 1 | 167 | 0.05 | | | 0.9 | A |





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| HCS Two-Lane | Highway | Report |
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Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2027 Construction PM Jurisdiction Time Analyzed **Project Description** KY 107 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Zone Length, ft 1425 Segment Type Lane Width, ft 10 Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 29.6 **Demand and Capacity** 186 Opposing Demand Flow Rate, veh/h 135 Directional Demand Flow Rate, veh/h Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.11 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 50.5 Speed Slope Coefficient (m) 2.96825 Speed Power Coefficient (p) 0.56003 -1.30923 PF Slope Coefficient (m) PF Power Coefficient (p) 0.76153 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 1.1 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h Tangent 1425 49.8 1 **Vehicle Results** 49.8 30.5 Average Speed, mi/h Percent Followers, % Segment Travel Time, minutes 0.33 Follower Density (FD), followers/mi/In 1.1 A Vehicle LOS Segment 2 **Vehicle Inputs**

| Segment Type | Passing Constrained | Length, ft | 1742 |
|-------------------------------------|---------------------|----------------------------------|------|
| Lane Width, ft | 10 | Shoulder Width, ft | 1 |
| Speed Limit, mi/h 55 Access Point I | | Access Point Density, pts/mi | 27.3 |
| Demand and Capacity | | | |
| Directional Demand Flow Rate, veh/h | 186 | Opposing Demand Flow Rate, veh/h | - |
| Peak Hour Factor | 0.94 | Total Trucks, % | 2.00 |

| Segment Capacity, veh/h 1700 | | | Demand/Capacity (D/C) | | 0.11 | |
|------------------------------|--------------------------------|-------------------|-----------------------|-----------------------|----------------------|---------------------|
| Inte | ermediate Results | | | | | |
| Segn | nent Vertical Class | 2 | | Free-Flow Speed, | mi/h | 51.0 |
| Spee | d Slope Coefficient (m) | 3.11550 | | Speed Power Coe | fficient (p) | 0.41622 |
| PF SI | ope Coefficient (m) | -1.54091 | | PF Power Coefficie | ent (p) | 0.70305 |
| In Pa | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 1.4 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sub | osegment Data | | | | | |
| # | Segment Type | Length, ft Rad | | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 1742 | - | | - | 49.9 |
| Veh | icle Results | | | | | |
| Aver | age Speed, mi/h | 49.9 | | Percent Followers, | , % | 37.7 |
| Segn | nent Travel Time, minutes | 0.40 | | Follower Density (| FD), followers/mi/ln | 1.4 |
| Vehi | cle LOS | A | | | | |
| | | | Segr | ment 3 | | |
| Veh | icle Inputs | | | | | |
| Segn | nent Type | Passing Zone | | Length, ft | | 3854 |
| Lane | Width, ft | 10 | | Shoulder Width, f | t | 1 |
| Speed Limit, mi/h 55 | | Access Point Dens | sity, pts/mi | 19.2 | | |
| Der | nand and Capacity | | | | | |
| Direc | tional Demand Flow Rate, veh/h | 186 | | Opposing Deman | d Flow Rate, veh/h | 135 |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segn | nent Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.11 |
| Inte | ermediate Results | | | | | |
| Segn | nent Vertical Class | 1 | | Free-Flow Speed, mi/h | | 53.1 |
| Spee | d Slope Coefficient (m) | 3.14431 | | Speed Power Coe | fficient (p) | 0.56003 |
| PF SI | ope Coefficient (m) | -1.23230 | | PF Power Coefficie | ent (p) | 0.79409 |
| In Pa | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 1.0 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sub | osegment Data | | | | | |
| # | Segment Type | Length, ft Rad | | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 Tangent 3854 - | | | - | 52.3 | | |
| Veh | icle Results | | | | | |
| Aver | age Speed, mi/h | 52.3 | | Percent Followers, | , % | 27.7 |
| Segn | nent Travel Time, minutes | 0.84 | | Follower Density (| FD), followers/mi/ln | 1.0 |
| Vehi | cle LOS | A | | | | |
| | | | Segr | ment 4 | | |

