

# **MIDDLETOWN-SIMPSONVILLE NEEDS ANALYSIS STUDY**

## **ABBREVIATED TRAFFIC FORECAST REPORT**

**Jefferson, Oldham, and Shelby Counties**

**Prepared for**



**By:**



**January 2019 Draft**

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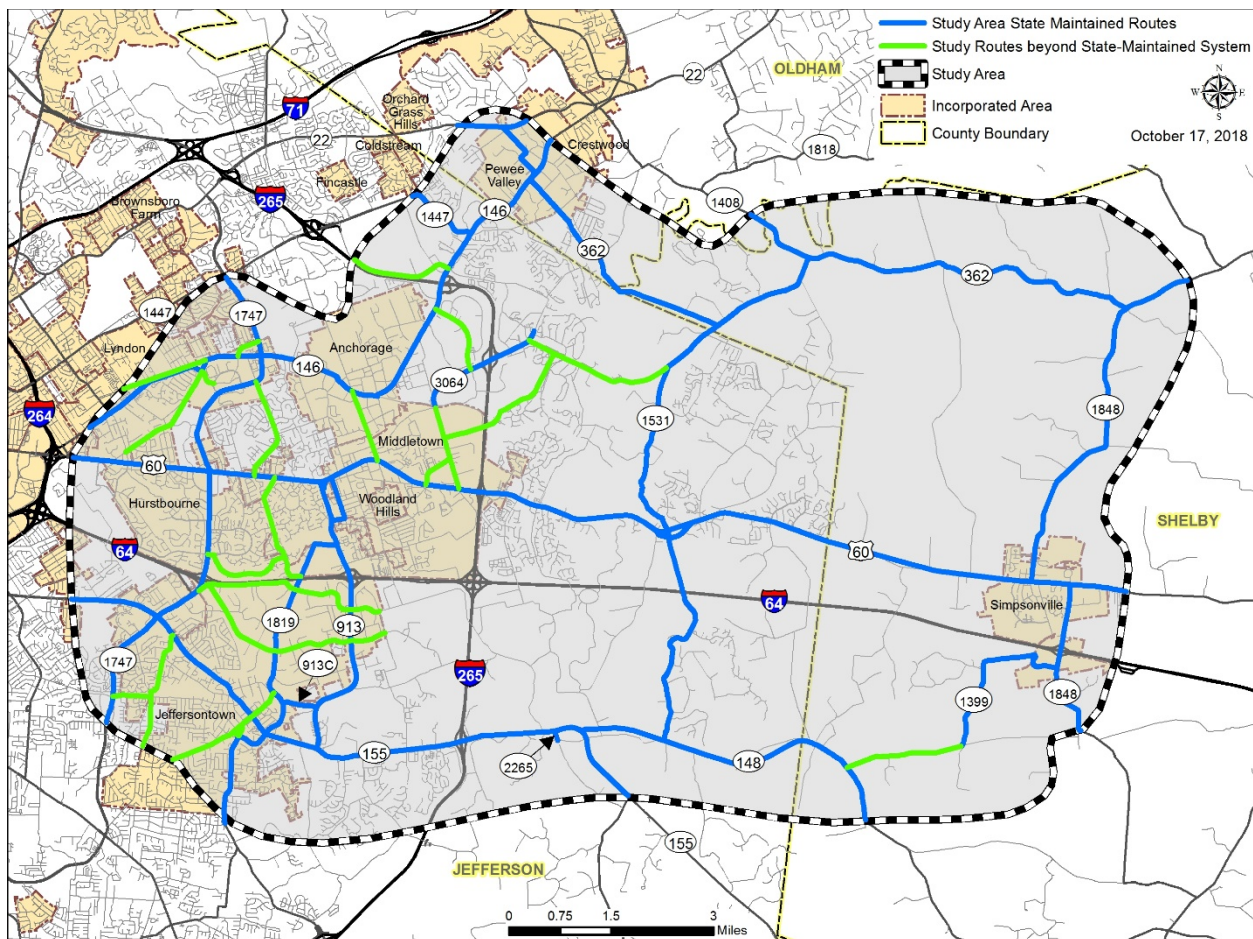
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## Study Background

The Kentucky Transportation Cabinet (KYTC) has assigned Qk4 a Needs Analysis Study for the general area bounded by Middletown and Simpsonville, shown in **Figure 1** below. Several large scale developments are occurring or slated to begin soon that will have an impact on regional traffic flows. The study will examine transportation needs related to safety and congestion on key routes in the study area. The study will focus on evaluating potential highway projects for future programming and identifying potential projects for future consideration, which is intended to assist local KYTC personnel and other officials as the Strategic Highway Investment Formula for Tomorrow (SHIFT) cycle approaches its sponsorship phase.



**Figure 1: Study Area Limits**

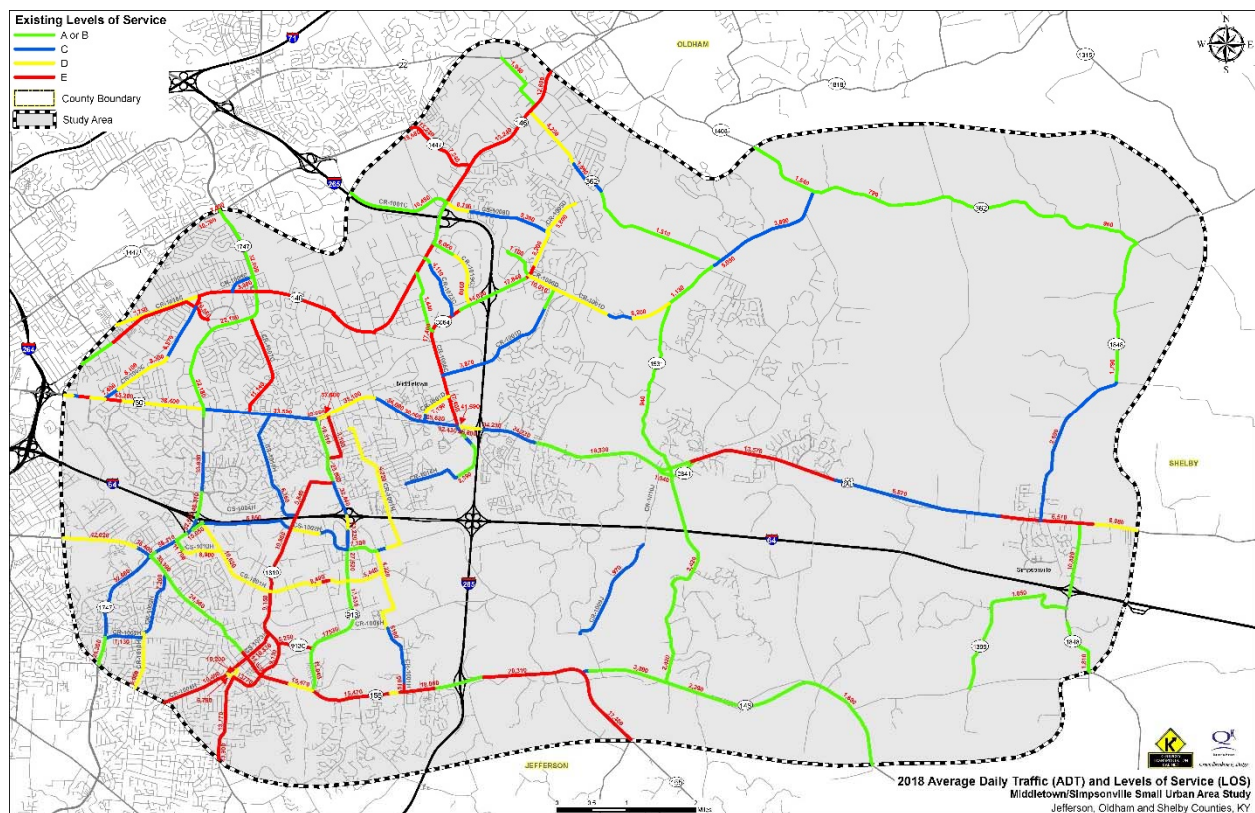
Study area roadways with milepoint limits are listed in **Table 1**, which includes state-maintained routes plus a selection of high volume arterial and major collector roadways beyond the state-maintained system.

