

**COMMONWEALTH OF KENTUCKY  
TRANSPORTATION CABINET  
FRANKFORT, KY 40622**

MANUAL TITLE: Planning Guidance Manual

REVISION NO.: 1

DATE REQUESTED: May 3, 2023

REPRINT: \_\_\_\_\_

REQUESTED BY: Kim Jasper

NEW: \_\_\_\_\_

<b>NEW PROCEDURES</b>
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CHAPTER/ SECTION	EXPLANATION	OLD PAGES TO BE DELETED	NEW PAGES TO BE ADDED
	The purpose of this printing is to include the following revised policies in the <i>Planning Guidance Manual</i> . This revision also includes an updated table of contents.		
PL-200	Planning Activity Matrix	PL-203	PL-203
PL-700	Multimodal Planning	PL-705	PL-705
Produced & Distributed by the Organizational Management Branch			



COMMONWEALTH OF KENTUCKY  
TRANSPORTATION CABINET  
transportation.ky.gov

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OFFICE OF THE SECRETARY  
OFFICIAL ORDER 112277

**SUBJECT:** *Planning Guidance Manual*

This manual has been prepared to provide information and guidance to personnel of the Kentucky Transportation Cabinet. Its purpose is to establish uniformity in the interpretation and administration of laws, regulations, policies, and procedures applicable to the operations and services of the Division of Planning and its relationship with other units of the Cabinet.

The policies and procedures set forth herein are hereby approved and declared effective unless officially changed.

All previous instructions, written and oral, relative to or in conflict with this manual are hereby superseded.

Signed and approved this 10th day of September, 2020.

Handwritten signature of Jim Gray in blue ink.

Date: 2020.09.10  
16:42:48 -04'00'

Jim Gray  
Secretary

Approved as to Legal Form

Handwritten signature of Will Fogle in blue ink.

Office of Legal Services

# *P*LANNING *G*UIDANCE *M*ANUAL



ISSUED BY

COMMONWEALTH OF KENTUCKY  
TRANSPORTATION CABINET

SEPTEMBER 2020



Produced by Organizational Management Branch  
Office of Human Resource Management



**01 TABLE OF CONTENTS** ..... 05/23

**100 INTRODUCTION**

    101 Design of This Guidance Manual

        101.1 Organization & Numbering..... 09/20

        101.2 Locating Information..... 09/20

        101.3 Cross References..... 09/20

        101.4 Questions ..... 09/20

    102 Purpose of This Guidance Manual ..... 09/20

**200 ADMINISTRATION**

    201 Overview

        201.1 Statutory Authority..... 09/20

        201.2 Mission & Vision..... 09/20

        201.3 TC 59 Forms ..... 09/20

    202 Organization & Responsibilities

        202.1 Organizational Chart ..... 09/20

        202.2 Central Office ..... 09/20

            202.2.1 Strategic Planning Branch ..... 09/20

            202.2.2 Modal Programs Branch..... 09/20

            202.2.3 Transportation Systems Branch ..... 09/20

            202.2.4 Data Management Branch ..... 09/20

            202.2.5 Traffic & Equipment Management Branch ..... 09/20

            202.2.6 Customer Service Branch ..... 09/20

    203 Planning Activity Matrix..... 05/23

    204 District Planning

        204.1 Overview ..... 09/20

        204.2 Additional Responsibilities..... 09/20

    205 DataMart..... 09/20

    206 Planning Consultant Contract Management

        206.1 On-Call Planning Consultants..... 09/20

        206.2 Contracted Planning Consultants ..... 09/20

        206.3 Contract Process & Oversight ..... 09/20

<b>300</b>	<b>KEY PLANS</b>	
301	Kentucky Transportation Cabinet (KYTC) Strategic Plan	
	301.1 Background .....	09/20
	301.2 Existing Plan .....	09/20
302	Kentucky Long-Range Statewide Transportation Plan (LRSTP)	
	302.1 Overview .....	09/20
	302.2 Kentucky LRSTP Process .....	09/20
303	Kentucky Freight Plan	
	303.1 Overview .....	09/20
	303.1.1 National Plan Requirements .....	09/20
	303.1.2 Kentucky Plan Requirements .....	09/20
	303.2 Kentucky Freight Plan Process .....	09/20
304	Kentucky Statewide Rail Plan	
	304.1 Overview .....	09/20
	304.1.1 Existing Plan .....	09/20
	304.1.2 Railroad Oversight & Regulation .....	09/20
	304.2 Kentucky Statewide Rail Plan (KSRP) Process .....	09/20
305	Kentucky Six-Year Highway Plan	
	305.1 Overview .....	09/20
	305.2 Six-Year Highway Plan Process .....	09/20
<b>400</b>	<b>FEDERAL-AID HIGHWAY PROGRAM</b>	
401	Funding Availability & Use	
	401.1 Funding Sources .....	09/20
	401.2 Use of Funds .....	09/20
402	Planning Work Program	
	402.1 Overview .....	09/20
	402.2 Planning Work Program Process .....	09/20
	402.3 Project Selection .....	09/20
403	Training for Planning Personnel	
	403.1 Overview .....	09/20
	403.2 Statewide Transportation Planning (STP) Meetings .....	09/20
	403.3 Focused Training .....	09/20
<b>500</b>	<b>HIGHWAY INFORMATION &amp; MONITORING SYSTEMS</b>	
501	Overview	
	501.1 Organization .....	09/20
	501.2 Highway Performance Monitoring System (HPMS) Data .....	09/20
	501.3 Highway Information System (HIS) Data .....	09/20
	501.4 HPMS & HIS Data Use .....	09/20
502	Geospatial Data & Maps	
	502.1 Geospatial Data Production .....	09/20
	502.2 Map Production .....	09/20

<b>500</b>	<b>HIGHWAY INFORMATION &amp; MONITORING SYSTEMS (cont.)</b>	
503	Transportation Systems	
503.1	Transportation Systems Branch Responsibilities.....	09/20
503.2	National Highway System (NHS).....	09/20
503.3	National Truck Network (NN).....	09/20
503.4	State Primary Road System (SPRS).....	09/20
503.5	Functional Classification.....	09/20
503.6	Coal Haul.....	09/20
503.7	Appalachian Development Highway System.....	09/20
503.8	Alternative Fuel Corridors.....	09/20
504	Traffic Count Data	
504.1	Overview.....	09/20
504.2	KYTC Traffic Database.....	09/20
504.3	Interactive Traffic Count Maps.....	09/20
504.4	Permanent Data Collection Stations.....	09/20
504.5	Traffic Data Collection Equipment Procurement & Maintenance....	09/20
505	Highway Performance Monitoring System (HPMS) Reporting	
505.1	Overview.....	09/20
505.2	Purpose & Use.....	09/20
<b>600</b>	<b>OFFICIAL ORDERS &amp; SYSTEM CHANGES</b>	
601	Statutory Authority.....	09/20
602	Acceptance Into State Primary Road System (SPRS).....	09/20
603	Types of Official Orders	
603.1	Overview.....	09/20
603.2	Base Highway System Modifications.....	09/20
603.3	Roadway Segment Transfers.....	09/20
603.4	Roadway Closure/Abandonment.....	09/20
<b>700</b>	<b>PROJECT DEVELOPMENT</b>	
701	Public Involvement	
701.1	Overview.....	09/20
701.2	Public Involvement Process.....	09/20
702	Purpose & Need Statement	
702.1	Overview.....	09/20
702.2	Purpose & Need Process.....	09/20
703	Planning Support	
703.1	Overview.....	09/20
703.2	Metropolitan Planning Organization (MPO) Planning.....	09/20
703.3	Area Development District (ADD) Regional Transportation Planning.....	09/20
703.4	Continuous Highway Analysis Framework (CHAF) Database.....	09/20
703.5	Network Screening: Excess Expected Crashes (EEC) and Vehicle Hours of Delay (VHD).....	09/20
703.6	Travel Demand Modeling/Traffic Forecasting.....	09/20
703.7	U.S. Army Corps of Engineers Public Notice Coordination.....	09/20