| Veł | nicle Inputs | | | | | |
|--------------------------|---------------------------------|---------------------|--------------------|--------------------|----------------------|---------------------|
| Segr | nent Type | Passing Constrained | | Length, ft | | 977 |
| Lane | Lane Width, ft 10 | | Shoulder Width, ft | | 1 | |
| Spee | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.0 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 186 | | Opposing Deman | d Flow Rate, veh/h | - |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.11 |
| Int | ermediate Results | | | | | |
| Segr | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 51.9 |
| Spee | ed Slope Coefficient (m) | 3.32351 | | Speed Power Coet | fficient (p) | 0.41674 |
| PF S | lope Coefficient (m) | -1.46187 | | PF Power Coefficie | ent (p) | 0.71687 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 1.3 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | osegment Data | | | | | |
| # | Segment Type | Length, ft | Rad | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 977 | - | | - | 50.7 |
| Veł | nicle Results | | - | | - | |
| Aver | rage Speed, mi/h | 50.7 | | Percent Followers, | % | 35.5 |
| Segr | ment Travel Time, minutes | 0.22 | | Follower Density (| FD), followers/mi/ln | 1.3 |
| Vehi | cle LOS | A | | | | |
| | | S | egn | nent 5 | | |
| Veł | nicle Inputs | | | | | |
| Segr | ment Type | Passing Zone | | Length, ft | | 4297 |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | | 1 |
| Spee | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.7 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 186 | | Opposing Deman | d Flow Rate, veh/h | 135 |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segr | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.11 |
| Int | ermediate Results | | | | | |
| Segment Vertical Class 2 | | Free-Flow Speed, | mi/h | 51.7 | | |
| Spee | ed Slope Coefficient (m) | 3.11550 | | Speed Power Coet | fficient (p) | 0.56228 |
| PF S | lope Coefficient (m) | -1.21392 | | PF Power Coefficie | ent (p) | 0.77877 |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 1.0 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | osegment Data | | | | | |

| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h | |
|---------------------------|---------------------------------|--------------------|-------------|-----------------------|----------------------|---------------------|--|
| 1 | Tangent | 4297 | - | | - | 50.9 | |
| Vel | nicle Results | | | | | | |
| Ave | rage Speed, mi/h | 50.9 | | Percent Followers, | % | 27.9 | |
| Seg | ment Travel Time, minutes | 0.96 | | Follower Density (| FD), followers/mi/ln | 1.0 | |
| Vehi | cle LOS | A | | | | | |
| | | | Segn | nent 6 | | | |
| Vel | nicle Inputs | | | | | | |
| Seg | ment Type | Passing Constrair | ned | Length, ft | | 1320 | |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | : | 1 | |
| Spe | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 12.0 | |
| De | mand and Capacity | | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 186 | | Opposing Demand | d Flow Rate, veh/h | - | |
| Peal | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.11 | |
| Int | Intermediate Results | | | | | | |
| Seg | ment Vertical Class | 1 | 1 | | mi/h | 54.9 | |
| Spe | ed Slope Coefficient (m) | 3.48611 | | Speed Power Coef | ficient (p) | 0.41674 | |
| PF S | lope Coefficient (m) | -1.44027 | | PF Power Coefficie | ent (p) | 0.72456 | |
| In Pa | assing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 1.2 | |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Sul | osegment Data | | | | | | |
| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 1320 | - | | - | 53.7 | |
| Vel | nicle Results | | | | | | |
| Ave | rage Speed, mi/h | 53.7 | | Percent Followers, | % | 34.7 | |
| Seg | ment Travel Time, minutes | 0.28 | | Follower Density (| FD), followers/mi/ln | 1.2 | |
| Vehi | cle LOS | A | | | | | |
| | | | Segn | nent 7 | | | |
| Vel | nicle Inputs | | | | | | |
| Segment Type Passing Zone | | Length, ft | | 903 | | | |
| Lane Width, ft 10 | | Shoulder Width, ft | : | 1 | | | |
| Speed Limit, mi/h 55 | | Access Point Dens | ity, pts/mi | 16.0 | | | |
| De | mand and Capacity | | | - | | | |
| Dire | ctional Demand Flow Rate, veh/h | 186 | | Opposing Deman | d Flow Rate, veh/h | 135 | |
| Peal | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.11 | |

| Inte | rmediate Results | | | | | | |
|-------|--------------------------------|-----------------|-----------------|--------------------|----------------------|---------------------|--|
| Segm | nent Vertical Class | 1 | | Free-Flow Speed, | mi/h | 53.9 | |
| Spee | d Slope Coefficient (m) | 3.15093 | | Speed Power Coet | fficient (p) | 0.56003 | |
| PF SI | ope Coefficient (m) | -1.30721 | | PF Power Coefficie | ent (p) | 0.76978 | |
| In Pa | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 1.1 | |
| %lmp | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Sub | segment Data | | | | | | |
| # | Segment Type | Length, ft | Length, ft Radi | | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 903 | - | | - | 53.1 | |
| Veh | icle Results | • | | | - | · | |
| Avera | ige Speed, mi/h | 53.1 | | Percent Followers, | % | 30.1 | |
| Segm | nent Travel Time, minutes | 0.19 | | Follower Density (| FD), followers/mi/ln | 1.1 | |
| Vehic | le LOS | A | | | | | |
| | | | Seg | jment 8 | | | |
| Veh | icle Inputs | | | | | | |
| Segn | nent Type | Passing Constra | ained | Length, ft | | 4308 | |
| Lane | Width, ft | 10 | | Shoulder Width, ft | t | 1 | |
| Spee | d Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 13.4 | |
| Den | nand and Capacity | | | | | | |
| Direc | tional Demand Flow Rate, veh/h | 186 | | Opposing Deman | d Flow Rate, veh/h | - | |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Segn | nent Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.11 | |
| Inte | rmediate Results | | | | | | |
| Segn | ent Vertical Class | 1 | | Free-Flow Speed, | mi/h | 54.6 | |
| Spee | d Slope Coefficient (m) | 3.50851 | | Speed Power Coe | fficient (p) | 0.41674 | |
| PF SI | ope Coefficient (m) | -1.34913 | | PF Power Coefficie | ent (p) | 0.74640 | |
| In Pa | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 1.1 | |
| %lmp | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 | |
| Sub | segment Data | | | | | | |
| # | Segment Type | Length, ft | R | adius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 4308 - | | | - | 53.3 | |
| Veh | icle Results | | | | <u>`</u> | | |
| Avera | ige Speed, mi/h | 53.3 | | Percent Followers, | % | 31.9 | |
| Segm | ent Travel Time, minutes | 0.92 | | Follower Density (| FD), followers/mi/ln | 1.1 | |
| Vehic | le LOS | A | | | | | |
| | Segment 9 | | | | | | |