**Table 1: Study Area Routes with Milepoint Limits**

| Route                                   | Local Name(s)                                                                                    | MP Limits                                    |
|-----------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------|
| <b>State-Maintained Routes</b>          |                                                                                                  |                                              |
| US 60                                   | Shelbyville Rd                                                                                   | Jefferson 5.850-17.375<br>Shelby 0.000-4.450 |
| KY 22                                   | Ballardsville Rd                                                                                 | Oldham 1.081-2.200                           |
| KY 146                                  | New LaGrange Rd   Whipps Mill Rd   LaGrange Rd   Park Rd   Bellewood Rd   Ridge Rd   LaGrange Rd | Jefferson 0.636-8.825<br>Oldham 0.000-1.343  |
| KY 148                                  | Taylorsville Rd   Hwy 148   Fisherville Rd                                                       | Jefferson 0.000-3.394<br>Shelby 0.000-1.675  |
| KY 155                                  | Taylorsville Lake Rd   Taylorsville Rd                                                           | Jefferson 3.012-12.700                       |
| KY 362                                  | Central Ave   Ash Ave   Aiken Rd                                                                 | Oldham 0.000-3.039<br>Shelby 0.000-9.400     |
| KY 913                                  | Blankenbaker Pkwy                                                                                | Jefferson 0.000-4.337                        |
| KY 913C                                 | Blankenbaker Access Rd                                                                           | Jefferson 0.000-0.500                        |
| KY 1399                                 | Veechdale Rd                                                                                     | Shelby 0.000-2.572                           |
| KY 1408                                 | Todds Point Rd   Floydsburg Rd                                                                   | Oldham 0.000-0.25<br>Shelby 0.000-0.871      |
| KY 1447                                 | Westport Rd                                                                                      | Jefferson 8.161-9.242                        |
| KY 1531                                 | Routt Rd   Eastwood Fisherville Rd   Johnson Rd   Aiken Rd                                       | Jefferson 5.620-12.656<br>Shelby 0.000-0.084 |
| KY 1747                                 | Hurstbourne Pkwy                                                                                 | Jefferson 9.200-17.138                       |
| KY 1819                                 | Billtown Rd   Ruckriegel Pkwy   Watterson Trl                                                    | Jefferson 7.546-13.624                       |
| KY 1848                                 | Buck Creek Rd   Todds Point Rd                                                                   | Shelby 3.717-10.591                          |
| KY 2265                                 | Hatmaker Trl                                                                                     | Jefferson 0.000-0.145                        |
| KY 2840                                 | Main St                                                                                          | Jefferson 0.000-0.107                        |
| KY 2841                                 | Eastwood Cut Off Rd                                                                              | Jefferson 0.000-0.643                        |
| KY 3084                                 | Old Henry Rd                                                                                     | Jefferson 0.000-1.978                        |
| <b>City or County Maintained Routes</b> |                                                                                                  |                                              |
| CR-1231                                 | Veechdale Rd                                                                                     | Shelby 0.000-1.725                           |
| CS-1001H                                | Plantside Dr                                                                                     | Jefferson 0.000-3.135                        |
| CS-1002H                                | Bluegrass Pkwy                                                                                   | Jefferson 0.000-2.927                        |
| CS-1004H                                | Linn Station Rd                                                                                  | Jefferson 1.108-2.500                        |
| CS-1073H                                | Watterson Trl                                                                                    | Jefferson 0.000-0.694                        |
| CS-1720H                                | Billtown Rd                                                                                      | Jefferson 0.000-0.165                        |
| CS-2056H                                | Ruckriegel Pkwy                                                                                  | Jefferson 0.000-0.103                        |
| CR-1001C                                | Chamberlain Ln                                                                                   | Jefferson 0.000-1.500                        |
| CR-1001D                                | Aiken Rd                                                                                         | Jefferson 0.000-4.535                        |
| CR-1002H                                | Six Mile Ln                                                                                      | Jefferson 2.868-4.385                        |
| CR-1003C                                | Evergreen Rd                                                                                     | Jefferson 0.317-1.401                        |
| CR-1004H                                | Watterson Trl                                                                                    | Jefferson 2.200-3.330                        |
| CR-1005C                                | Whipps Mill Rd                                                                                   | Jefferson 0.240-2.316                        |
| CR-1006C                                | N English Stn Rd                                                                                 | Jefferson 0.000-1.232                        |
| CR-1006D                                | Bush Farm Rd                                                                                     | Jefferson 0.506-0.897                        |
| CR-1007C                                | Dorsey Ln                                                                                        | Jefferson 0.000-1.563                        |
| CR-1010C                                | La Grange Rd                                                                                     | Jefferson 0.400-1.672                        |
| CR-1010H                                | Stony Brook Dr                                                                                   | Jefferson 1.334-2.150                        |
| CR-1016H                                | Moser Rd                                                                                         | Jefferson 0.000-1.733                        |
| CR-1019C                                | Nelson Miller Pkwy                                                                               | Jefferson 0.000-1.139                        |
| CR-1035C                                | Mill Brook Rd                                                                                    | Jefferson 0.000-0.271                        |

## Traffic Data Collection

Segment level traffic data was collected and summarized from the KYTC and Kentuckiana Regional Planning and Development Agency (KIPDA) count databases. The majority of these traffic volumes were collected within the last three years. To grow this data to 2018 levels, historic traffic counts for each segment were used to determine a growth rate for that roadway section. These growth rates were then used to project the latest Average Daily Traffic (ADT) counts to a consistent 2018 base year for the existing scenario shown in **Figure 2**. For any segments showing negative growth, a growth rate of zero was used for both cars and trucks. The results of this analysis showed historic growth rates ranging from negative to over five percent on a couple of routes. Most segments showed moderate growth, averaging 0.5% annually since 2000.



**Figure 2: Existing Scenario ADTs on Study Routes**

Where possible, K and D Factors were collected from KYTC's HIS database and used to determine design hour volumes and directional splits on the various roadway segments. This hourly information was used for operational analysis. When unavailable, statewide averages by functional class were used.

To supplement incomplete or outdated counts, 48-hour tube counts were conducted during November 2018. Count locations included KY 1819, Linn Station, Gilliland Road, Plantside Drive, Rehl Road, and Veechdale Road. A peak hour turning movement count was also conducted at the KY 1747 intersection with Six Mile Lane.

### *Existing Year Model Adjustments*

KYTC's modeling team started with the Kentucky Statewide Travel Demand Model (KYSTM) version 17. Socioeconomic (household and employment) data from KIPDA's new travel demand model for Oldham and Jefferson Counties was used to adjust socioeconomic data in the KYSTM. Zonal splits were made in some areas to increase the accuracy of the model in the study area. For example, Oldham County is now represented by approximately 63 zones, up from an original 36. Because of differences in boundaries between the two models, the refined KYSTM splits some of KIPDA's zones.

Since it lies beyond the limits of KIPDA's model, KYTC modeling staff vetted Shelby County so that the KYSTM employment simulated for 2017 matches the latest employment data. Shelby County is one of the faster growing counties in Kentucky due to its proximity to Jefferson County. Therefore for the purpose of this study, KYTC used an annual growth rate of 2.7% across Service, Retail, and Non-retail employment types.

Root Mean Square Error (RMSE) is a measure of calculated values to modeled values. In traffic models, Annual Average Daily Traffic (AADT) is a readily available source of information. Therefore, the most recent counts were applied to the model spatially. The RMSE for various counties of the last three models (named based on the total number of zones) are highlighted below; the project analysis uses the 5,905-zone version:

|           | <u>5864 zones</u> | <u>5892 zones</u> | <u>5905 zones</u> |
|-----------|-------------------|-------------------|-------------------|
| Statewide | 70.0%             | 60.8%             | 60.7%             |
| Jefferson | 50.3%             | 42.8%             | 42.7%             |
| Oldham    | 49.9%             | 49.7%             | 49.4%             |
| Shelby    | 56.4%             | 57.0%             | 55.7%             |
| Taylor    | 65.2%             | 65.4%             | 65.5%             |

While splitting zones in Oldham, Jefferson, and Spencer Counties, KYTC revised employment. Based on forecasted 2040 county-level employment estimates, the annual growth rate is about 2.7% for Shelby County. KYTC modeling staff amended 2010 and 2040 employment so that 2017 is accurately simulated while allowing a 2.7% growth rate.

After KYTC model adjustments and data collection efforts were completed, the model was run to simulate 2018 scenario traffic volumes on study roadways. Model assignments by link were compared to current traffic counts to determine appropriate adjustments (difference & ratio) to be applied to future year model runs. Qk4 did not adjust any centroid connectors.

### *Future No Build Projections*

Future year growth for all study area roadway segments was determined using the KYSTM; comparisons between the 2018-observed and 2018-modeled analysis were used to determine difference and ratio adjustments that were applied to future year model assignments. To begin building the future No Build

scenario, expected future growth trends were evaluated based on assumptions in each county's comprehensive plan, regional growth patterns maintained by KIPDA, conversation with city/county planners, and development applications within Jefferson County.

Background socioeconomic assumptions for population and employment in the future year KYSTM were adjusted to reflect disparities between this assessment and previous growth distributions in the model.

Two projects beyond the study area limits were considered committed in the 2040 No Build network:

- Widening I-71 to six lanes in Oldham County (MP 0-22)
- Widening I-64 to six lanes throughout Shelby County (MP 32-39)

Other large-scale improvement projects likely to influence regional traffic flows are included in the individual build scenarios described in the following section.