<b>700</b>	<b>PROJECT DEVELOPMENT (cont.)</b>	
704	Planning Studies	
704.1	Overview .....	09/20
704.2	Small Urban Area (SUA) Studies .....	09/20
704.3	Corridor Studies .....	09/20
704.4	Data Needs Analysis (DNA) Studies .....	09/20
704.5	Interchange Justification/Modification Studies .....	09/20
704.6	Special Studies .....	09/20
705	Multimodal Planning	
705.1	Overview .....	05/23
705.2	Bicycle Planning .....	05/23
705.3	Pedestrian Planning .....	05/23
705.4	Ferry Boat Planning .....	05/23
705.5	Rail Planning .....	05/23
705.6	Public Riverports .....	05/23
706	Intermodal Planning & Modal Connectors	
706.1	Overview .....	09/20
706.2	Intermodal Planning Process .....	09/20
707	Freight Planning	
707.1	Overview .....	09/20
707.2	Truck Freight & Truck Parking .....	09/20
707.3	Rail Freight .....	09/20
707.4	Waterborne Freight .....	09/20
707.5	Air Freight .....	09/20
707.6	Pipeline Network Planning .....	09/20
<b>800</b>	<b>REPORTING OF PERFORMANCE MEASURES</b>	
801	Congestion Management	
801.1	Overview .....	09/20
801.2	Congestion Toolbox .....	09/20
801.3	Mobility Analysis Program .....	09/20
801.4	Air Quality Planning .....	09/20
802	Performance-Based Planning Measures	
802.1	Overview .....	09/20
802.2	Level of Travel Time Reliability .....	09/20
802.3	Truck Travel Time Reliability .....	09/20
802.4	Annual Hours of Peak Hour Excessive Delay .....	09/20
802.5	Percent Non-Single Occupant Vehicle Travel .....	09/20
<b>900</b>	<b>PROJECT PRIORITIZATION</b>	
901	Strategic Highway Investment Formula for Tomorrow (SHIFT)	
901.1	Overview .....	09/20
901.2	Model Development .....	09/20
901.3	Implementation .....	09/20

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**900 PROJECT PRIORITIZATION (cont.)**

**902 SHIFT Statewide & Regional Scoring**

        902.1 Statewide Scoring Formula .....09/20

        902.2 Regional Scoring Formula .....09/20

        902.3 Geographic Regions & Scoring Adjustments .....09/20

        902.4 Scoring Boost Process .....09/20

**02 ACRONYMS .....09/20**

**03 GLOSSARY.....09/20**

**04 TABLES & FIGURES .....09/20**

**9000 EXHIBITS**



	<p><i>Chapter</i></p> <p>INTRODUCTION</p>
	<p><i>Subject</i></p> <p>Design of This Guidance Manual</p>

**PL-101.1 ORGANIZATION & NUMBERING**

**“PL” Prefix**—Preceding each numbered division, this prefix stands for the manual title *Planning Guidance Manual*.

**Chapters**—The content of this manual is divided into chapters. Each chapter is assigned a consecutive number by hundreds (100, 200, 300, etc.). The chapter title appears at the top of each page.

**Subjects**—Chapters are divided into subjects. Each subject is assigned a consecutive number within its chapter range (PL-101, PL-102, PL-103, etc.) The subject number and title appear at the top of each page.

**Sections**—Subjects are divided into sections. Each section is assigned a consecutive number within its subject range (PL-101.1, PL-101.2, etc.) Section numbers appear down the left side of each page. A corresponding title is to the right of each section number.

**Subsections**—Some sections are divided into subsections. Each subsection is assigned a consecutive number within its section range (PL-101.1.1, PL-101.1.2, etc.) Subsection numbers appear down the left side of each page. A corresponding title is to the right of each subsection number.

**Date**—The latest issuance date of a subject appears at the bottom of each page of the subject. This date agrees with the latest issuance date shown for the subject in the “Table of Contents.”

**Page Numbering**—Each subject has its own page numbering, which appears at the bottom of each page.

**Questions and Answers**—Throughout this manual, transportation planning programs and processes are described in answer to six primary questions:

- How is the program or process initiated?
- What inputs are required from others?

**PL-101.1 ORGANIZATION & NUMBERING (cont.)**

- What forms are used?
- What are the steps to implementation?
- When is the program or process considered complete?
- What is the approval chain?

**PL-101.2 LOCATING INFORMATION**

One index appears at the front of the manual, and four indexes appear at the back:

**Table of Contents (PL-01)**—This index at the front lists the numbers and titles of the manual’s chapters, subjects, sections, and subsections, as well as other information, in numerical order. It includes the latest issuance dates of all the subjects. As the manual matures, these dates change.

**List of Acronyms (PL-02)**—This index at the back lists the acronyms used throughout the manual.

**Glossary (PL-03)**—This index at the back lists key information in alphabetical order.

**Tables & Figures (PL-04)**—This index at the back lists the manual’s tables and figures in numerical order.

**Table of Exhibits (PL-9000)**—This index at the back lists the manual’s exhibits, including forms, worksheets, diagrams, etc., by number and title.

**PL-101.3 CROSS REFERENCES**

A boldfaced subject number appearing within the text is a cross reference to additional information.

**PL-101.4 QUESTIONS**

For additional copies of this manual, contact:

Organizational Management Branch  
Office of Human Resource Management  
Transportation Cabinet Office Building, 6<sup>th</sup> Floor West  
200 Mero Street  
Frankfort, KY 40622



	<i>Chapter</i> INTRODUCTION
	<i>Subject</i> Purpose of This Guidance Manual

The purpose of the *Planning Guidance Manual* (PGM) is to provide a topics-based assessment of Division of Planning responsibilities to serve as both an internal guide for Division of Planning personnel and a reference manual for the Division of Planning’s external customers throughout KYTC, as well as the general public. This manual seeks to root each specific planning responsibility in state and federal law (the “why?”), the expectation that the law places on that responsibility (the “what?”), the timeframe imposed by the respective law (the “when?”), the organizational unit responsible for ensuring this responsibility is met (the “who?”) and the general workflow necessary to carry out each responsibility (the “how”).



	<p><i>Chapter</i></p> <p>ADMINISTRATION</p>
	<p><i>Subject</i></p> <p>Overview</p>

**PL-201.1 STATUTORY AUTHORITY**

The Kentucky Transportation Cabinet (KYTC) Division of Planning is charged with providing a “continuing, comprehensive, and cooperative (3C)” transportation planning process for the Commonwealth of Kentucky as established by state and federal law (including [23 CFR 420](#), [23 CFR 450](#), [23 CFR 460](#), [23 CFR 470](#), [23 CFR 490](#), [KRS 174](#), [KRS 176](#), and [KRS 177](#)). The Division of Planning demonstrates the wide-ranging responsibilities of this planning process online at:

<https://transportation.ky.gov/Planning/Pages/default.aspx>

**PL-201.2 MISSION & VISION**

KYTC’s Strategic Mission and Vision are online at:

<https://transportation.ky.gov/Pages/AboutUs.aspx>

Both guide the Division of Planning’s own Mission Statement, which is as follows:

“Provide support, strategy, and direction for maintaining and improving a safe, reliable, customer-oriented transportation network through the collection, management, analysis/utilization, and reporting of data and information.”

Much of KYTC’s overall continuous project delivery cycle is focused on project design, construction, and maintenance systems; however, the true cyclical planning and visioning work for KYTC’s programs and projects occurs in the relationships fostered with and through those other functional areas (Figure 1).



**Figure 1. Transportation Project Relationships**

**PL-201.2 MISSION & VISION (cont.)**

The work accomplished by the Division of Planning envisions continuous transportation improvement in the Commonwealth. Four basic steps guide the visioning effort and establish the planning topics that undergird this work. These steps are as follows:

- Understand the issues and concerns experienced in the day-to-day design, construction, operation, and maintenance of transportation systems across Kentucky.
- Compare the data generated by the continuous assessment of transportation conditions (“where we are”) against the backdrop of the Long-Range Statewide Transportation Plan to determine progress toward meeting long-range goals (“where we want to be”).
- Reevaluate the project and program commitments already made to achieve long-range transportation goals and ensure that those commitments are still the most effective programs and projects to meet or exceed the transportation vision for Kentucky.
- Maintain existing programs in fulfillment of KYTC’s long-range vision, and adjust them as necessary to maximize benefits for the people of Kentucky.