| Vel | nicle Inputs | | | | | |
|----------------------|---------------------------------|---------------------|-------------|--------------------------------|----------------------|---------------------|
| Segi | ment Type | Passing Zone | | Length, ft | | 1140 |
| Lane | e Width, ft | 10 5 | | Shoulder Width, ft | | 1 |
| Spee | ed Limit, mi/h | 55 | | Access Point Dens | ity, pts/mi | 24.0 |
| De | mand and Capacity | · | | | | · |
| Dire | ctional Demand Flow Rate, veh/h | 186 | | Opposing Demand | d Flow Rate, veh/h | 135 |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segi | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.11 |
| Int | ermediate Results | | | - | | |
| Segi | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 51.9 |
| Spee | ed Slope Coefficient (m) | 3.04253 | | Speed Power Coef | ficient (p) | 0.56003 |
| PF S | lope Coefficient (m) | -1.31241 | | PF Power Coefficie | ent (p) | 0.76372 |
| In Pa | assing Lane Effective Length? | No | | Total Segment Der | nsity, veh/mi/ln | 1.1 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sul | bsegment Data | | | | | |
| # | Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 1140 | - | | - | 51.2 |
| Vel | nicle Results | | | | | |
| Aver | rage Speed, mi/h | 51.2 | | Percent Followers, | % | 30.5 |
| Segi | ment Travel Time, minutes | 0.25 | | Follower Density (| FD), followers/mi/ln | 1.1 |
| Vehi | cle LOS | A | | | | |
| Bic | ycle Results | | | | | |
| Perc | ent Occupied Parking | 0 | | Pavement Condition | on Rating | 4 |
| Flow | / Rate Outside Lane, veh/h | 186 | | Bicycle Effective Width, ft | | 11 |
| Bicy | cle LOS Score | 4.64 | | Bicycle Effective Speed Factor | | 4.79 |
| Bicy | cle LOS | E | | | | |
| | | Se | gm | nent 10 | | |
| Vel | hicle Inputs | | | | | |
| Segi | ment Type | Passing Constrained | | Length, ft | | 1690 |
| Lane | e Width, ft | 10 | | Shoulder Width, ft | : | 1 |
| Speed Limit, mi/h 55 | | Access Point Dens | ity, pts/mi | 6.3 | | |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 185 | | Opposing Demand | d Flow Rate, veh/h | - |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segi | ment Capacity, veh/h | 1700 | | Demand/Capacity | (D/C) | 0.11 |
| Int | ermediate Results | | | | | |
| Segi | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 56.4 |