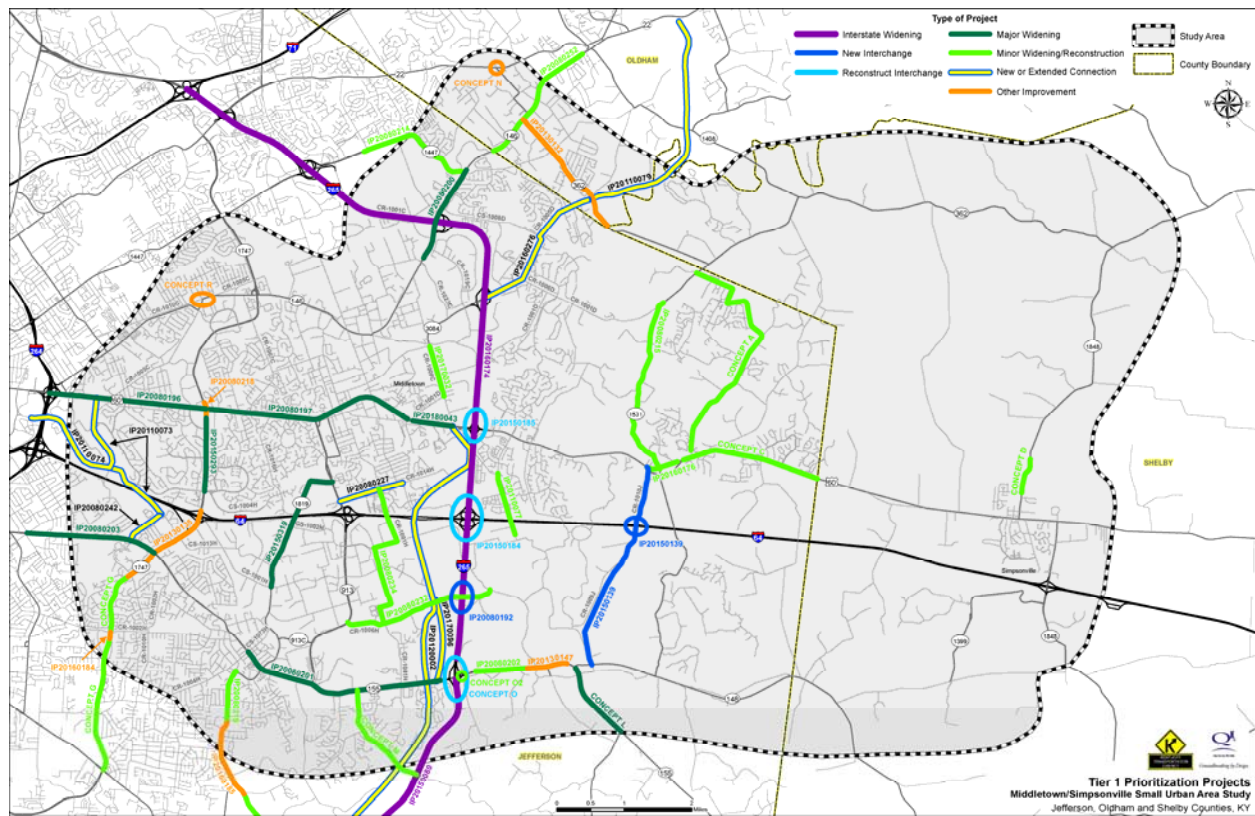
The 2040 No Build scenario was run, adjusting output with the same 2018 observed-to-modeled adjustments to determine 2040 No Build daily volumes. These were used as the 2040 No Build ADTs for roadway segments. Trucks were assumed to grow at the same rate as cars.

Existing and Future No Build segment ADTs for study area roadways are presented in **Appendix A**.

### *Future Build Scenarios*

As the study progressed, the project team identified approximately 50 planned improvements throughout the study area, each representing a standalone 2040 Build scenario. Projects are summarized in **Figure 3**. Most projects were modeled independently to measure future impacts to traffic operations, either on the improved link or regionally. Two projects were modeled together: Gilliland Road and its corresponding interchange. Results are summarized in **Appendix B**.

Qk4 will return the modified model and documentation to the KYTC at the conclusion of the study.



## Appendix A

### 2018 & 2040 No Build Segment Level Traffic Forecast

| Route  | County    | BMP    | EMP    | Truck % | 2018 ADT | 2040 No Build ADT |
|--------|-----------|--------|--------|---------|----------|-------------------|
| US 60  | Jefferson | 5.850  | 5.960  | 7.8     | 56590    | 62000             |
| US 60  | Jefferson | 5.960  | 6.029  | 7.8     | 47300    | 52000             |
| US 60  | Jefferson | 6.029  | 6.227  | 7.8     | 48030    | 53000             |
| US 60  | Jefferson | 6.227  | 6.435  | 7.8     | 46480    | 51000             |
| US 60  | Jefferson | 6.435  | 6.660  | 7.8     | 45200    | 48000             |
| US 60  | Jefferson | 6.660  | 7.390  | 7.8     | 38400    | 43000             |
| US 60  | Jefferson | 7.390  | 7.857  | 7.8     | 38400    | 43000             |
| US 60  | Jefferson | 7.857  | 8.030  | 9.6     | 33520    | 37000             |
| US 60  | Jefferson | 8.03   | 9.414  | 9.6     | 33520    | 38000             |
| US 60  | Jefferson | 9.414  | 9.473  | 9.6     | 33520    | 38000             |
| US 60  | Jefferson | 9.473  | 9.537  | 9.6     | 35650    | 46000             |
| US 60  | Jefferson | 9.537  | 9.675  | 9.6     | 37600    | 45000             |
| US 60  | Jefferson | 9.675  | 10.389 | 1.9     | 38100    | 44000             |
| US 60  | Jefferson | 10.389 | 10.918 | 1.9     | 34600    | 40000             |
| US 60  | Jefferson | 10.918 | 11.093 | 1.9     | 30500    | 35000             |
| US 60  | Jefferson | 11.093 | 11.497 | 9.6     | 35620    | 45000             |
| US 60  | Jefferson | 11.497 | 11.684 | 9.6     | 32430    | 41000             |
| US 60  | Jefferson | 11.684 | 11.774 | 9.6     | 41690    | 52000             |
| US 60  | Jefferson | 11.774 | 12.020 | 9.6     | 45600    | 60000             |
| US 60  | Jefferson | 12.020 | 12.253 | 9.4     | 34230    | 46000             |
| US 60  | Jefferson | 12.253 | 12.845 | 9.4     | 34230    | 46000             |
| US 60  | Jefferson | 12.845 | 12.895 | 9.4     | 34230    | 46000             |
| US 60  | Jefferson | 12.895 | 13.150 | 6.6     | 19330    | 29000             |
| US 60  | Jefferson | 13.150 | 13.535 | 6.6     | 19330    | 26000             |
| US 60  | Jefferson | 13.535 | 13.882 | 6.6     | 19330    | 32000             |
| US 60  | Jefferson | 13.882 | 14.600 | 6.6     | 19330    | 32000             |
| US 60  | Jefferson | 14.600 | 15.194 | 6.6     | 19330    | 26000             |
| US 60  | Jefferson | 15.194 | 15.426 | 6.6     | 13570    | 19000             |
| US 60  | Jefferson | 15.426 | 15.775 | 6.6     | 13570    | 20000             |
| US 60  | Jefferson | 15.775 | 17.375 | 6.6     | 13570    | 20000             |
| US 60  | Shelby    | 0.000  | 2.485  | 6.6     | 6570     | 11000             |
| US 60  | Shelby    | 2.485  | 2.784  | 6.6     | 6570     | 11000             |
| US 60  | Shelby    | 2.784  | 2.940  | 6.6     | 6570     | 11000             |
| US 60  | Shelby    | 2.940  | 2.980  | 6.6     | 6570     | 12000             |
| US 60  | Shelby    | 2.980  | 3.098  | 6.6     | 6570     | 12000             |
| US 60  | Shelby    | 3.098  | 3.139  | 6.6     | 6570     | 13000             |
| US 60  | Shelby    | 3.139  | 3.484  | 6.6     | 6570     | 13000             |
| US 60  | Shelby    | 3.484  | 3.616  | 6.6     | 6570     | 13000             |
| US 60  | Shelby    | 3.616  | 3.800  | 6.1     | 8080     | 12000             |
| US 60  | Shelby    | 3.800  | 6.945  | 6.1     | 8080     | 12000             |
| KY 146 | Jefferson | 0.636  | 0.983  | 3.5     | 19130    | 23000             |
| KY 146 | Jefferson | 0.983  | 1.149  | 3.3     | 9920     | 13000             |
| KY 146 | Jefferson | 1.149  | 1.218  | 3.3     | 9920     | 12000             |
| KY 146 | Jefferson | 1.218  | 2.420  | 3.3     | 9920     | 12000             |
| KY 146 | Jefferson | 2.420  | 2.565  | 3.3     | 9920     | 12000             |
| KY 146 | Jefferson | 2.565  | 2.685  | 5.5     | 9710     | 12000             |