By doing this visioning work for KYTC, the Division of Planning ensures consistency with KYTC’s long-range transportation goals and policies as programs and projects are funneled into long-range, six-year, biennial and annual transportation plans and programs. The collaborative efforts with KYTC’s District Highway Offices, Metropolitan Planning Organizations (MPOs), Area Development Districts (ADDs), local governments, other state and federal agencies, and private sector interests serve to enhance the continuity between long-range and short-range transportation planning across the Commonwealth.

**PL-201.3 TC 59 FORMS**

KYTC’s Office of Human Resource Management, Organizational Management Branch, maintains an Internet electronic forms library as the official resource for customers of KYTC forms at:

<https://transportation.ky.gov/Organizational-Resources/Pages/Forms-Library.aspx>

**PL-201.3 TC 59 FORMS (cont.)**

The forms listed below in Table 1. pertain directly to Division of Planning activities and are listed under the “TC 59 Planning” category of the online forms library:

**Table 1. TC 59 Planning Forms**

<b>Form Number</b>	<b>Title</b>	<b>Electronic</b>	<b>Print</b>	<b>Instructions</b>
TC 59-4	Ferry Traffic Count	Excel	PDF	PDF
TC 59-100	Coal Shipment Route and Tonnage Report	Word	PDF	---
TC 59-101	Bicycle/Share the Road Warning Sign Request	Word	PDF	---
TC 59-102	Kentucky Railroad Annual Report	Excel	PDF	---
TC 59-103	Application for Certificate of Convenience and Necessity to Operate Intrastate Toll Ferry or Bridge	Word	PDF	---
TC 59-105	Kentucky Riverport Improvement (KRI) Application	Excel	PDF	---
TC 59-106	Ferry Boat Program (FBP) Application	Word	PDF	PDF

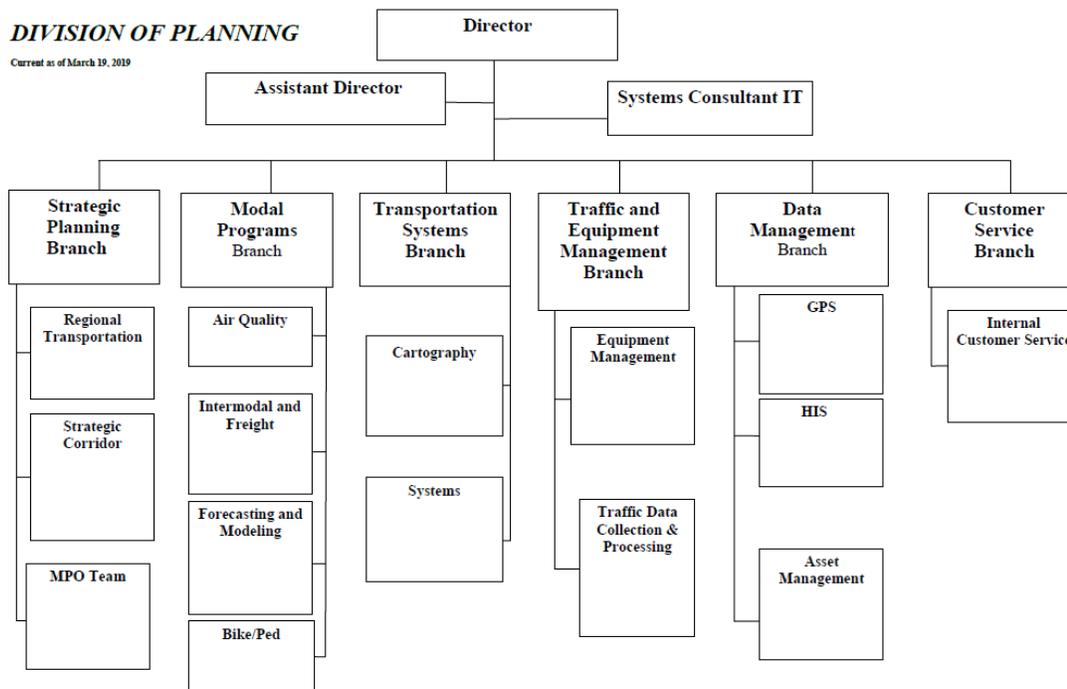
The KYTC Division of Planning uses these official forms to support the programs described in the “title” above. There are also numerous unofficial forms used throughout the KYTC planning function that serve to collect, analyze, report, or disseminate data and information.



 <p>Division of <b>PLANNING</b> Kentucky Transportation Cabinet</p>	<p><i>Chapter</i></p> <p>ADMINISTRATION</p>
	<p><i>Subject</i></p> <p>Organization &amp; Responsibilities</p>

**PL-202.1 ORGANIZATIONAL CHART**

**Figure 2. Division of Planning Organizational Chart**



**PL-202.2 CENTRAL OFFICE**

The Director of the Division of Planning is responsible for the efficient and effective implementation of KYTC’s transportation planning programs and is supported by five engineering and technical branches, one support branch, an Assistant Director, and a Systems Consultant IT (information technology specialist) to deliver planning services and products.

The Assistant Director of the Division of Planning is responsible for the implementation of the Strategic Highway Investment Formula for Tomorrow (SHIFT) and other duties as assigned by the Division Director.

**PL-202.2 CENTRAL OFFICE (cont.)**

The information technology specialist is assigned to the Division Director and works with the Director to coordinate efficient data flow between the Division's internal and external data suppliers and customers.

The individual branch responsibilities and the important companion roles of the KYTC Highway Districts and the KYTC DataMart information exchange are outlined in PL-202.2.1 through PL-205.

**PL-202.2.1 Strategic Planning Branch**

This branch is responsible for the coordination of Statewide, District, MPO, and ADD regional transportation planning activities and the ultimate consolidation of those planning efforts into prioritized state and federal plans, projects, and programs.

Topics directly under the purview of this branch include:

- KYTC's Long-Range Statewide Transportation Plan
- KYTC's Recommended Six-Year Highway Plan
- MPO planning
- ADD regional transportation planning
- Corridor planning studies, interchange justification/modification studies, project planning studies, Small Urban Area (SUA) Studies, as well as special planning studies
- Statewide planning consultant management

**PL-202.2.2 Modal Programs Branch**

This branch is responsible for statewide planning efforts involving multimodal freight systems; modal facilities such as ferry boats, railroads, and public riverports; and active transportation modes (bicycle and pedestrian). This branch also prepares and uses traffic models to forecast transportation system traffic volumes, assess levels of traffic congestion, and analyze air quality effects of transportation system improvements.

Topics directly under the purview of this branch include:

- KYTC's freight plan
- KYTC's rail plan
- Multimodal planning (ferry boats, rail, riverports)
- Intermodal planning/modal connectors
- Travel demand modeling/traffic forecasting
- Bicycle and pedestrian planning

**PL-202.2.3 Transportation Systems Branch**

This branch is responsible for ensuring that any changes to the State Primary Road System (SPRS) are accomplished within the legal framework established by [23 CFR 470](#), [KRS 177.020](#), and [603 KAR 3:030](#). This branch also maintains the records associated with the National Truck Network (NN), Kentucky's Coal Haul System, and the federally designated Forest Highway (FH) System. In addition, this branch coordinates the production of the Official State Highway Map and other interactive and printable map products.

Topics under the purview of this branch include:

- Roadway systems changes/official orders
- National Truck Network (NN)
- Kentucky Coal Haul System
- Forest Highway (FH) System
- Alternative Fuel Corridors
- Cartography and mapping

**PL-202.2.4 Data Management Branch**

This branch is responsible for maintaining the Highway Information System (HIS). HIS contains the electronic, Geographic Information System (GIS) based road centerline network that serves as KYTC's linear referencing system (LRS). HIS also contains information about traffic counts, roadway features and systems, and other KYTC data routinely updated to facilitate analysis by the KYTC Division of Planning.

Topics under the purview of this branch include:

- Geospatial data
- Systems definition—National Highway System (NHS)
- Systems definition—State Primary Road System (SPRS)
- Systems definition—Functional Classification
- Highway Performance Monitoring System (HPMS)
- Performance-based planning measures

**PL-202.2.5 Traffic & Equipment Management Branch**

This branch is responsible for collecting several types of traffic data to provide useful analytical information to aid in engineering decisions, including traffic volumes, vehicle classifications, vehicle weights, vehicle speeds, and turning movements. This branch collects, processes, stores, and reports traffic data for use by KYTC, as well as other governmental and private agencies, to meet the Federal Highway Administration's (FHWA's) reporting requirements.