| 1 | 192 | 0.07 | | | 1.1 | A | |
|--------------------------------------|-----------------------------|----------------|---------------------|----------------------------------|-----------------------------|---------------------|--|
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS | |
| Facility | y Results | | | | | | |
| Vehicle L | OS | A | | | | | |
| Segment | t Travel Time, minutes | 0.33 | Follo | ower Density (| FD), followers/mi/ln | 1.0 | |
| Average | Speed, mi/h | 53.9 | Perc | ent Followers, | % | 28.5 | |
| Vehicle | e Results | | | | | | |
| 1 Tar | ngent | 1584 | - | | - | 53.9 | |
| # Seg | gment Type | Length, ft | Radius, ft | t | Superelevation, % | Average Speed, mi/h | |
| Subse | gment Data | | | | | | |
| %Improv | vement to Percent Followers | 0.0 | %Im | provement to | Speed | 0.0 | |
| In Passing | g Lane Effective Length? | No | Tota | Total Segment Density, veh/mi/ln | | 1.0 | |
| PF Slope | Coefficient (m) | -1.25959 | PF P | ower Coefficie | ent (p) | 0.78431 | |
| Speed Sl | ope Coefficient (m) | 3.15544 | Spe | Speed Power Coefficient (p) | | 0.59209 | |
| Segment | t Vertical Class | 1 | Free | Free-Flow Speed, mi/h | | 54.6 | |
| Interm | nediate Results | | | | | | |
| Segment | t Capacity, veh/h | 1700 | Den | nand/Capacity | (D/C) | 0.11 | |
| Peak Hou | ur Factor | 0.94 | lotal Irucks, % | | 2.00 | | |
| Direction | nal Demand Flow Rate, veh/h | 185 | Орр | osing Deman | d Flow Rate, veh/h | 65 | |
| Demai | Demand and Capacity | | | | | | |
| Speed Limit, mi/h 55 | | >> | Access Point Densit | | ity, pts/mi | 13.3 | |
| Lane Wic | atn, ft | | Sho | uider Width, ft | ity ptc/mi | 12.2 | |
| Segment | t Туре | Passing Zone | Leng | gth, ft | | 1584 | |
| venicle | | | | | | | |
| | | Je | ginent | | | | |
| | | Sa | ament | 11 | | | |
| Vehicle L | OS | A | 1 0110 | | . = // | | |
| Segment | Travel Time minutes | 0.35 | Folly | ower Density (| FD), followers/mi/ln | 1.1 | |
| Average | Speed mi/h | 55 1 | Porc | ent Followers | % | 33.5 | |
| Vehicle | e Results | | | | | | |
| 1 Tar | ngent | 1690 | - | - | - | 55.1 | |
| # Sec | ament Type | Length, ft | Radius, ft | ius. ft Superelevation % | | Average Speed, mi/h | |
| Subse | gment Data | | | | | | |
| %Improv | vement to Percent Followers | 0.0 | %Im | %Improvement to Speed | | 0.0 | |
| In Passing Lane Effective Length? No | | No | Tota | Total Segment Density, veh/mi/ln | | 1.1 | |
| PF Slope Coefficient (m) -1.40749 PI | | PF P | ower Coefficie | ent (p) | 0.73425 | | |
| Speed Slope Coefficient (m) | | 3.57078 | | ed Power Coef | fficient (p) | 0.41674 | |





Construction PM KY 107.xuf

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| HCS Two-Lane H | lighway | Report |
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|----------------|---------|--------|

Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2027 Jurisdiction Time Analyzed Construction AM **Project Description** KY 1682 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Constrained Length, ft 11019 Segment Type 9 Lane Width, ft Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 6.7 **Demand and Capacity** 16 Opposing Demand Flow Rate, veh/h Directional Demand Flow Rate, veh/h _ Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.01 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 55.7 Speed Slope Coefficient (m) 3.62268 Speed Power Coefficient (p) 0.41674 -1.34359 0.71736 PF Slope Coefficient (m) PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.0 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h Tangent 11019 55.7 1 **Vehicle Results** 6.7 Average Speed, mi/h 55.7 Percent Followers, % Segment Travel Time, minutes 2.25 Follower Density (FD), followers/mi/In 0.0 А Vehicle LOS

Segment 2

Vehicle Inputs

| Segment Type | Passing Constrained | Length, ft | 1320 | | | | | |
|---|---------------------|----------------------------------|------|--|--|--|--|--|
| Lane Width, ft | 9 | Shoulder Width, ft | 1 | | | | | |
| Speed Limit, mi/h | 55 | Access Point Density, pts/mi | 16.0 | | | | | |
| Demand and Capacity | | | | | | | | |
| Demand and Capacity | | | | | | | | |
| Demand and Capacity Directional Demand Flow Rate, veh/h | 27 | Opposing Demand Flow Rate, veh/h | - | | | | | |