| Route  | County    | BMP    | EMP    | Truck % | 2018 ADT | 2040 No Build ADT |
|--------|-----------|--------|--------|---------|----------|-------------------|
| KY 146 | Jefferson | 2.685  | 3.569  | 5.5     | 9710     | 13000             |
| KY 146 | Jefferson | 3.569  | 3.696  | 3.3     | 10700    | 14000             |
| KY 146 | Jefferson | 3.696  | 4.287  | 3.3     | 10700    | 14000             |
| KY 146 | Jefferson | 4.287  | 4.745  | 3.3     | 10700    | 14000             |
| KY 146 | Jefferson | 4.745  | 5.052  | 3.3     | 10700    | 14000             |
| KY 146 | Jefferson | 5.052  | 5.658  | 3.3     | 7090     | 10000             |
| KY 146 | Jefferson | 5.658  | 6.504  | 3.3     | 7090     | 10000             |
| KY 146 | Jefferson | 6.504  | 6.582  | 3.3     | 11070    | 14000             |
| KY 146 | Jefferson | 6.582  | 6.727  | 3.3     | 11070    | 14000             |
| KY 146 | Jefferson | 6.727  | 6.910  | 3.3     | 11070    | 14000             |
| KY 146 | Jefferson | 6.910  | 6.964  | 3.3     | 11070    | 14000             |
| KY 146 | Jefferson | 6.964  | 7.280  | 3.3     | 11070    | 14000             |
| KY 146 | Jefferson | 7.280  | 7.555  | 5.8     | 18680    | 23000             |
| KY 146 | Jefferson | 7.555  | 7.718  | 5.8     | 18680    | 23000             |
| KY 146 | Jefferson | 7.718  | 7.850  | 5.8     | 18680    | 23000             |
| KY 146 | Jefferson | 7.850  | 8.011  | 5.8     | 18680    | 23000             |
| KY 146 | Jefferson | 8.011  | 8.251  | 5.8     | 18680    | 22000             |
| KY 146 | Jefferson | 8.251  | 8.825  | 5.8     | 13240    | 20000             |
| KY 146 | Oldham    | 0.000  | 0.630  | 5.8     | 13240    | 15000             |
| KY 146 | Oldham    | 0.630  | 2.021  | 5.8     | 12600    | 16000             |
| KY 146 | Oldham    | 2.021  | 2.082  | 5.8     | 12600    | 16000             |
| KY 146 | Oldham    | 2.082  | 2.150  | 5.8     | 12600    | 16000             |
| KY 148 | Jefferson | 0.000  | 0.110  | 3.5     | 3890     | 9000              |
| KY 148 | Jefferson | 0.110  | 1.239  | 3.5     | 3890     | 9000              |
| KY 148 | Jefferson | 1.239  | 3.394  | 3.5     | 2390     | 3200              |
| KY 148 | Shelby    | 0.000  | 2.418  | 8.2     | 1680     | 2700              |
| KY 155 | Jefferson | 3.033  | 4.276  | 7.5     | 17460    | 28000             |
| KY 155 | Jefferson | 4.276  | 4.496  | 7.5     | 20310    | 29000             |
| KY 155 | Jefferson | 4.496  | 5.711  | 7.5     | 20310    | 29000             |
| KY 155 | Jefferson | 5.711  | 6.058  | 7.5     | 20310    | 25000             |
| KY 155 | Jefferson | 6.058  | 6.355  | 6.8     | 18060    | 23000             |
| KY 155 | Jefferson | 6.355  | 6.450  | 6.8     | 18060    | 23000             |
| KY 155 | Jefferson | 6.450  | 6.889  | 6.8     | 18060    | 22000             |
| KY 155 | Jefferson | 6.889  | 6.951  | 15.1    | 15470    | 18000             |
| KY 155 | Jefferson | 6.951  | 7.089  | 15.1    | 15470    | 18000             |
| KY 155 | Jefferson | 7.089  | 8.107  | 15.1    | 15470    | 18000             |
| KY 155 | Jefferson | 8.107  | 8.247  | 15.1    | 15470    | 18000             |
| KY 155 | Jefferson | 8.247  | 8.590  | 6.8     | 15470    | 18000             |
| KY 155 | Jefferson | 8.590  | 8.772  | 6.8     | 15470    | 20000             |
| KY 155 | Jefferson | 8.772  | 9.024  | 6.8     | 15470    | 20000             |
| KY 155 | Jefferson | 9.024  | 9.301  | 6.8     | 11620    | 17000             |
| KY 155 | Jefferson | 9.301  | 9.350  | 6.8     | 11620    | 17000             |
| KY 155 | Jefferson | 9.350  | 9.439  | 5.8     | 24560    | 30000             |
| KY 155 | Jefferson | 9.439  | 10.124 | 5.8     | 24560    | 30000             |
| KY 155 | Jefferson | 10.124 | 10.255 | 5.8     | 24560    | 30000             |
| KY 155 | Jefferson | 10.255 | 10.455 | 5.8     | 24560    | 28000             |

| Route   | County    | BMP    | EMP    | Truck % | 2018 ADT | 2040 No Build ADT |
|---------|-----------|--------|--------|---------|----------|-------------------|
| KY 155  | Jefferson | 10.455 | 10.585 | 5.8     | 24560    | 28000             |
| KY 155  | Jefferson | 10.585 | 11.032 | 5.8     | 24560    | 27000             |
| KY 155  | Jefferson | 11.032 | 11.268 | 5.8     | 35390    | 40000             |
| KY 155  | Jefferson | 11.268 | 11.395 | 5.8     | 35390    | 40000             |
| KY 155  | Jefferson | 11.395 | 11.549 | 7.3     | 36400    | 40000             |
| KY 155  | Jefferson | 11.549 | 11.630 | 8.4     | 32120    | 36000             |
| KY 155  | Jefferson | 11.630 | 12.830 | 8.4     | 42020    | 46000             |
| KY 362  | Oldham    | 0.000  | 0.975  | 5.0     | 1940     | 4400              |
| KY 362  | Oldham    | 0.975  | 1.970  | 5.0     | 4290     | 6900              |
| KY 362  | Oldham    | 1.970  | 2.532  | 5.0     | 1590     | 3700              |
| KY 362  | Oldham    | 2.532  | 3.039  | 5.0     | 1590     | 3100              |
| KY 362  | Shelby    | 0.000  | 0.260  | 5.0     | 1510     | 3000              |
| KY 362  | Shelby    | 0.260  | 1.639  | 5.0     | 1510     | 3100              |
| KY 362  | Shelby    | 1.639  | 2.450  | 6.9     | 3890     | 7000              |
| KY 362  | Shelby    | 2.450  | 3.394  | 6.9     | 3890     | 7300              |
| KY 362  | Shelby    | 3.394  | 7.090  | 8.2     | 790      | 1400              |
| KY 362  | Shelby    | 7.090  | 7.720  | 8.2     | 790      | 1700              |
| KY 362  | Shelby    | 7.720  | 8.399  | 8.2     | 960      | 1900              |
| KY 913  | Jefferson | 0.000  | 0.619  | 5.2     | 11040    | 13000             |
| KY 913  | Jefferson | 0.619  | 1.557  | 5.2     | 17530    | 21000             |
| KY 913  | Jefferson | 1.557  | 1.933  | 5.2     | 17530    | 20000             |
| KY 913  | Jefferson | 1.933  | 2.097  | 5.2     | 27520    | 31000             |
| KY 913  | Jefferson | 2.097  | 2.384  | 5.2     | 27520    | 31000             |
| KY 913  | Jefferson | 2.384  | 2.528  | 10.4    | 53220    | 57000             |
| KY 913  | Jefferson | 2.528  | 2.643  | 10.4    | 53220    | 57000             |
| KY 913  | Jefferson | 2.643  | 2.829  | 10.4    | 53220    | 56000             |
| KY 913  | Jefferson | 2.829  | 3.072  | 4.4     | 32440    | 37000             |
| KY 913  | Jefferson | 3.072  | 3.382  | 4.4     | 32440    | 38000             |
| KY 913  | Jefferson | 3.382  | 3.751  | 4.4     | 25900    | 28000             |
| KY 913  | Jefferson | 3.751  | 4.337  | 4.4     | 10310    | 13000             |
| KY 913C | Jefferson | 0.000  | 0.500  | 5.6     | 5250     | 8400              |
| KY 1399 | Shelby    | 0.000  | 0.900  | 7.7     | 1050     | 2500              |
| KY 1399 | Shelby    | 0.900  | 1.300  | 7.7     | 1050     | 2200              |
| KY 1399 | Shelby    | 1.300  | 2.035  | 7.7     | 1050     | 2200              |
| KY 1399 | Shelby    | 2.035  | 2.481  | 7.7     | 1050     | 2200              |
| KY 1399 | Shelby    | 2.481  | 2.572  | 7.7     | 1050     | 2200              |
| KY 1408 | Oldham    | 0.000  | 1.056  | 5.1     | 1540     | 4300              |
| KY 1408 | Shelby    | 0.000  | 0.500  | 5.1     | 1540     | 4300              |
| KY 1408 | Shelby    | 0.500  | 0.871  | 5.1     | 1540     | 4300              |
| KY 1447 | Jefferson | 8.028  | 9.242  | 18.3    | 7540     | 11000             |
| KY 1531 | Jefferson | 5.620  | 5.740  | 8.2     | 2420     | 6300              |
| KY 1531 | Jefferson | 5.740  | 6.371  | 8.2     | 2420     | 6300              |
| KY 1531 | Jefferson | 6.371  | 6.812  | 8.2     | 2420     | 6300              |
| KY 1531 | Jefferson | 6.812  | 7.536  | 8.2     | 2420     | 6700              |
| KY 1531 | Jefferson | 7.536  | 8.179  | 8.2     | 2420     | 6700              |