**PL-202.2.5 Traffic & Equipment Management Branch (cont.)**

Topics under the purview of this branch include:

- KYTC Traffic Database
- Interactive Traffic Count Maps
- Permanent Data Stations
- Weigh-In-Motion
- Traffic data equipment procurement

**PL-202.2.6 Customer Service Branch**

This branch is responsible for administrative, budgetary, and expenditure tracking of activities directly attributable to the completion of the annual State Planning and Research (SPR) Work Program.

Topics under the purview of this branch include:

- SPR Planning Work Program
- Training for KYTC Division of Planning Personnel



	<p><i>Chapter</i></p> <p>ADMINISTRATION</p>
	<p><i>Subject</i></p> <p>Planning Activity Matrix</p>

**Table 2.** outlines the Planning Activity Matrix by listing 21 transportation planning topics, which are then broken down into 62 subtopics. For each subtopic, the matrix briefly describes what is done, why it is done, when it is done, and which KYTC Division of Planning Branch (or other office) is responsible for ensuring completion.



**Table 2. Planning Activity Matrix**

<i>Planning Topic</i>	<i>Subtopic</i>	<i>What is done?</i>	<i>Why is it done?</i>	<i>When is it done?</i>	<i>Who does this?</i>
<b>Air Quality</b>	Non-Attainment and Maintenance Areas	The federal Clean Air Act established air quality standards and required each state to develop a State Implementation Plan (SIP) that sets emissions budgets and defines areas that are in Non-attainment status or are Attainment areas with Maintenance Plans.	40 CFR 50; 23 CFR 450.322 42 USC 7506(c)	The SIP is a dynamic document that is routinely updated by the state Division of Air Quality (DAQ) with transportation data assistance from KYTC	Modal Programs
	Transportation Conformity	State and regional transportation plans, programs, and projects must stay within the established emissions budgets and thereby conform to the SIP.	40 CFR 93.100 to 128; 23 CFR 450.326; 23 CFR 450.328; 42 USC 7506(c)	Conformity analyses are done as needed by KYTC and partners and approved by FHWA.	Modal Programs
	CMAQ Analysis	The federal CMAQ transportation funding program is administered by the KYTC Department of Rural and Municipal Aid and was established to help reduce traffic congestion and benefit air quality.	23 CFR 149	Planning assists the CMAQ process by providing a quantitative air quality analysis for each CMAQ application.	Modal Programs
<b>Bicycle and Pedestrian Program</b>	Bike/Ped Procedures and Policies	The Bike/Ped Program is to promote and facilitate the increased use of non-motorized modes of transportation. This includes developing public education, promotion, and safety programs for using such facilities.	USDOT Policy Statement, March 2010; KRS 174.120 and .125; KRS 189; 601 KAR 14:020	The Bike/Ped Program is a continuing effort with annual activities funded through the Planning Work Program.	Modal Programs
	Kentucky Bicycle and Bikeway Commission (KBBC)	The KBBC was created by state law (KRS 174.125) for the purpose of representing the interests of cyclists including the identification of bicycle and bikeway needs across Kentucky.	KRS 174.125	KBBC activities are on-going and are actively supported by the KYTC Bike/Ped Coordinator.	Modal Programs
	Paula Nye Memorial Education Grants	Each year, proceeds from the sale of "Share the Road" bicycle license plates fund educational grants named for KYTC's first Bike/Ped Coordinator, Paula Nye.	KYTC Program to distribute proceeds from bicycle license plate sales.	Paula Nye Grant applications are due on or before October 1 each year and grants are awarded usually by December 31.	Modal Programs

**Table 2. Planning Activity Matrix**

<i>Planning Topic</i>	<i>Subtopic</i>	<i>What is done?</i>	<i>Why is it done?</i>	<i>When is it done?</i>	<i>Who does this?</i>
<b><i>Bicycle and Pedestrian Program cont.</i></b>	Complete Streets, Roads, and Highways	The Complete Streets, Roads, and Highways program and associated <a href="#">Manual</a> promote Complete Streets as a tool to provide safe transportation for all users in Kentucky through planning, design, and implementation on all new construction and reconstruction projects.	<a href="#">KYTC Complete Streets, Roads, and Highways Policy</a>	The Complete Streets, Roads, and Highways program is an ongoing effort throughout all transportation activities.	Modal Programs
<b><i>Coal Haul System</i></b>		A “directory” of the Coal Haul System (route maps, haul road mileage, and total ton-miles hauled) is provided on-line. The Extended Weight Coal or Coal By-Products Haul Road System is updated by Official Order each year to include roads on which overweight vehicles were permitted to carry more than 50,000 tons during the previous calendar year.	KRS 177.977 and KRS 177.9771; KRS 42.455	Updated on-line twice per year with process initiated in December and June of each year. The Extended Weight Haul Road System is designated by Official Order prior to November 1 each year.	Transportation Systems
<b><i>Congestion Management</i></b>	Congestion Toolbox	The Congestion Toolbox guides KYTC project scoping efforts to the most practical solution for the traffic problem being addressed by a proposed project.	23 USC 134; 603 KAR 5:120	The Congestion Toolbox is used when initial scoping is done for candidate projects.	Strategic Planning
	Mobility Analysis Program	A KYTC performance-based planning initiative, the Mobility Analysis Program is used to identify trends and issues related to urban traffic congestion.	This Program supports the federal performance-based planning directive.	The Mobility Analysis Program is used to produce information for FHWA annual reports.	Modal Programs
<b><i>Freight Planning</i></b>	Truck Freight and Truck Parking	KYTC works closely with the KY Freight Advisory Committee for Transportation (KFACT) and FHWA to assure compliance with the FAST Act of 2015 and its freight planning requirements.	23 USC 167(d) 23 USC 167 (f); 23 USC 167 (g); 49 USC 70202	Truck freight planning and truck parking studies are on-going efforts funded thru the Planning Work Program.	Modal Programs
	Rail Freight	Rail freight planning is a cooperative effort between KYTC, the Federal Rail Administration (FRA) and the privately-owned railroad companies that operate in Kentucky.	49 USC 70202	Rail freight planning is an on-going effort funded thru the Planning Work Program.	Modal Programs

**Table 2. Planning Activity Matrix**

<i>Planning Topic</i>	<i>Subtopic</i>	<i>What is done?</i>	<i>Why is it done?</i>	<i>When is it done?</i>	<i>Who does this?</i>
<b>Freight Planning (cont.)</b>	Waterborne Freight	Waterborne freight planning for Kentucky’s inland waterway system is coordinated through the legislatively created Water Transportation Advisory Board (WATB).	49 USC 70202	Waterborne freight planning is an on-going effort funded thru the Planning Work Program.	Modal Programs
	Air Freight	KYTC’s air freight planning is a monitoring and air cargo data gathering effort that relies on the FAA, the KYTC Division of Aviation, and the air freight industry.	49 USC 70202	Air freight planning is an on-going effort funded thru the Planning Work Program.	Modal Programs
	Pipelines	KYTC’s pipeline freight planning is a monitoring and data gathering effort that relies on USDOT’s PHMSA, the Kentucky Public Service Commission, and the pipeline industry.	49 USC 70202	Pipeline freight planning is an on-going effort funded thru the Planning Work Program.	Modal Programs
<b>Intermodal Connectors</b>		Public roads leading to major intermodal terminals are designated as “NHS connectors” by FHWA. KYTC works with MPOs and freight transport facilities to determine eligibility for this designation.	23 USC 167(d)	An on-going effort is required to maintain and update Kentucky’s list of designated NHS connectors.	Strategic Planning
<b>Highway Information System (HIS)</b>	Geospatial Data and Map Production	HIS is based on a GIS network of all the public roadway centerlines (and some privately owned) for the state of Kentucky. The centerlines serve as a base to “locate” roadway information. Data collection is on-going, and the geospatial information is “refreshed” weekly. Maps are produced from this data by the Transportation Systems Branch’s Cartography Team.	23 USC 502(h); 23 CFR 470; KRS 176.055; KRS 154.022-040	Geospatial data is continuously updated with map production ranging from the Official Highway Map to special-purpose maps as requested.	Data Management and Transportation Systems
	National Highway System (NHS)	The NHS was established by USDOT in 1995 in cooperation with the states, local officials, and MPOs. It includes Interstate Highways and other principal arterial roads which serve population centers, support commerce, and meet national defense needs through STRAHNET.	Section 1104 of MAP-21; 23 USC 103 23 CFR 470	NHS data is continuously updated and used for HPMS and national performance measure reporting and mapping. Changes to the NHS require FHWA approval.	Data Management and Transportation Systems