| Segment Capacity, veh/h | egment Capacity, veh/h 1700 Demand/Capacity (D/C) | | (D/C) | 0.02 | |
|--------------------------------|---|------|----------------------------------|----------------------|---------------------|
| Intermediate Results | | | | | |
| Segment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 53.3 |
| Speed Slope Coefficient (m) | 3.39939 | | Speed Power Coet | fficient (p) | 0.41674 |
| PF Slope Coefficient (m) | -1.45222 | | PF Power Coefficie | ent (p) | 0.72054 |
| In Passing Lane Effective Leng | jth? No | | Total Segment De | nsity, veh/mi/ln | 0.1 |
| %Improvement to Percent Fol | llowers 0.0 | | %Improvement to | Speed | 0.0 |
| Subsegment Data | | | | | |
| # Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 Tangent | 1320 | - | | - | 53.3 |
| Vehicle Results | | | | | |
| Average Speed, mi/h | 53.3 | | Percent Followers, | % | 10.1 |
| Segment Travel Time, minutes | s 0.28 | | Follower Density (| FD), followers/mi/ln | 0.1 |
| Vehicle LOS | A | | | | |
| | | Segn | nent 3 | | |
| Vehicle Inputs | | | | | |
| Segment Type | Passing Zon | e | Length, ft | | 1742 |
| Lane Width, ft | 9 | | Shoulder Width, ft | | 1 |
| Speed Limit, mi/h | d Limit, mi/h 55 | | Access Point Density, pts/mi | | 24.2 |
| Demand and Capacit | у | | | | |
| Directional Demand Flow Rate | e, veh/h 27 | | Opposing Deman | d Flow Rate, veh/h | 21 |
| Peak Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segment Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.02 |
| Intermediate Results | | | | | |
| Segment Vertical Class | 1 | | Free-Flow Speed, mi/h | | 51.3 |
| Speed Slope Coefficient (m) | 2.94174 | | Speed Power Coet | fficient (p) | 0.62593 |
| PF Slope Coefficient (m) | -1.22729 | | PF Power Coefficie | ent (p) | 0.78443 |
| In Passing Lane Effective Leng | yth? No | | Total Segment Density, veh/mi/ln | | 0.0 |
| %Improvement to Percent Fol | llowers 0.0 | | %Improvement to | Speed | 0.0 |
| Subsegment Data | | | | | |
| # Segment Type | Length, ft | Rac | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 Tangent | 1742 | - | | - | 51.3 |
| Vehicle Results | | | | | |
| Average Speed, mi/h | 51.3 | | Percent Followers, | % | 6.9 |
| Segment Travel Time, minutes | 5 0.39 | | Follower Density (| FD), followers/mi/ln | 0.0 |
| Vehicle LOS | A | | | | |
| | | Segn | nent 4 | | |

| Vehicle | e Inputs | | | | | |
|------------|----------------------------|---------------------------|---------|----------------------------------|-----------------------------|---------------------|
| Segment | Туре | Passing Constrained | | Length, ft | | 7586 |
| Lane Wid | lth, ft | 9 | Sho | oulder Width, ft | : | 1 |
| Speed Lir | mit, mi/h | 55 | Aco | cess Point Dens | ity, pts/mi | 17.4 |
| Demai | nd and Capacity | | | | | |
| Direction | al Demand Flow Rate, veh/h | 27 | Ор | posing Deman | d Flow Rate, veh/h | - |
| Peak Hou | ur Factor | 0.94 | Tot | tal Trucks, % | | 2.00 |
| Segment | Capacity, veh/h | 1700 | De | mand/Capacity | (D/C) | 0.02 |
| Interm | nediate Results | | | | | |
| Segment | Vertical Class | 1 | Fre | e-Flow Speed, | mi/h | 53.0 |
| Speed Slo | ope Coefficient (m) | 3.45285 | Spe | eed Power Coef | ficient (p) | 0.41674 |
| PF Slope | Coefficient (m) | -1.34349 | PF | PF Power Coefficient (p) | | 0.73368 |
| In Passing | g Lane Effective Length? | No | Tot | Total Segment Density, veh/mi/ln | | 0.0 |
| %Improv | ement to Percent Followers | 0.0 | %Ir | mprovement to | Speed | 0.0 |
| Subse | gment Data | | | | | |
| # Seg | gment Type | Length, ft | Radius, | ft | Superelevation, % | Average Speed, mi/h |
| 1 Tar | ngent | 7586 | - | | - | 53.0 |
| Vehicle | e Results | | | | | |
| Average | Speed, mi/h | 53.0 | Per | rcent Followers, | % | 9.0 |
| Segment | Travel Time, minutes | 1.63 Follower Density (FD | | FD), followers/mi/ln | 0.0 | |
| Vehicle L | OS | A | | | | |
| Facility | y Results | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS |
| 1 | 20 | 0.00 | | | 0.0 | А |





| HCS Two-Lane | Highway | Report |
|--------------|---------|--------|
|--------------|---------|--------|

Project Information ATW 10/18/22 Analyst Date Agency Stantec Analysis Year 2027 Jurisdiction Time Analyzed **Construction PM Project Description** KY 1682 Units U.S. Customary Segment 1 **Vehicle Inputs** Passing Constrained Length, ft 11019 Segment Type 9 Lane Width, ft Shoulder Width, ft 1 Speed Limit, mi/h 55 Access Point Density, pts/mi 6.7 **Demand and Capacity** 20 Opposing Demand Flow Rate, veh/h Directional Demand Flow Rate, veh/h _ Peak Hour Factor 0.94 Total Trucks, % 2.00 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.01 **Intermediate Results** Segment Vertical Class 1 Free-Flow Speed, mi/h 55.7 Speed Slope Coefficient (m) 3.62268 Speed Power Coefficient (p) 0.41674 0.71736 PF Slope Coefficient (m) -1.34359 PF Power Coefficient (p) In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.0 0.0 0.0 %Improvement to Percent Followers %Improvement to Speed **Subsegment Data** # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h Tangent 11019 55.7 1 **Vehicle Results** 7.9 Average Speed, mi/h 55.7 Percent Followers, % 0.0 Segment Travel Time, minutes 2.25 Follower Density (FD), followers/mi/In А Vehicle LOS