| Route   | County    | BMP    | EMP    | Truck % | 2018 ADT | 2040 No Build ADT |
|---------|-----------|--------|--------|---------|----------|-------------------|
| KY 1531 | Jefferson | 8.179  | 9.120  | 6.9     | 2420     | 2600              |
| KY 1531 | Jefferson | 9.120  | 9.933  | 6.9     | 940      | 3500              |
| KY 1531 | Jefferson | 9.933  | 10.950 | 6.9     | 940      | 4300              |
| KY 1531 | Jefferson | 10.950 | 11.802 | 6.9     | 940      | 4300              |
| KY 1531 | Jefferson | 11.802 | 12.656 | 10.5    | 1130     | 4200              |
| KY 1531 | Shelby    | 0.000  | 0.084  | 18.3    | 5050     | 10000             |
| KY 1747 | Jefferson | 9.583  | 11.033 | 4.3     | 32680    | 34000             |
| KY 1747 | Jefferson | 11.033 | 11.119 | 4.3     | 56410    | 62000             |
| KY 1747 | Jefferson | 11.119 | 11.206 | 4.3     | 56410    | 62000             |
| KY 1747 | Jefferson | 11.206 | 11.459 | 4.3     | 56410    | 62000             |
| KY 1747 | Jefferson | 11.459 | 11.509 | 4.3     | 56410    | 61000             |
| KY 1747 | Jefferson | 11.509 | 11.634 | 4.3     | 56410    | 60000             |
| KY 1747 | Jefferson | 11.634 | 11.743 | 3.8     | 52530    | 56000             |
| KY 1747 | Jefferson | 11.743 | 11.918 | 3.8     | 52530    | 57000             |
| KY 1747 | Jefferson | 11.918 | 11.990 | 2.8     | 48310    | 52000             |
| KY 1747 | Jefferson | 11.990 | 12.289 | 2.8     | 48310    | 52000             |
| KY 1747 | Jefferson | 12.289 | 12.862 | 2.0     | 33930    | 37000             |
| KY 1748 | Jefferson | 12.862 | 12.919 | 2.0     | 33930    | 40000             |
| KY 1748 | Jefferson | 12.919 | 13.389 | 2.0     | 33930    | 40000             |
| KY 1747 | Jefferson | 13.389 | 13.503 | 2.0     | 33930    | 40000             |
| KY 1747 | Jefferson | 13.503 | 13.632 | 9.6     | 22180    | 26000             |
| KY 1747 | Jefferson | 13.632 | 13.959 | 9.6     | 22180    | 26000             |
| KY 1747 | Jefferson | 13.959 | 15.972 | 9.6     | 22180    | 26000             |
| KY 1747 | Jefferson | 15.972 | 17.040 | 1.6     | 32000    | 39000             |
| KY 1819 | Jefferson | 7.139  | 7.770  | 7.1     | 13900    | 18000             |
| KY 1819 | Jefferson | 7.770  | 8.045  | 4.3     | 13770    | 18000             |
| KY 1819 | Jefferson | 8.045  | 8.359  | 4.3     | 13770    | 18000             |
| KY 1819 | Jefferson | 8.359  | 8.885  | 4.3     | 13770    | 15000             |
| KY 1819 | Jefferson | 8.885  | 9.386  | 4.3     | 13770    | 15000             |
| KY 1819 | Jefferson | 9.386  | 9.941  | 4.3     | 9130     | 10000             |
| KY 1819 | Jefferson | 9.941  | 10.159 | 8.3     | 9150     | 10000             |
| KY 1819 | Jefferson | 10.159 | 10.795 | 8.3     | 9150     | 11000             |
| KY 1819 | Jefferson | 10.795 | 11.977 | 9.4     | 10880    | 13000             |
| KY 1819 | Jefferson | 11.977 | 12.811 | 8.3     | 5840     | 8000              |
| KY 1819 | Jefferson | 12.811 | 13.470 | 6.4     | 3160     | 5200              |
| KY 1819 | Jefferson | 13.470 | 13.624 | 6.4     | 3160     | 5200              |
| KY 1848 | Shelby    | 3.751  | 4.000  | 7.7     | 1810     | 3000              |
| KY 1848 | Shelby    | 4.000  | 4.595  | 7.7     | 1810     | 3000              |
| KY 1848 | Shelby    | 4.595  | 4.652  | 2.0     | 10400    | 17000             |
| KY 1848 | Shelby    | 4.652  | 4.801  | 2.0     | 10400    | 17000             |
| KY 1848 | Shelby    | 4.801  | 4.865  | 2.0     | 10400    | 17000             |
| KY 1848 | Shelby    | 4.865  | 4.996  | 2.0     | 10400    | 17000             |
| KY 1848 | Shelby    | 4.996  | 5.040  | 6.9     | 1810     | 7000              |
| KY 1848 | Shelby    | 5.040  | 5.271  | 9.1     | 10820    | 19000             |
| KY 1848 | Shelby    | 5.271  | 6.025  | 9.1     | 10820    | 18000             |
| KY 1848 | Shelby    | 6.025  | 6.450  | 8.2     | 2690     | 5200              |

| Route                   | County    | BMP   | EMP    | Truck % | 2018 ADT | 2040 No Build ADT |
|-------------------------|-----------|-------|--------|---------|----------|-------------------|
| KY 1848                 | Shelby    | 6.450 | 8.494  | 8.2     | 2690     | 5200              |
| KY 1848                 | Shelby    | 8.494 | 10.591 | 8.2     | 1790     | 4000              |
| KY 2841                 | Jefferson | 0.000 | 0.031  | 6.9     | 1940     | Beyond Model      |
| KY 2841                 | Jefferson | 0.031 | 0.643  | 6.4     | 1940     | Beyond Model      |
| KY 3084                 | Jefferson | 0.000 | 0.177  | 8.6     | 17400    | 17000             |
| KY 3084                 | Jefferson | 0.177 | 0.692  | 9.6     | 14090    | 14000             |
| KY 3084                 | Jefferson | 0.692 | 0.838  | 9.6     | 14090    | 17000             |
| KY 3084                 | Jefferson | 0.838 | 1.146  | 9.6     | 14090    | 17000             |
| KY 3084                 | Jefferson | 1.146 | 1.251  | 8.6     | 17840    | 21000             |
| KY 3084                 | Jefferson | 1.251 | 1.440  | 8.6     | 17840    | 25000             |
| KY 3084                 | Jefferson | 1.440 | 1.668  | 8.6     | 17840    | 25000             |
| KY 3084                 | Jefferson | 1.668 | 1.721  | 8.6     | 17840    | 25000             |
| KY 3084                 | Jefferson | 1.721 | 1.799  | 8.6     | 17840    | 25000             |
| KY 3084                 | Jefferson | 1.799 | 1.953  | 8.6     | 17840    | 22000             |
| KY 3084                 | Jefferson | 1.953 | 1.978  | 8.6     | 17840    | 22000             |
| CR-1231 Veechdale Rd    | Shelby    | 0.000 | 1.725  | 2.0     | 1100     | Beyond Model      |
| CS-1001H Plantside Dr   | Jefferson | 0.000 | 0.190  | 6.9     | 10650    | 15000             |
| CS-1001H Plantside Dr   | Jefferson | 0.190 | 1.454  | 6.9     | 10650    | 13000             |
| CS-1001H Plantside Dr   | Jefferson | 1.454 | 2.000  | 6.9     | 8490     | 11000             |
| CS-1001H Plantside Dr   | Jefferson | 2.000 | 2.242  | 6.9     | 8490     | 14000             |
| CS-1001H Plantside Dr   | Jefferson | 2.242 | 2.281  | 6.9     | 8490     | 14000             |
| CS-1001H Plantside Dr   | Jefferson | 2.281 | 2.326  | 6.9     | 8490     | 14000             |
| CS-1001H Plantside Dr   | Jefferson | 2.326 | 2.596  | 6.9     | 8490     | 14000             |
| CS-1001H Plantside Dr   | Jefferson | 2.596 | 3.135  | 6.9     | 5440     | 9100              |
| CS-1001H Plantside Dr   | Jefferson | 3.135 | 4.200  | 6.9     | 5310     | 8900              |
| CS-1002H Bluegrass Pkwy | Jefferson | 0.000 | 0.085  | 6.9     | 15050    | 17000             |
| CS-1002H Bluegrass Pkwy | Jefferson | 0.085 | 0.176  | 6.9     | 15050    | 17000             |
| CS-1002H Bluegrass Pkwy | Jefferson | 0.176 | 1.486  | 6.9     | 6850     | 8000              |
| CS-1002H Bluegrass Pkwy | Jefferson | 1.486 | 1.910  | 6.9     | 6850     | 9000              |
| CS-1002H Bluegrass Pkwy | Jefferson | 1.910 | 2.397  | 6.9     | 6850     | 9000              |
| CS-1002H Bluegrass Pkwy | Jefferson | 2.397 | 2.474  | 6.9     | 6850     | 9000              |
| CS-1002H Bluegrass Pkwy | Jefferson | 2.474 | 2.927  | 6.9     | 7380     | 10000             |
| CS-1004H Linn Stn Rd    | Jefferson | 1.108 | 1.209  | 1.2     | 19100    | 23000             |
| CS-1004H Linn Stn Rd    | Jefferson | 1.209 | 2.183  | 1.2     | 19100    | 23000             |
| CS-1004H Linn Stn Rd    | Jefferson | 2.183 | 2.270  | 2.3     | 8400     | 10000             |
| CS-1004H Linn Stn Rd    | Jefferson | 2.270 | 2.391  | 2.3     | 8400     | 10000             |
| CS-1004H Linn Stn Rd    | Jefferson | 2.391 | 2.500  | 2.3     | 8400     | 10000             |
| CS-1008D Factory Ln     | Jefferson | 0.000 | 0.379  | 6.9     | 8700     | 14000             |
| CS-1008D Factory Ln     | Jefferson | 0.379 | 0.725  | 6.9     | 5300     | 12000             |
| CS-1008D Factory Ln     | Jefferson | 0.725 | 1.520  | 6.9     | 5300     | 12000             |
| CS-1013H Bunsen Pkwy    | Jefferson | 0.000 | 0.534  | 6.9     | 8900     | 10000             |
| CS-1013H Bunsen Pkwy    | Jefferson | 0.534 | 0.731  | 6.9     | 11700    | 13000             |
| CS-1073H Watterson Tr   | Jefferson | 0.000 | 0.352  | 8.6     | 10330    | 13000             |
| CS-1073H Watterson Tr   | Jefferson | 0.352 | 0.421  | 8.6     | 10330    | 12000             |