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<b>Highway Information System (HIS) cont.</b>	National Truck Network (NN)	The NN was authorized by Federal Law in 1982 to establish a national network of highways designated for large trucks. Though different from the NHS, many NHS routes are included on the NN.	STAA of 1982; 23 CFR 658; 602 KAR 5:070	NN data is monitored routinely and any changes to the NN require FHWA approval.	Data Management and Transportation Systems
	State Primary Road System (SPRS)	The SPRS is a roadway classification system based on the service that a highway facility provides. Data collection, monitoring, and updating is an essential role of KYTC Division of Planning with assistance from the KYTC Districts, other KYTC Divisions, MPOs, ADDs, and local governments.	KRS 177.020; 603 KAR 3:030	SPRS data maintenance is continual to keep pace with system improvements and changes resulting from regular roadway inventory updates.	Data Management and Transportation Systems
	Functional Classification	KYTC's Functional Classification System is an important planning tool that groups streets and highways according to the character of travel service they provide. Modifications require approval of the KYTC Secretary through the Official Order process.	FHWA Criteria and Procedures	Function Classification System data is continuously monitored, and updates are made as community growth and changes in travel patterns necessitate.	Data Management and Transportation Systems
	Appalachian Development Highway System (ADHS)	The Kentucky portion of the ADHS contains 575 miles of roadway in Eastern and Southern Kentucky and is nearing completion as originally conceived in 1965. Modifications to the ADHS generally occur as newly completed sections of roadway are constructed and are accommodated by Official Order.	Appalachian Regional Development Act (ARDA)	Updates to the ADHS are made as changes occur or new segments are added. The overall ADHS effort has been guided by an "ADHS Cost Estimate" done for ARC every 5 years.	Data Management and Transportation Systems
	Alternative Fuel Corridors	Section 1413 of the FAST Act required that FHWA collaborate with the US Department of Energy to designate a national network of alternative fueling and charging infrastructure. Kentucky has four designated alternative fuel corridors and 2 designations currently pending.	23 CFR 658.11	Annual updates are made to the Alternative Fuel Corridor designations as federally prescribed corridor fueling station requirements are met.	Modal Programs and Data Management

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<b>Highway Mapping</b>	Official State Highway Map	The Official State Highway Map is a static map updated annually using HIS data layers. This map is made available to the public for informational purposes about Kentucky’s highway system.	23 CFR 470; KRS 176.055	The Official State Highway Map is generally updated for public distribution each year.	Transportation Systems
	Printable Maps	Printable maps are made available in PDF form for a variety of uses including General County Maps, Traffic Maps, NHS and NN Maps, and Coal Haul Maps, among others. They are available on the KYTC Division of Planning website.	23 CFR 470; KRS 176.055	Printable Maps are static maps that are updated as current information necessitates.	Transportation Systems
	Interactive Maps	Interactive mapping is accomplished using digital mapping techniques that incorporate spatial HIS data and produce maps showing requested data layers.	23 CFR 470; KRS 176.055	“On demand” using tools available on KYTC’s DataMart website.	Transportation Systems
<b>Highway Performance Monitoring System (HPMS)</b>		HPMS is a national information system that includes data on the extent, condition, performance, use, and operating characteristics of the nation’s highways. HPMS is used to support data-driven decision-making within FHWA, State DOTs, and the US Congress.	23 USC 502(h); 23 USC 315; 23 CFR 490.207; 23 CFR 490.307	HPMS data reporting is updated annually in concert with the HPMS Field Manual and is submitted by the State DOTs to FHWA by June 15 of each year.	Data Management
<b>Multimodal Programs</b>	Ferry Boat Program	KYTC coordinates with the 10 active ferry boat operations across the state and provides funding for 7 of those through the Six-Year Highway Plan. Two are federally funded and one is privately funded. Each provides an essential local traffic movement function.	23 USC 147; FAST Act Section 1112; KRS 280.010 to KRS 280.130	State contracts for ferry boat funding must be completed before July 1 each year. Federal FBP funds must be obligated during the Fiscal Year they are allocated.	Modal Programs
	Rail Planning	KYTC is responsible for regulating Kentucky’s railroads pursuant to KRS 174.057. KYTC also oversees the Kentucky Rail Crossing Improvement (KRCI) Program and updates to the Kentucky Statewide Rail Plan.	49 CFR 266.15; KRS 174.057; 603 KAR 7:090	KRCI and federal grant projects are applied for and awarded in the year funding is available. The Statewide Rail Plan is updated as needed.	Modal Programs

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<b>Multimodal Programs (cont.)</b>	Public Riverports	KYTC supports the Kentucky Water Transportation Advisory Board as it conducts riverport planning activities and administers the Kentucky Riverport Improvement (KRI) Grant Program.	KRS 65.510 to KRS 65.650; KRS 174.200, .205,.210; KRS 154.80-140	KRI projects are applied for and awarded in the year funding is available.	Modal Programs
<b>Planning Forms Library</b>		The Planning Forms Library is maintained by the KYTC Office of Human Resource Management. These forms are collected by category with Planning Forms identified as "TC 59" Forms.	The Forms Library is an organizational effort to collect all KYTC forms in a single repository.	The Organizational Management Branch adds new TC 59 Forms as those official forms are developed by the Division of Planning.	Customer Service
<b>Roadway Systems Changes/Official Orders</b>		District Planning and CDE initiate the request, Div. of Planning prepares Official Order and, if no land transfer is involved, recommends to the Office of Legal Services and the Commissioner of Highways for approval. If land is to be transferred to another entity, Planning routes Official Order through the Div. of Right of Way who coordinates approvals with Legal Services, the Commissioner of Highways, and the Kentucky Finance and Administration Cabinet.	23 CFR 470; KRS 177.020; 603 KAR 3:030; 23 CFR 620	Official Orders are done when any change occurs to the State Primary Road System (SPRS)	Transportation Systems
<b>SHIFT (Strategic Highway Investment Formula for Tomorrow)</b>		SHIFT is a collaborative and transparent, data-driven, objective approach to highway project prioritization. SHIFT produces statewide and regional priorities to be considered for inclusion in the Governor's Recommended Six-Year Highway Plan.	KRS 176.430	SHIFT is a biennial process that begins with a newly Enacted Six-Year Highway Plan (SYP) and ends with the submittal of the next Recommended 6YP.	Strategic Planning

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<b>Statewide Planning Work Program and Annual SP&amp;R/PL Fund Usage</b>		Each year, the Division of Planning conducts the Planning Work Program development process in consultation with the Highway Districts, MPOs, and ADDs. The annual Planning Work Program document, and its proposed use of SP&R and PL Funds, is jointly approved by FHWA and FTA.	23 USC 134; 23 USC 135; Public Law 114-94; 23 CFR 420; 23 USC 505; 49 USC 5303-5305 and 5313(b); 49 CFR 18; 2CFR 200; 23 CFR 450	The Planning Work Program is submitted to FHWA by mid-May and FHWA/FTA approves by mid-June, so the new Work Program is in effect by July 1 of each year.	Planning Director and Customer Service
<b>Traffic Counts</b>	Traffic Count Database	The oversight and management of traffic data involves the collection and use of vehicle volumes, classifications, weights, speeds and turning movements across Kentucky's road network. Raw data is collected, adjusted, and displayed in the Traffic Count Database.	23 CFR 500.203(a); 23 CFR 500.204	Traffic data collection is a continuous activity.	Traffic and Equipment Management
	Interactive Traffic Count Maps	Traffic Count Database information is readily accessible to anyone through interactive traffic count maps available from KYTC's DataMart and Division of Planning websites.	KYTC provides these to make traffic count information more readily available to users.	The data supplied from the Traffic Count Database is refreshed weekly.	Traffic and Equipment Management
	Permanent Data Collection Stations: ATRs and WIM	Federal law requires that sufficient continuous traffic count coverage be afforded to meet the statistical precision of HPMS and other data needs. Permanent data stations (Automatic Traffic Recorders (ATRs) and Weigh-in-Motion (WIM) equipment) provide that continuous coverage.	23 CFR 500.204(a); 23 CFR 500.204(c)	Permanent station data collection is a continuous activity.	Traffic and Equipment Management
	Traffic Data Collection Equipment Procurement and Maintenance	The traffic count program's dependence on permanent data collection stations, tube counters, and other devices necessitates that equipment replacement and repair are integral to the program and any equipment procurement be conducted in accordance with Kentucky's Model Procurement Code.	KRS 45; KRS 45A; 200 KAR 5	Equipment replacement and repair are continuous activities.	Traffic and Equipment Management