Segment 2

Vehicle Inputs

| Segment Type | Passing Constrained | Length, ft | 1320 | | | | | |
|---|---------------------|----------------------------------|------|--|--|--|--|--|
| Lane Width, ft | 9 | Shoulder Width, ft | 1 | | | | | |
| Speed Limit, mi/h | 55 | Access Point Density, pts/mi | 16.0 | | | | | |
| Demand and Capacity | | | | | | | | |
| Demand and Capacity | | | | | | | | |
| Demand and Capacity Directional Demand Flow Rate, veh/h | 38 | Opposing Demand Flow Rate, veh/h | - | | | | | |

| Segn | nent Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.02 |
|-------|--------------------------------|--------------|------|----------------------------------|----------------------|---------------------|
| Inte | Intermediate Results | | | | | |
| Segn | nent Vertical Class | 1 | | Free-Flow Speed, | mi/h | 53.3 |
| Spee | d Slope Coefficient (m) | 3.39939 | | Speed Power Coet | fficient (p) | 0.41674 |
| PF SI | ope Coefficient (m) | -1.45222 | | PF Power Coefficie | ent (p) | 0.72054 |
| In Pa | ssing Lane Effective Length? | No | | Total Segment De | nsity, veh/mi/ln | 0.1 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sub | osegment Data | | | | | |
| # | Segment Type | Length, ft | Ra | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 1320 | - | | - | 53.3 |
| Veh | icle Results | | | | | |
| Aver | age Speed, mi/h | 53.3 | | Percent Followers, | , % | 12.9 |
| Segn | nent Travel Time, minutes | 0.28 | | Follower Density (| FD), followers/mi/ln | 0.1 |
| Vehi | cle LOS | A | | | | |
| | | | Segr | ment 3 | | |
| Veh | icle Inputs | | | | | |
| Segn | nent Type | Passing Zone | | Length, ft | | 1742 |
| Lane | Width, ft | 9 | | Shoulder Width, ft | | 1 |
| Spee | d Limit, mi/h | mit, mi/h 55 | | Access Point Dens | sity, pts/mi | 24.2 |
| Der | mand and Capacity | | | | | |
| Direc | tional Demand Flow Rate, veh/h | 38 | | Opposing Deman | d Flow Rate, veh/h | 30 |
| Peak | Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Segn | nent Capacity, veh/h | 1700 | | Demand/Capacity (D/C) | | 0.02 |
| Inte | ermediate Results | | | | | |
| Segn | nent Vertical Class | 1 | | Free-Flow Speed, mi/h | | 51.3 |
| Spee | d Slope Coefficient (m) | 2.95050 | | Speed Power Coet | fficient (p) | 0.61736 |
| PF SI | ope Coefficient (m) | -1.23555 | | PF Power Coefficie | ent (p) | 0.78252 |
| In Pa | ssing Lane Effective Length? | No | | Total Segment Density, veh/mi/ln | | 0.1 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to | Speed | 0.0 |
| Sub | osegment Data | | | | | |
| # | Segment Type | Length, ft | Ra | dius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 1742 | - | | - | 51.3 |
| Veh | icle Results | | | | | |
| Aver | age Speed, mi/h | 51.3 | | Percent Followers, | , % | 9.2 |
| Segn | nent Travel Time, minutes | 0.39 | | Follower Density (| FD), followers/mi/ln | 0.1 |
| Vehi | cle LOS | A | | | | |
| | | | Segr | ment 4 | | |

| Vehicle | e Inputs | | | | | |
|------------|----------------------------|----------------------|---------|--|-----------------------------|---------------------|
| Segment | Туре | Passing Constrained | Ler | ngth, ft | | 7586 |
| Lane Wid | lth, ft | 9 | Sh | oulder Width, ft | t | 1 |
| Speed Lir | mit, mi/h | 55 | Ac | cess Point Dens | ity, pts/mi | 17.4 |
| Demai | nd and Capacity | | | | | · |
| Direction | al Demand Flow Rate, veh/h | 38 | Op | posing Deman | d Flow Rate, veh/h | - |
| Peak Hou | ur Factor | 0.94 | Tot | tal Trucks, % | | 2.00 |
| Segment | Capacity, veh/h | 1700 | De | mand/Capacity | (D/C) | 0.02 |
| Interm | nediate Results | | | | | |
| Segment | Vertical Class | 1 | Fre | e-Flow Speed, | mi/h | 53.0 |
| Speed Slo | ope Coefficient (m) | 3.45285 | Sp | eed Power Coef | fficient (p) | 0.41674 |
| PF Slope | Coefficient (m) | -1.34349 | PF | PF Power Coefficient (p) | | 0.73368 |
| In Passing | g Lane Effective Length? | No | Tot | Total Segment Density, veh/mi/ln | | 0.1 |
| %Improv | ement to Percent Followers | 0.0 | %1 | %Improvement to Speed | | 0.0 |
| Subse | gment Data | | | | | |
| # Seg | gment Type | Length, ft | Radius, | ft | Superelevation, % | Average Speed, mi/h |
| 1 Tar | ngent | 7586 | - | | - | 53.0 |
| Vehicle | e Results | | | | | |
| Average | Speed, mi/h | 53.0 | Pei | Percent Followers, % | | 11.5 |
| Segment | Travel Time, minutes | Time, minutes 1.63 F | | Follower Density (FD), followers/mi/ln | | 0.1 |
| Vehicle L | OS | A | | | | |
| Facility | y Results | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS |
| 1 | 28 | 0.00 | | | 0.1 | А |