| Route                    | County    | BMP   | EMP   | Truck % | 2018 ADT | 2040 No Build ADT |
|--------------------------|-----------|-------|-------|---------|----------|-------------------|
| CS-1073H Watterson Tr    | Jefferson | 0.421 | 0.583 | 8.6     | 10330    | 12000             |
| CS-1073H Watterson Tr    | Jefferson | 0.583 | 0.642 | 8.6     | 10330    | 12000             |
| CS-1073H Watterson Tr    | Jefferson | 0.642 | 0.694 | 8.6     | 10330    | 12000             |
| CS-1720H Billtown Rd     | Jefferson | 0.000 | 0.165 | 8.6     | 10200    | 11000             |
| CS-2056H Ruckriegel Pkwy | Jefferson | 0.000 | 0.103 | 8.6     | 6790     | 8000              |
| CR-1001C Chamberlain Ln  | Jefferson | 0.000 | 0.974 | 6.9     | 10480    | 11000             |
| CR-1001C Chamberlain Ln  | Jefferson | 0.974 | 1.639 | 6.9     | 10480    | 12000             |
| CR-1001C Chamberlain Ln  | Jefferson | 1.639 | 1.970 | 6.9     | 10480    | 12000             |
| CR-1001C Chamberlain Ln  | Jefferson | 1.970 | 2.043 | 6.9     | 10480    | 12000             |
| CR-1001C Chamberlain Ln  | Jefferson | 2.043 | 2.104 | 6.9     | 10480    | 12000             |
| CR-1001D Aiken Rd        | Jefferson | 0.000 | 0.090 | 6.9     | 7190     | 11000             |
| CR-1001D Aiken Rd        | Jefferson | 0.090 | 0.556 | 6.9     | 7190     | 11000             |
| CR-1001D Aiken Rd        | Jefferson | 0.556 | 1.131 | 6.9     | 3870     | 6600              |
| CR-1001D Aiken Rd        | Jefferson | 1.131 | 1.221 | 6.9     | 3870     | 6600              |
| CR-1001D Aiken Rd        | Jefferson | 1.221 | 2.428 | 6.9     | 3870     | 6600              |
| CR-1001D Aiken Rd        | Jefferson | 2.428 | 2.732 | 6.9     | 3870     | 6600              |
| CR-1001D Aiken Rd        | Jefferson | 2.732 | 3.149 | 6.9     | 8260     | 11000             |
| CR-1001D Aiken Rd        | Jefferson | 3.149 | 3.605 | 6.9     | 8260     | 11000             |
| CR-1001D Aiken Rd        | Jefferson | 3.605 | 3.965 | 6.9     | 8260     | 11000             |
| CR-1001D Aiken Rd        | Jefferson | 3.965 | 4.535 | 6.9     | 8260     | 11000             |
| CR-1001H Tucker Stn Rd   | Jefferson | 0.000 | 1.079 | 6.9     | 4220     | 9000              |
| CR-1001H Tucker Stn Rd   | Jefferson | 1.079 | 2.104 | 6.9     | 4220     | 8000              |
| CR-1001H Tucker Stn Rd   | Jefferson | 2.104 | 2.257 | 6.9     | 4220     | 7000              |
| CR-1001H Tucker Stn Rd   | Jefferson | 2.257 | 3.538 | 6.9     | 4220     | 6000              |
| CR-1001H Tucker Stn Rd   | Jefferson | 3.538 | 4.435 | 6.9     | 5160     | 7000              |
| CR-1001H Tucker Stn Rd   | Jefferson | 4.435 | 4.534 | 6.9     | 5160     | 7000              |
| CR-1002H Six Mile Ln     | Jefferson | 2.868 | 3.432 | 6.9     | 7130     | 10000             |
| CR-1002H Six Mile Ln     | Jefferson | 3.432 | 4.385 | 6.9     | 7260     | 8000              |
| CR-1004H Watterson Tr    | Jefferson | 1.083 | 3.330 | 8.6     | 10400    | 12000             |
| CR-1005C Whipps Mill     | Jefferson | 0.000 | 0.067 | 0.5     | 7400     | 9000              |
| CR-1005C Whipps Mill     | Jefferson | 0.067 | 0.240 | 0.5     | 7400     | 9000              |
| CR-1005C Whipps Mill     | Jefferson | 0.240 | 0.887 | 0.5     | 8100     | 9000              |
| CR-1005C Whipps Mill     | Jefferson | 0.887 | 0.926 | 0.5     | 8300     | 9000              |
| CR-1005C Whipps Mill     | Jefferson | 0.926 | 1.085 | 0.5     | 8300     | 9000              |
| CR-1005C Whipps Mill     | Jefferson | 1.085 | 1.918 | 0.5     | 6970     | 8000              |
| CR-1005C Whipps Mill     | Jefferson | 1.918 | 2.123 | 0.5     | 3300     | 5000              |
| CR-1005C Whipps Mill     | Jefferson | 2.123 | 2.236 | 0.5     | 3300     | 5000              |
| CR-1005C Whipps Mill     | Jefferson | 2.236 | 2.316 | 0.5     | 2700     | 4000              |
| CR-1005D Old Henry Rd    | Jefferson | 0.000 | 0.532 | 6.9     | 8200     | 14000             |
| CR-1005D Old Henry Rd    | Jefferson | 0.532 | 1.147 | 6.9     | 5800     | 11000             |
| CR-1006C N English Stn   | Jefferson | 0.000 | 0.101 | 8.6     | 17400    | 21000             |
| CR-1006C N English Stn   | Jefferson | 0.101 | 0.199 | 8.6     | 17400    | 21000             |
| CR-1006C N English Stn   | Jefferson | 0.199 | 0.239 | 8.6     | 17400    | 21000             |
| CR-1006C N English Stn   | Jefferson | 0.239 | 0.457 | 8.6     | 17400    | 21000             |

| Route                       | County    | BMP   | EMP   | Truck % | 2018 ADT | 2040 No Build ADT |
|-----------------------------|-----------|-------|-------|---------|----------|-------------------|
| CR-1006C N English Stn      | Jefferson | 0.457 | 1.157 | 8.6     | 17400    | 22000             |
| CR-1006C N English Stn      | Jefferson | 1.157 | 1.232 | 8.6     | 17400    | 17000             |
| CR-1006C N English Stn      | Jefferson | 1.232 | 2.131 | 6.4     | 1440     | 1000              |
| CR-1006D Bush Farm Rd       | Jefferson | 0.000 | 0.507 | 2.0     | 1100     | Beyond Model      |
| CR-1006D Bush Farm Rd       | Jefferson | 0.507 | 0.898 | 4.0     | 10010    | 11000             |
| CR-1006H Rehl Rd            | Jefferson |       |       | 2.0     | 750      | 3000              |
| CR-1006H Rehl Rd            | Jefferson | 0.059 | 0.576 | 2.0     | 750      | 3000              |
| CR-1007C Dorsey Ln          | Jefferson | 0.000 | 0.122 | 8.6     | 11140    | 13000             |
| CR-1007C Dorsey Ln          | Jefferson | 0.122 | 1.563 | 8.6     | 11140    | 14000             |
| CR-1009J Echo Tr            | Jefferson | 0.000 | 1.655 | 8.2     | 970      | 3000              |
| CR-1010C La Grange Rd       | Jefferson | 0.000 | 1.672 | 6.9     | 7750     | 10000             |
| CR-1010H Stony Brook Dr     | Jefferson | 1.035 | 2.150 | 6.9     | 6000     | 5000              |
| CR-1010J Gilliland Rd       | Jefferson | 0.000 | 0.854 | 4.3     | 980      | 3000              |
| CR-1010J Gilliland Rd       | Jefferson | 0.854 | 0.899 | 4.3     | 980      | 3000              |
| CR-1010J Gilliland Rd       | Jefferson | 0.899 | 1.107 | 4.3     | 980      | 3000              |
| CR-1014C Goose Creek Rd     | Jefferson | 0.000 | 1.350 | 6.9     | 7020     | Beyond Model      |
| CR-1014H Urton Ln           | Jefferson | 0.000 | 0.104 | 8.2     | 2390     | 9000              |
| CR-1014H Urton Ln           | Jefferson | 0.104 | 0.199 | 8.2     | 2390     | 9000              |
| CR-1014H Urton Ln           | Jefferson | 0.199 | 0.357 | 8.2     | 2390     | 9000              |
| CR-1014H Urton Ln           | Jefferson | 0.357 | 0.967 | 8.2     | 2390     | 9000              |
| CR-1014H Urton Ln           | Jefferson | 0.967 | 1.169 | 8.2     | 2390     | 9000              |
| CR-1014H Urton Ln           | Jefferson | 1.169 | 1.779 | 8.2     | 2390     | 9000              |
| CR-1016H Moser Rd           | Jefferson | 0.000 | 1.733 | 6.9     | 6160     | 8000              |
| CR-1019C Nelson Miller Pkwy | Jefferson | 0.000 | 0.308 | 6.9     | 6060     | Beyond Model      |
| CR-1019C Nelson Miller Pkwy | Jefferson | 0.308 | 0.483 | 6.9     | 6060     | Beyond Model      |
| CR-1019C Nelson Miller Pkwy | Jefferson | 0.483 | 0.682 | 6.9     | 6060     | Beyond Model      |
| CR-1019C Nelson Miller Pkwy | Jefferson | 0.682 | 0.995 | 6.9     | 6060     | Beyond Model      |
| CR-1019C Nelson Miller Pkwy | Jefferson | 0.995 | 1.070 | 6.9     | 6060     | Beyond Model      |
| CR-1019C Nelson Miller Pkwy | Jefferson | 1.070 | 1.139 | 6.9     | 6060     | Beyond Model      |
| CR-1023C Stanley Gault Pkwy | Jefferson | 0.000 | 0.079 | 6.9     | 4110     | Beyond Model      |
| CR-1023C Stanley Gault Pkwy | Jefferson | 0.079 | 0.818 | 6.9     | 4110     | Beyond Model      |
| CR-1023C Stanley Gault Pkwy | Jefferson | 0.818 | 0.859 | 6.9     | 4110     | Beyond Model      |
| CR-1023C Stanley Gault Pkwy | Jefferson | 0.859 | 0.944 | 6.9     | 4110     | Beyond Model      |
| CR-1035C Mill Brook Rd      | Jefferson | 0.000 | 0.271 | 6.9     | 10550    | Beyond Model      |