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<b>Training for Planning Personnel</b>		In conjunction with the annual Planning Work Program, training for Planning personnel is budgeted. During each Fiscal Year, training assignments are made by the Division Director in line with relative need and budgetary constraints.	This is necessary to ensure core competency for Planning personnel.	Training for Planning Personnel is an on-going activity, necessary to keep pace with new planning methodologies and technologies.	Planning Director and Customer Service
<b>Transportation Planning Support</b>	MPO Planning	KYTC supports federally required MPO planning activities in nine metropolitan areas across Kentucky. The MPOs develop Long Range Transportation Plans, short-range Transportation Improvement Programs, coordinate with local agencies and the public, fund state and MPO initiatives, and serve many other transportation planning purposes.	23 USC 134 and 135; 23 CFR 420; 23 CFR 450.300 to .340; 23 CFR 450.218(b); 23 CFR 460; 23 CFR 470.105(a); 23 CFR 490; 23 USC 101(a)(33); KRS 174, 176, 177	Each MPO must have a Uniform Planning Work Program (UPWP) approved by July 1 of each year. The UPWP guides programmatic undertakings throughout the year.	Strategic Planning
	ADD Regional Transportation Planning	KYTC provides technical assistance and coordination for regional transportation planning activities in Kentucky's 15 Area Development Districts (ADDs). The ADDs help to prioritize rural transportation needs in accordance with identified statewide planning factors.	49 USC 5304 (e)(1); 23 CFR 450.210; 23 CFR Subpart B; 23 CFR 450.219(b)(1)	Each individual ADD is assigned annual tasks by KYTC through the ADD's Annual Work Program (AWP) contract approved by July 1 of each year.	Strategic Planning
	PIF/CHAF Database	The Continuous Highways Analysis Framework (CHAF) enables users to collect, track, analyze, and rank project needs across Kentucky. The CHAF data factors prominently in the SHIFT project prioritization process.	KRS 176.430	CHAF data is continuously updated and used for SHIFT each odd numbered year prior to each Regular Legislative Session.	Strategic Planning
	Network Screening (EEC/VHD)	Network screening uses data to manage and evaluate highway system performance. Highway safety and congestion metrics have been developed to produce Excess Expected Crashes (EEC) and Vehicle Hours of Delay (VHD).	KRS 176.430	EEC and VHD data is used in the SHIFT scoring process to prioritize projects for the KYTC Six-Year Highway Plan.	Strategic Planning

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<b>Transportation Planning Support (cont.)</b>	Travel Demand Modeling/Traffic Forecasting	Traffic forecasting is accomplished through use of various tools including statewide and urban travel modeling. Outputs provide traffic data used in the planning and design of KYTC Six-Year Highway Plan projects.	23 USC 134 and 135; KRS 176.430	Traffic forecasting is undertaken by the Division of Planning upon request from an appropriate KYTC project leader.	Modal Programs
	US Army Corps of Engineers (USACE) Public Notice Coordination	The Division of Planning’s KYTC/USACE Liaison is the KYTC single point of contact for coordinating all KYTC comments in response to USACE Public Notices.	Section 404 of 33 USC 1344	KYTC coordination of responses is needed with each USACE Public Notice.	Strategic Planning
	Purpose and Need	A project’s Purpose and Need directly informs the scope of the project which, in turn, directly informs the level of effort, cost, and anticipated schedule for the project.	40 CFR 1500-1508	As potential projects are identified, a conceptual Purpose and Need Statement should be developed alongside the initial project concept.	Strategic Planning
	Public Involvement in Plan Production	KYTC established public involvement procedures to support the LRSTP, the STIP, the Consultation Process, and the development and delivery of transportation improvements.	23 CFR 450.210(a); 23 CFR 450.316(a)	Public involvement procedures are employed to keep the public informed about KYTC program and project delivery.	Strategic Planning
	Statewide Transportation Planning Meetings	The Division of Planning coordinates quarterly meetings with MPO, ADD, KYTC District, and FHWA planning staff for the purpose of training, collaboration, and the dissemination of information.	23 USC 134 and 135; KRS 176.430	These meetings are held quarterly to ensure regular and consistent transportation planning across Kentucky.	Strategic Planning
<b>Transportation Planning Studies</b>	Small Urban Area (SUA) Studies	SUA Studies serve to evaluate and recommend transportation improvements in areas between 5,000 and 50,000 population. Study documentation and results are presented in a SUA Report made available on the KYTC Division of Planning website.	23 CFR 450.212; 23 CFR 450.206; KRS 176.430	SUA Studies are accomplished or updated as necessary to facilitate SUA project or community planning.	Strategic Planning

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<b>Transportation Planning Studies (cont.)</b>	Strategic Corridor Planning	Corridor Studies evaluate and prioritize proposed new roadways or improvements to existing roadway segments, usually of regional or statewide significance, for future Six-Year Highway Plan funding.	23 CFR 450.212; 23 CFR 450.206; KRS 176.430	Corridor Studies are directed by the Six-Year Highway Plan or are initiated through the KYTC Statewide Planning process.	Strategic Planning
	DNA Studies	The DNA Study is a form-based study prepared by the KYTC District Planning and Project Development staff. This study is done to provide a defined scope and Draft Purpose and Need for each project considered in the SHIFT prioritization process.	23 CFR 450.212; 23 CFR 450.206; KRS 176.430	DNA Studies are undertaken for each sponsored CHAF project and for new projects added to the Six-Year Highway Plan by the legislature.	District Planning
	Interchange Justification/Modification Studies	An Interchange Justification Study (IJS) or Interchange Modification Report (IMR) is done to gain FHWA approval for new interchanges or changes to existing interchanges on the Interstate Highway System. These studies allow FHWA to make informed decisions about the approval of planned system additions.	23 CFR 450.212; 23 CFR 450.206; 23 USC 109 and 111; 23 CFR 625.4; 49 CFR 1.48(b)(1); KRS 176.430	IJS or IMR Studies are accomplished whenever a project directly connects to or modifies and existing connection to the Interstate Highway System.	Strategic Planning
	Special Studies	Special Studies are required for a variety of purposes to generate planning level data to facilitate future project development or prioritization needs.	23 CFR 450.212; 23 CFR 450.206; KRS 176.430	Special Studies are done in response to specific requests, generally from internal KYTC sources.	Strategic Planning
<b>Transportation Plans</b>	KYTC Strategic Plan	The KYTC Strategic Plan sets forth the KYTC's own Mission, Vision, and Core Values against which the KYTC's actions and activities can be held accountable.	The KYTC Strategic Plan establishes a context for all that KYTC undertakes.	The Strategic Plan represents an on-going commitment to excellence.	Strategic Planning
	Kentucky Long-Range State Transportation Plan (LRSTP)	The LRSTP is a 20-year vision that aligns federal, state, metro, and non-metro transportation goals with performance expectations and realistic fiscal expectations to produce an intermodal statewide transportation plan.	23 USC 135; 23 CFR 450.100 to 23 CFR 450.226; 23 USC 5304	The LRSTP is continually evaluated for viability and updated when changing transportation conditions dictate.	Strategic Planning