| | | HCS Two-La | ane | Highway Re | port | |
|-------|---------------------------------|---------------------|-----|----------------------------------|-----------------------|---------------------|
| Pro | oject Information | | | | | |
| Ana | lyst | ATW | | Date | | 10/18/22 |
| Age | ncy | Stantec | | Analysis Year | | 2027 |
| Juris | diction | | | Time Analyzed | | Construction AM |
| Proj | ect Description | Woodburn Hay Road | | Units | | U.S. Customary |
| | | S | egn | nent 1 | | |
| Vel | hicle Inputs | | | | | |
| Seg | ment Type | Passing Constrained | | Length, ft | | 13257 |
| Lane | e Width, ft | 9 | | Shoulder Width, f | t | 0 |
| Spe | ed Limit, mi/h | 35 | | Access Point Dens | sity, pts/mi | 14.3 |
| De | mand and Capacity | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 15 | | Opposing Deman | d Flow Rate, veh/h | - |
| Peal | K Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | r (D/C) | 0.01 |
| Int | ermediate Results | | | | | |
| Seg | ment Vertical Class | 1 | | Free-Flow Speed, | mi/h | 30.2 |
| Spe | ed Slope Coefficient (m) | 2.25978 | | Speed Power Coefficient (p) | | 0.41674 |
| PF S | lope Coefficient (m) | -1.40543 | | PF Power Coefficient (p) | | 0.60145 |
| In Pa | assing Lane Effective Length? | No | | Total Segment Density, veh/mi/ln | | 0.1 |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to Speed | | 0.0 |
| Su | bsegment Data | | | | | |
| # | Segment Type | Length, ft | Rac | lius, ft | Superelevation, % | Average Speed, mi/h |
| 1 | Tangent | 13257 | - | - | | 30.2 |
| Vel | hicle Results | | | | | |
| Ave | rage Speed, mi/h | 30.2 | | Percent Followers | , % | 10.6 |
| Seg | ment Travel Time, minutes | 4.98 | | Follower Density (| (FD), followers/mi/ln | 0.1 |
| Vehi | icle LOS | A | | | | |
| | | S | egn | nent 2 | | |
| Vel | hicle Inputs | | | | | |
| Seg | ment Type | Passing Constrained | | Length, ft | | 435 |
| Lane | e Width, ft | 9 | | Shoulder Width, f | t | 0 |
| Spe | ed Limit, mi/h | 35 | | Access Point Dens | sity, pts/mi | 0.0 |
| De | mand and Capacity | • | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 77 | | Opposing Deman | d Flow Rate, veh/h | - |
| Peal | K Hour Factor | 0.94 | | Total Trucks, % | | 2.00 |
| | | | | | | |

| Segme | nt Capacity, veh/h | 1700 | Der | mand/Capacity | (D/C) | 0.05 | | |
|----------------------|--|----------------|-----------|--|-----------------------------|---------------------|--|--|
| Intermediate Results | | | | | | | | |
| Segme | nt Vertical Class | 1 | Free | e-Flow Speed, | mi/h | 33.8 | | |
| Speed | Slope Coefficient (m) | 2.34249 | Spe | eed Power Coef | ficient (p) | 0.41674 | | |
| PF Slop | pe Coefficient (m) | -1.49222 | PF I | Power Coefficie | ent (p) | 0.64889 | | |
| In Pass | ing Lane Effective Length? | No | Tota | al Segment Dei | nsity, veh/mi/ln | 0.6 | | |
| %lmpr | ovement to Percent Followers | 0.0 | %In | mprovement to | Speed | 0.0 | | |
| Subs | Subsegment Data | | | | | | | |
| # 9 | Segment Type | Length, ft | Radius, f | ft | Superelevation, % | Average Speed, mi/h | | |
| 1 1 | langent la | 435 | - | | - | 33.8 | | |
| Vehi | cle Results | | | | | | | |
| Averag | e Speed, mi/h | 33.8 | Per | Percent Followers, % | | 24.6 | | |
| Segme | nt Travel Time, minutes | 0.15 | Foll | Follower Density (FD), followers/mi/ln | | 0.6 | | |
| Vehicle | e LOS | А | | | | | | |
| Facili | ity Results | | | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower De | ensity, followers/ mi/ln | LOS | | |
| 1 | 10 | 0.00 | | | 0.1 | А | | |