## Appendix B

### 2040 Build Scenario Results

| Project ID                         | Project Limits                                                                     | Description of Improvement                                                     | Existing Conditions |               |                    | 2040 Build Summary                             |
|------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------|---------------|--------------------|------------------------------------------------|
|                                    |                                                                                    |                                                                                | 2018 ADT            | 2018 % Trucks | 2040 No Build ADT  |                                                |
| Interstates                        |                                                                                    |                                                                                |                     |               |                    |                                                |
| CHAF<br>IP20150080                 | I-265<br>Bardstown Rd to<br>Taylorsville Rd<br>MP 17.300-23.100                    | Major Widening<br>(six lanes)                                                  | 66,000-<br>71,000   | 9-12          | 77,000-<br>83,000  | 87,000-93,000 ADT<br>-2,716 VHT   +6,774 VMT   |
| CHAF<br>IP20160174                 | I-265<br>Taylorsville Rd to I-71<br>MP 23.409-34.727                               | Major Widening (six<br>lanes)                                                  | 48,500-<br>86,500   | 10-11         | 56,000-<br>95,000  | 64,000-115,000 ADT<br>-7,027 VHT   +11,242 VMT |
| CHAF<br>IP20150184                 | I-265 MP 24.600-26.400                                                             | Reconstruct I-265/I-64<br>Interchange                                          | 48,500              | 10.6          | 56,000-<br>111,000 | 57,000-111,000<br>-347 VHT   -3,001 VMT        |
|                                    | I-64 MP 18.6-19.2                                                                  |                                                                                | 60,000-<br>95,000   | 9.5           | --                 |                                                |
| CHAF<br>IP20150185                 | I-265 MP 26.500-27.100                                                             | Reconstruct I-265/US 60<br>Interchange as SPUI with<br>C/D to I-64 Interchange | 86,500              | 10.0          | 83,000-<br>95,000  | 83,000-95,000<br>-180 VHT   -1,289 VMT         |
|                                    | US 60 MP 11.8-12.3                                                                 |                                                                                | 34,500              | 2.0           | 46,000-<br>60,000  |                                                |
| Concept O                          | I-265 MP 23.100                                                                    | Reconstruct I-265/KY<br>155 Interchange                                        | 71,000              | 12.4          | 56,000-<br>83,000  | 56,000-83,000<br>-75 VHT   +160 VMT            |
|                                    | KY 155 MP 6.058                                                                    |                                                                                | 20,000              | 6.7           | 25,000             |                                                |
| CHAF<br>IP20080192                 | I-265 MP 24.000-24.600                                                             | New Interchange at I-<br>265/Rehl Road                                         | 48,500              | 10.6          | 56,000             | 57,000 ADT<br>+508 VHT   -6,500 VMT            |
| CHAF<br>IP20150139                 | I-64 MP 21.0-22.0                                                                  | New I-64 Interchange<br>with US 60/KY 148<br>connector                         | 60,000              | 9.5           | 75,000             | 78,000 ADT<br>+59 VHT   -1,970 VMT             |
| Other NHS Routes (Extended System) |                                                                                    |                                                                                |                     |               |                    |                                                |
| CHAF<br>IP20080196                 | US 60 Shelbyville Rd<br>I-264 to Hurstbourne Ln<br>MP 5.529-7.857                  | Major Widening (six+<br>lanes)                                                 | 38,400-<br>56,590   | 7.8           | 43,000-<br>62,000  | 52,000-68,000 ADT<br>LOS D   0.6-0.8 V/C       |
| CHAF<br>IP20080197                 | US 60 Shelbyville Rd<br>Hurstbourne Ln to I-265<br>MP 7.857-12.020                 | Major Widening (six<br>lanes)                                                  | 30,500-<br>45,600   | 2-10          | 35,000-<br>60,000  | 38,000-56,000 ADT<br>LOS B-D   0.4-0.6 V/C     |
| CHAF<br>IP20180043                 | US 60 Shelbyville Rd<br>Old Shelbyville Rd to N<br>English Stn<br>MP 11.093-11.684 | Major Widening (six<br>lanes)                                                  | 32,430-<br>35,620   | 9.6           | 41,000-<br>45,000  | 42,000-46,000 ADT<br>LOS C   0.5 V/C           |
| Concept L                          | KY 155 Taylorsville Rd<br>KY 148 to Routt Rd<br>MP 3.000-4.200                     | Major Widening (four<br>lanes)                                                 | 17,460              | 7.5           | 28,000             | 29,000 ADT<br>LOS B   0.4 V/C                  |
| CHAF<br>IP20130147                 | KY 155 MP 4.400-5.000<br>S Pope Lick Rd MP 0.160                                   | Safety/Hazard<br>Elimination<br>(intersection/bridge)                          | 20,310              | 7.5           | 29,000             | Minimal operational<br>changes                 |
| CHAF<br>IP20080202                 | KY 155 Taylorsville Rd<br>I-265 to KY 148<br>MP 4.400-5.750                        | Minor Widening<br>(add center turn lane)                                       | 20,310              | 7.5           | 25,000-<br>29,000  | 28,000-29,000 ADT<br>LOS A-E   0.3-0.7 V/C     |
| CHAF<br>IP20080201                 | KY 155 Taylorsville Rd<br>Watterson Tr to I-265<br>MP 6.300-9.350                  | Major Widening (five<br>lanes)                                                 | 11,620-<br>18,060   | 7-15          | 17,000-<br>23,000  | 24,000-32,000 ADT<br>LOS A-B   0.3-0.4 V/C     |
| CHAF<br>IP20080203                 | KY 155 Taylorsville Rd<br>Hikes Ln to Hurstbourne Ln<br>MP 11.395-13.314           | Major Widening (six<br>lanes)                                                  | 30,850-<br>42,020   | 7-8           | 36,000-<br>46,000  | 38,000-58,000 ADT<br>LOS C-D   0.4-0.7 V/C     |