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<b>Transportation Plans (cont.)</b>	Kentucky Freight Plan (KFP)	The KFP forecasts freight volumes for 5, 10, and 20-year horizons and develops a 5-year, fiscally constrained investment plan to guide the use of National Highway Freight Program (NHFP) funding.	49 USC 70202	The KFP is required to be updated every 5 years to inform the development of USDOT’s National Freight Strategic Plan.	Strategic Planning
	Kentucky Statewide Rail Plan	The Statewide Rail Plan is required by the Federal Rail Administration (FRA) to analyze freight and passenger rail trends and forecasts and to propose needed rail improvements.	49 CFR 266.15; KRS 174.057; 603 KAR 7:090	The Statewide Rail Plan is required to be updated every 4 years by FRA.	Modal Programs
	Kentucky Six-Year Highway Plan	The Six-Year Highway Plan contains biennial highway project activity that is approved by the General Assembly and another 4 years of project activity endorsed by the General Assembly.	KRS 176.430; KRS 176.431; KRS 176.433; KRS 176.435	A new Six-Year Highway Plan is submitted to the General Assembly in January of each even-numbered year.	Modal Programs
<b>Transportation Planning Consultant Management</b>		The Division of Planning uses consultants for technical assistance in a variety of ways. These planning consultants are selected, managed, and evaluated in concert with processes managed by the KYTC Division of Professional Services.	23 CFR 172.3; KRS 45A.800; KRS 322	Planning Consultant services are requested whenever the need arises to augment the Division of Planning’s own resources.	Strategic Planning
<b>Transportation System Performance-Based Planning Measures</b>	Level of Travel Time Reliability	The “Interstate and Non-Interstate NHS Travel Time Reliability Performance Measures” are reported both Statewide and MPO-specific, seek to provide FHWA with an assessment of system reliability for passenger vehicles, and are reported through HPMS.	23 CFR 490.507; 23 CFR 490.509; 23 CFR 490.511; 23 CFR 490.513; 23 CFR 490.105; 23 CFR 490.107; 23 CFR 490.109	This data is submitted on or before June 15 of each year to FHWA as part of the HPMS package.	Modal Programs
	Truck Travel Time Reliability	The “Freight Reliability Performance Measure” is reported both Statewide and MPO-specific, seeks to provide FHWA with an assessment of system reliability for freight movement, and is reported through HPMS.	23 CFR 490.607; 23 CFR 490.609; 23 CFR 490.611; 23 CFR 490.613; 23 CFR 490.105; 23 CFR 490.107; 23 CFR 490.109	This data is submitted on or before June 15 of each year to FHWA as part of the HPMS package.	Modal Programs

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<b>Transportation System Performance-Based Planning Measures (cont.)</b>	Annual Hours of Peak Hour Excessive Delay	This “CMAQ Congestion Performance Measure” is currently only applicable to OKI, seeks to provide FHWA with a peak hour delay performance component, and is reported through HPMS.	23 CFR 490.707; 23 CFR 490.709; 23 CFR 490.711; 23 CFR 490.713; 23 CFR 490.105; 23 CFR 490.107; 23 CFR 490.109	This data is submitted on or before June 15 of each year to FHWA as part of the HPMS package.	Modal Programs
	% Non-Single Occupant Vehicle Travel	This “CMAQ Congestion Performance Measure” is currently only applicable to OKI, seeks to provide FHWA with a ridesharing performance component, and is reported through HPMS.	23 CFR 490.707; 23 CFR 490.709; 23 CFR 490.711; 23 CFR 490.713; 23 CFR 490.105; 23 CFR 490.107; 23 CFR 490.109	This data is submitted on or before June 15 of each year to FHWA as part of the HPMS package.	Modal Programs

	<p><i>Chapter</i></p> <p>ADMINISTRATION</p>
	<p><i>Subject</i></p> <p>District Planning</p>

**PL-204.1 OVERVIEW**

To facilitate the local coordination of KYTC planning activities across the state, each KYTC highway district has a District Planning Supervisor who is responsible to the District Project Development Branch Manager and the Chief District Engineer. The District Planning Supervisor and assigned district planning staff serve to coordinate transportation planning activities with the Chief District Engineer, district branch managers, Metropolitan Planning Organizations (MPOs) and Area Development Districts (ADDs), individual local officials, and Division of Planning liaisons as necessary to carry out district planning assignments. Although these assignments vary between districts, there are several planning responsibilities every district is responsible for facilitating including the following:

- Provide background information for roadway system updates involving official orders
- Perform traffic counts and other data collection efforts
- Lead KYTC district project planning activities
- Work with the ADDs to identify potential projects for Strategic Highway Investment Formula for Tomorrow (SHIFT) prioritization
- Perform Data Needs Analysis (DNA) studies
- Assist with KYTC district public involvement efforts

For KYTC districts containing metropolitan areas, KYTC district planning staff is directly involved in MPO assistance by serving on the MPO technical committees addressing a broad array of MPO plan and program issues ranging from census boundary definition to project identification, congestion management, access management, and air quality reviews. Each KYTC district’s planning staff is responsible for its own unique mix of rural, small urban, ADD, and MPO planning activities, and serves as an invaluable resource for the KYTC Division of Planning.

**PL-204.2 ADDITIONAL RESPONSIBILITIES**

In addition to supporting KYTC Division of Planning activities at the local level, the KYTC District Planning Supervisor and staff are often given other district-specific assignments. Those assignments vary among districts and may include the following:

**PL-204.2 ADDITIONAL RESPONSIBILITIES (cont.)**

- Local Public Agency (LPA) Project Development Coordination
- Highway Safety Improvement Program (HSIP) Coordination
- Municipal Separate Storm Sewer System (MS4) Coordination
- KYTC Project Management
- Americans with Disabilities Act (ADA) Coordination and Transition Planning
- Local Road Coordination with the KYTC Department of Rural and Municipal Aid
- Extended Weight Coal Haul Agreement Coordination
- Other duties as assigned (such as, Covered Bridge Coordination)

The KYTC Chief District Engineer (as the District Executive Director) has the authority to utilize district planning staff in many different ways. The most common involvement for district planning staff is traditionally in the LPA and Local Road Coordination efforts alongside the KYTC Department of Rural and Municipal Aid. The local knowledge and availability of the district planning staff are often critical to enhancing the city's and county government's understanding and appreciation of KYTC's local road programs. This same degree of familiarity with the state road system often makes the district planning staff a key partner for KYTC's federally required HSIP, MS4, and ADA coordination efforts.

The KYTC district planning staff is increasingly called upon to manage early development of KYTC projects. As KYTC project development efforts become more deeply tied to the project purpose and scope identified in district-led Data Needs Analysis (DNA) studies, KYTC district planning supervisors and staff are being designated as Project Managers to shepherd preliminary engineering activities along a path consistent with the conceptual scope. Whenever practical, the use of KYTC district planning staff as Project Managers helps to ensure that the initial project vision is effectively communicated and pursued.

Unique circumstances in each KYTC district also create other opportunities for the district planning staff. Wherever KYTC district planning staff capabilities exist, the Chief District Engineers use those capabilities to address real needs. It is beyond the scope of this manual to detail all assignments of KYTC district planning staff beyond regular planning responsibilities; however, the following questions and answers will demonstrate some of the major activities they may be asked to perform.

*How is district planning involvement in other KYTC programs initiated?*

The Chief District Engineer will include programmatic goals and expectations for each district planning participant's assignment.

**PL-204.2 ADDITIONAL RESPONSIBILITIES (cont.)**

Some of the more challenging assignments are as follows:

- ***District Local Public Agency (LPA) Coordination.*** The [KYTC Department of Rural and Municipal Aid, Office of Local Programs \(OLP\)](#), administers KYTC's LPA program. Among other responsibilities, OLP administers two federally funded programs: [Transportation Alternatives Program \(TAP\)](#) and [Congestion Mitigation and Air Quality \(CMAQ\) Program](#). Both programs administer grant funds allocated annually by the Federal Highway Administration (FHWA), and conduct application cycles in the fall of each year whereby local governments may submit applications for project funding. Examples of projects include trails and bikeways, sidewalks, traffic flow improvements, and other projects that encourage, promote, or enhance local accessibility. The local government is responsible for developing a project proposal and, if the project is chosen for funding, the local government is responsible for designing and constructing the project within the established timeframe and approved project budget. The local government may use consultant resources available through KYTC's Statewide LPA contract for project delivery assistance.

The KYTC district planning staff is typically involved with OLP and local governments in the coordination of projects for each annual application process. Local governments sometimes contact KYTC district planning staff early in the process for assistance in conceptualizing and preparing TAP or CMAQ applications. The district planning role may vary from application to application, but the coordination between the state and local parties is essential to a successful proposal.