| | HCS Two-Lane Highway Report | | | | | | |
|-------|---------------------------------|---------------------|-----|----------------------------------|-----------------------|---------------------|--|
| Pro | oject Information | | _ | | | | |
| Ana | lyst | ATW | | Date | | 10/18/22 | |
| Age | ncy | Stantec | | Analysis Year | | 2027 | |
| Juris | diction | | | Time Analyzed | | Construction PM | |
| Proj | ect Description | Woodburn Hay Road | | Units | | U.S. Customary | |
| | | S | egn | nent 1 | | | |
| Vel | hicle Inputs | | | | | | |
| Seg | ment Type | Passing Constrained | | Length, ft | | 13257 | |
| Lane | e Width, ft | 9 | | Shoulder Width, f | t | 0 | |
| Spe | ed Limit, mi/h | 35 | | Access Point Dens | sity, pts/mi | 14.3 | |
| De | mand and Capacity | | | • | | ÷ | |
| Dire | ctional Demand Flow Rate, veh/h | 16 | | Opposing Deman | d Flow Rate, veh/h | - | |
| Peal | K Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |
| Seg | ment Capacity, veh/h | 1700 | | Demand/Capacity | r (D/C) | 0.01 | |
| Int | ermediate Results | | | | | | |
| Seg | ment Vertical Class | 1 | | Free-Flow Speed, mi/h | | 30.2 | |
| Spe | ed Slope Coefficient (m) | 2.25978 | | Speed Power Coefficient (p) | | 0.41674 | |
| PF S | lope Coefficient (m) | -1.40543 | | PF Power Coefficient (p) | | 0.60145 | |
| In Pa | assing Lane Effective Length? | No | | Total Segment Density, veh/mi/ln | | 0.1 | |
| %lm | provement to Percent Followers | 0.0 | | %Improvement to Speed | | 0.0 | |
| Su | bsegment Data | | | | | | |
| # | Segment Type | Length, ft | Rac | lius, ft | Superelevation, % | Average Speed, mi/h | |
| 1 | Tangent | 13257 | - | - | | 30.2 | |
| Vel | hicle Results | | | | | | |
| Ave | rage Speed, mi/h | 30.2 | | Percent Followers | , % | 11.0 | |
| Seg | ment Travel Time, minutes | 4.98 | | Follower Density (| (FD), followers/mi/ln | 0.1 | |
| Vehi | icle LOS | A | | | | | |
| | | S | egn | nent 2 | | | |
| Vel | hicle Inputs | | | | | | |
| Seg | ment Type | Passing Constrained | | Length, ft | | 435 | |
| Lane | e Width, ft | 9 | | Shoulder Width, f | t | 0 | |
| Spe | ed Limit, mi/h | 35 | | Access Point Dens | sity, pts/mi | 0.0 | |
| De | mand and Capacity | • | | | | | |
| Dire | ctional Demand Flow Rate, veh/h | 77 | | Opposing Deman | d Flow Rate, veh/h | - | |
| Peal | < Hour Factor | 0.94 | | Total Trucks, % | | 2.00 | |

| Segme | ent Capacity, veh/h | 1700 | Der | mand/Capacity | (D/C) | 0.05 | | |
|----------------------|------------------------------|----------------|-----------|--|-------------------|---------------------|--|--|
| Intermediate Results | | | | | | | | |
| Segme | ent Vertical Class | 1 | Fre | e-Flow Speed, | mi/h | 33.8 | | |
| Speed | Slope Coefficient (m) | 2.34249 | Spe | eed Power Coef | ficient (p) | 0.41674 | | |
| PF Slop | pe Coefficient (m) | -1.49222 | PF | Power Coefficie | ent (p) | 0.64889 | | |
| In Pass | ing Lane Effective Length? | No | Tot | al Segment Dei | nsity, veh/mi/ln | 0.6 | | |
| %lmpr | ovement to Percent Followers | 0.0 | %Ir | mprovement to | Speed | 0.0 | | |
| Subs | Subsegment Data | | | | | | | |
| # 9 | Segment Type | Length, ft | Radius, f | ft | Superelevation, % | Average Speed, mi/h | | |
| 1 1 | Tangent | 435 | - | | - | 33.8 | | |
| Vehi | cle Results | | | | | | | |
| Averag | ge Speed, mi/h | 33.8 | Per | Percent Followers, % | | 24.6 | | |
| Segme | ent Travel Time, minutes | 0.15 | Fol | Follower Density (FD), followers/mi/In | | 0.6 | | |
| Vehicle | e LOS | А | | | | | | |
| Facil | ity Results | | | | | | | |
| т | VMT veh-mi/p | VHD veh-h/p | | Follower Density, followers/ mi/ln | | LOS | | |
| 1 | 11 | 0.00 | | | 0.1 | А | | |