| Project ID                    | Project Limits                                                                  | Description of Improvement                           | Existing Conditions |               |                   | 2040 Build Summary                                              |
|-------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------|---------------------|---------------|-------------------|-----------------------------------------------------------------|
|                               |                                                                                 |                                                      | 2018 ADT            | 2018 % Trucks | 2040 No Build ADT |                                                                 |
| Concept G                     | KY 1747 Hurstbourne<br>US 31E to KY 155<br>Taylorsville Rd<br>MP 7.489-11.033   | Safety Improvements                                  | 24,300-32,680       | 4.3           | 34,000            | Minimal operational changes                                     |
| CHAF<br>IP20160184            | KY 1747 MP 9.483-9.583<br><br>Six Mile Ln MP 2.868                              | Safety/Hazard Elimination<br>(extend left turn lane) | 24,300              | 4.3           | 34,000            | Minimal operational changes. Queue storage ratio improves (<1). |
|                               |                                                                                 |                                                      | 7,130               | --            | 10,160            |                                                                 |
| CHAF<br>IP20130135            | KY 1747 Hurstbourne<br>Stony Brook Dr to I-64<br>MP 10.500-11.995               | Congestion Management                                | 32,680-56,410       | 3-4           | 34,000-62,000     | 38,000-66,000 ADT<br>LOS B-C   0.4-0.6                          |
| CHAF<br>IP20150293            | KY 1747 Hurstbourne<br>Linn Stn Rd to Eden Ave<br>MP 12.289-13.362              | Reconstruction<br>(add 3rd SB thru lane)             | 33,930              | 2             | 26,000-40,000     | 39,000-43,000 ADT<br>LOS C   0.4-0.7 V/C                        |
| CHAF<br>IP20080218            | KY 1747 MP 13.400-13.600<br><br>US 60 MP 7.857                                  | Intersection Improvements                            | 22,180-33,930       | 2-10          | 26,000-40,000     | 26,000-40,000 ADT<br>LOS E-F for intersection                   |
|                               |                                                                                 |                                                      | 38,400              | 8-10          | 42,520            | 43,000 ADT                                                      |
| Other Regional & Local Routes |                                                                                 |                                                      |                     |               |                   |                                                                 |
| CHAF<br>IP20160176            | US 60 Shelbyville Rd<br>Eastwood Cutoff to<br>Rockcrest Way<br>MP 14.718-15.114 | Minor Widening and Intersection Improvements         | 19,330              | 6.6           | 26,000            | 25,000 ADT<br>LOS B   0.4 V/C                                   |
| Concept C                     | US 60 Shelbyville Rd<br>Rockcrest Way to County line<br>MP 15.114-17.375        | Minor Widening<br>(add center turn lane)             | 13,570-19,330       | 6.6           | 19,000-26,000     | 20,000-26,000 ADT<br>LOS B-E   0.4-0.7 V/C                      |
| CHAF<br>IP20080252            | KY 146 LaGrange Rd<br>County line to Pryor Ave<br>MP 0.000-2.021                | Reconstruction                                       | 9,920-19,130        | 5.8           | 12,000-24,000     | 16,000 ADT<br>LOS E   0.5-0.6 V/C                               |
| Concept R                     | KY 146 MP 2.740<br>Whipps Mill Rd MP 2.740                                      | Intersection Improvements                            | 9,710               | 5.5           | 13,000            | 13,000 ADT<br>LOS D-E for intersection                          |
|                               |                                                                                 |                                                      | 8,100               | --            | --                |                                                                 |
| CHAF<br>IP20080200            | KY 146 LaGrange Rd<br>Factory Ln to Reamers Rd<br>MP 6.800-8.300                | Major Widening (five lanes)                          | 11,070-18,680       | 3-6           | 14,000-23,000     | 15,000-33,000 ADT<br>LOS B-C   0.3-0.5 V/C                      |
| CHAF<br>IP20130132            | KY 362 Ash Ave<br>Co. Line to LaGrange Rd<br>MP 0.975-3.039                     | Safety/Hazard Elimination                            | 1,590-4,290         | 5             | 3,100-6,900       | 2,200-7,700 ADT<br>LOS C-D   0.1-0.3 V/C                        |
| Concept N                     | KY 362 MP 0.000<br>KY 22 MP 1.825                                               | Intersection Improvements                            | 1,940               | 5             | 4,400             | Minimal operational changes                                     |
|                               |                                                                                 |                                                      | 9,100               | --            | --                |                                                                 |
| CHAF<br>IP20080214            | KY 1447 Westport Rd<br>Murphy Ln to LaGrange Rd<br>MP 7.500-9.240               | Minor Widening<br>(add center turn lane)             | 7,540               | 18.3          | 11,000            | 11,000 ADT<br>LOS E   0.4 V/C                                   |
| CHAF<br>IP20080215            | KY 1531 Johnson Rd<br>US 60 to Aiken Rd<br>MP 9.100-11.900                      | Reconstruction<br>(no additional lanes)              | 940-2,420           | 7-11          | 2,600-4,300       | 3,500-4,300 ADT<br>LOS C   0.1-0.2 V/C                          |
| CHAF<br>IP20080219            | KY 1819 Billtown Rd<br>I-265 to Ruckriegel Pkwy<br>MP 5.300-8.900               | Minor Widening                                       | 13,770-13,900       | 4-7           | 18,000            | 16,000-18,000 ADT<br>LOS E   0.5-0.7 V/C                        |
| CHAF<br>IP20160185            | KY 1819 Billtown Rd<br>Colonnades Pl to Easum Rd<br>MP 6.900-8.100              | Reconstruction                                       | 13,770-13,900       | 4-7           | 18,000            | 18,000 ADT<br>LOS E   0.6-0.7 V/C                               |

| Project ID         | Project Limits                                                                    | Description of Improvement                                             | Existing Conditions |               |                   | 2040 Build Summary                         |
|--------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------|---------------|-------------------|--------------------------------------------|
|                    |                                                                                   |                                                                        | 2018 ADT            | 2018 % Trucks | 2040 No Build ADT |                                            |
| CHAF<br>IP20150319 | KY 1819 Watterson Tr<br>Plantside Dr to<br>Blankenbaker Rd<br>MP 10.795-12.811    | Major Widening                                                         | 5,840-<br>10,880    | 8-9           | 8,00-<br>13,000   | 9,300-13,000 ADT<br>LOS A-B   0.2 V/C      |
| Concept D          | KY 1848 Todds Point Rd<br>3,100' N from Grand<br>Central Dr<br>MP 6.418-7.005     | Minor Widening                                                         | 2,690               | 8.2           | 5,200             | 5,200 ADT<br>LOS C   0.2 V/C               |
| CHAF<br>IP20080234 | CR-1001H Tucker Station<br>Rehl Rd to Ellingsworth Ln<br>MP 1.079-3.538           | Reconstruction<br>(no additional lanes)                                | 4,220               | 6.9           | 6,300-<br>7,800   | 6,300-7,800 ADT<br>LOS D-E   0.4-0.5 V/C   |
| Concept A          | CR-1002D Flat Rock Rd<br>US 60 to Aiken Rd<br>MP 0.000-3.848                      | Minor Widening                                                         | 4,800               | --            | --                | 6,700 ADT<br>LOS D   0.3 V/C               |
| CHAF<br>IP20110077 | CR-1002J S English Station<br>Poplar Ln to Christian<br>Academy<br>MP 2.950-3.900 | Reconstruction<br>(no additional lanes)                                | 1,700               | --            | --                | 1,700 ADT<br>LOS C   0.2 V/C               |
| CHAF<br>IP20170032 | CR-1006C N English Station<br>Aiken Rd to Avoca Rd<br>MP 0.457-1.232              | Minor Widening<br>(add center turn lane)                               | 17,400              | 8.6           | 16,000-<br>22,000 | 18,000-23,000 ADT<br>LOS D-E   0.4-0.5 V/C |
| CHAF<br>IP20080232 | CR-1006H Rehl Rd<br>Blankenbaker Pkwy to S<br>Pope Lick<br>MP 0.000-2.255         | Reconstruction (no<br>additional lanes)                                | 750                 | 2             | 3,000             | 3,000 ADT<br>LOS C   0.3 V/C               |
| Concept M          | CR-1008H Old Heady Rd<br>Taylorsville Rd to<br>Chenoweth Run<br>MP 0.000-1.376    | Widening with Center<br>Turn Lane                                      | 4,350               | --            | --                | 5,400 ADT<br>LOS C   0.2 V/C               |
| CHAF<br>IP20080227 | CS-1030H Ellingsworth<br>LnBlankenbaker Pkwy to<br>Urton LnMP 0.000-0.607         | Extend/widen<br>Ellingsworth Lane (add<br>center turn lane)            | 7,000               | --            | 3,700             | -18 VHT   +105 VMT                         |
| CHAF<br>IP20080242 | CS-1163H Blowing Tree<br>KY 155 to Bunsen Pkwy<br>MP 0.000-0.459                  | Extend/widen Blowing<br>Tree Blvd (three lanes)                        | 1,900               | --            | --                | Beyond Model                               |
| CHAF<br>IP20110073 | New Route                                                                         | Bunsen Blvd/Christian<br>Way Connector (five<br>lanes)                 | --                  | --            | --                | Beyond Model                               |
| CHAF<br>IP20110074 | New Route                                                                         | Bowling Blvd/Christian<br>Way Connector (five<br>lanes)                | --                  | --            | --                | Beyond Model                               |
| CHAF<br>IP20110079 | New Route                                                                         | Connector (four lanes),<br>Old Henry Rd<br>Interchange to KY 22        | --                  | --            | --                | -4,482 VHT   -6,321 VMT                    |
| CHAF<br>IP20120002 | New Route                                                                         | Extend Urton Lane (three<br>lanes), north of I-64 to<br>Seatonville Rd | 2,400-<br>6,500     | --            | --                | -1,594 VHT   -2,721 VMT                    |
| CHAF<br>IP20160276 | New Route                                                                         | Extend Old Henry Rd to<br>KY 362 Ash Ave                               | --                  | --            | --                | -1,393 VHT   -1,364 VMT                    |
| CHAF<br>IP20170096 | New Route                                                                         | Extend Plantside Drive,<br>Rehl Rd to KY 155                           | --                  | --            | --                | -495 VHT   -1621 VMT                       |