As the District LPA Coordinator, the district planning supervisor's main role is to review the final plans developed by the local government or its consultant to ensure proper engineering standards have been followed.

KYTC district planning staff may also be called upon to assist in the early development of requests for [Kentucky Scenic Byways](#) designations, another responsibility of OLP as established by KRS 177.571-576; the [National Scenic Byways Program](#) is governed by 23 USC 162 and administered by FHWA.

- ***District HSIP Coordination.*** The [2015 Fixing America's Surface Transportation \(FAST\) Act](#) reauthorized federal transportation programs, including funding for highway safety investments. FHWA and KYTC collaboration resulted in the [Highway Safety Improvement Program \(HSIP\)](#), which features priority safety projects to address roadway departure crashes, intersection safety, commercial motor vehicle crashes, pedestrian and bicycle safety initiatives, and other opportunities to deliver data-driven safety solutions.

**PL-204.2 ADDITIONAL RESPONSIBILITIES (cont.)**

[KYTC Division of Traffic Operations](#) leads this data-driven approach to highway safety and relies heavily on planning-level roadway data from the KYTC Division of Planning's Highway Information System (HIS) database. Accordingly, HSIP project development and implementation uses the KYTC district planning staff as partners and team members in the HSIP effort. In some instances, the District Planning Supervisor may be designated as the District HSIP Coordinator due to the strong link between planning information and operational improvement needs. The HSIP project identification effort is ongoing, with continuous data-driven roadway segment assessments initiated in preparation for each new funding cycle.

➤ **District MS4 Coordination.** The Division of Environmental Analysis (DEA) leads the MS4 stormwater coordination effort at KYTC. The [KYTC District MS4 Coordinator Resources](#) describe KYTC's responsibilities for MS4, as well as the local relationships that are necessary to protect Kentucky's waterways from pollution associated with stormwater runoff. The KYTC district planning staff assists Division of Environmental Analysis (DEA) staff as follows:

- ◆ Disseminate educational materials to local communities
- ◆ Develop and maintain local stormwater mapping
- ◆ Provide KYTC data for the local stormwater infrastructure inventory
- ◆ Assist with documenting and developing plans for the elimination of illicit stormwater discharges
- ◆ Assist state highway contractors in complying with the Kentucky Pollutant Discharge Elimination System (KPDES) permitting process

MS4 coordination is ongoing, with particular efforts necessary when new highway-related MS4 permitting is required or illicit stormwater discharge issues are discovered and addressed.

*What input is required for district planning involvement in other KYTC programs?*

Full support of the Chief District Engineer and the lead KYTC Division or Department must be provided to the LPA, HSIP, MS4, and other programs to which KYTC district planning staff is assigned. Additionally, the KYTC Division of Planning staff must recognize the various roles that each KYTC district planning staff member is assigned, and appreciate the scheduling complexities that may occur as they balance both regular and additional.

*What forms are used in district planning involvement in other KYTC programs?*

There are no official TC 59 planning forms involved in this process; however, there are several other KYTC forms that district planning staff may need to be familiar with in the performance of other program duties. Those forms include the following:

**PL-204.2 ADDITIONAL RESPONSIBILITIES (cont.)**

- **KYTC Department of Rural and Municipal Aid Forms**
  - ◆ TC 20-24, *CMAQ Program Application*
  - ◆ TC 20-26, *Scenic Byways & Highways Designation Application*
  - ◆ TC 20-32, *LPA Change Order*
  - ◆ TC 20-36, *TAP Application*
  - ◆ TC 20-37, *LPA Certification of Responsibility*
  - ◆ TC 20-40, *Documentation of Non-Cash Match*
  - ◆ LPA Project Development Checklist
  
- **KYTC Division of Construction Forms**
  - ◆ TC 63-60, *Stormwater Best Management Practice Plan*
  - ◆ TC 63-61, *Erosion Control Inspection Report*
  - ◆ TC 63-61A, *Erosion Control Inspection Report for KPDES Permits in Contractors Name*

Additional forms may be necessary as the assignment dictates. These forms are readily available from the [KYTC Internet Forms Library](#) and the KYTC Intranet Forms Library. Contact Division of Planning staff if you are unable to access KYTC's Intranet.

*What are the steps for district planning involvement in other KYTC programs?*

Roles and responsibilities assigned to KYTC district planning staff beyond those in support of the KYTC Division of Planning each come with their own set of rules and procedures that must be followed. These district planning assignments typically provide a functional contribution to a larger KYTC team (for instance LPA, HSIP, and MS4), and the steps are measured in terms of total team progress. The KYTC district planning staff expectations are defined in the context of the role they are filling.

*When is district planning involvement in other KYTC programs complete?*

When KYTC district planning staff are involved in other KYTC programs, their level of involvement is generally defined on a project-by-project basis and is considered complete when the project application has been deemed unsuccessful or a project has been implemented successfully. For LPA or HSIP projects chosen for implementation, the district planning staff remain actively engaged in the project team until the project is complete and the team is disbanded.

*What is the approval chain for district planning involvement in other KYTC programs?*

When KYTC district planning staff are assigned to another KYTC program, they are typically representing a district's interests under the purview of the Chief District Engineer.

**PL-204.2      ADDITIONAL RESPONSIBILITIES (cont.)**

Accordingly, the KYTC district planning staff supports local governments, assists and advises the KYTC department or division responsible for the other program, and brings necessary planning expertise and data to the project identification and selection processes that accompany those other programs.

The ultimate programmatic decisions for other programs are made by the leaders of that particular program (for example, the KYTC Department of Rural and Municipal Aid is responsible for the LPA Program; the KYTC Division of Traffic Operations is responsible for the HSIP; and, the Division of Environmental Analysis is responsible for the MS4 Program). The costs incurred in the support of these other programs are generally funded through program-specific funding authorizations or through the KYTC district budget.



	<i>Chapter</i> ADMINISTRATION
	<i>Subject</i> DataMart

Much of the data produced by the Division of Planning is used by KYTC’s Office of Technology to produce numerous reports and interactive mapping products that are made available to the public through KYTC’s online Transportation Enterprise Database ([DataMart](#)). From roadway systems information to traffic counts and highway plans, DataMart captures a wealth of the Division of Planning’s refined transportation data for sharing in various forms.



	<p><i>Chapter</i></p> <p>ADMINISTRATION</p>
	<p><i>Subject</i></p> <p>Planning Consultant Contract Management</p>

**PL-206.1 ON-CALL PLANNING CONSULTANTS**

KYTC’s Division of Planning uses transportation planning consultants who are under statewide “on-call” contracts for a variety of technical assistance. For example, the Traffic and Equipment Management Branch uses on-call consultants to help perform special data collection; the Modal Programs Branch uses on-call consultants to assist with traffic forecasting and travel modeling activities; and the Strategic Planning Branch uses on-call consultants to perform several types of highway project planning studies.

Each on-call consultant contract has a project level cost upset limit established through the consultant advertisement process. Traffic data collection services currently has a maximum letter agreement amount of \$100,000 per assignment, while the letter agreements for traffic forecasting, traffic modeling, and strategic planning have current limits of \$150,000, \$200,000, and \$250,000, respectively.

**PL-206.2 CONTRACTED PLANNING CONSULTANTS**

If the planning need is beyond the bounds of the on-call contracting process, a planning consultant may be obtained by requesting the Division of Professional Services to advertise for and select a special provider of the desired consultant services. Administrative procedures related to the use of consultant services for planning are contained in the [KYTC Professional Services Guidance Manual](#). Consultant contracts and letter agreements for individual projects advertised through the KYTC Division of Professional Services are not to be signed until a funding authorization to cover the negotiated contract amount has occurred.

Consultant prequalification categories for planning are subject to change. The most current categories are online at KYTC Division of Professional Services under [Prequalification Criteria](#) and may include:

- Conceptual Transportation Planning
- Transportation Planning Engineering

**PL-206.2 CONTRACTED PLANNING CONSULTANTS (cont.)**

- Advanced Transportation Planning Engineering
- Road Centerline Data Collection
- Traffic Data Collection
- Traffic Forecasting
- Travel Demand and Simulation Modeling
- Pedestrian and Bicycle Facility Planning and Design

**PL-206.3 CONTRACT PROCESS & OVERSIGHT***How are planning consultant contracts initiated and managed?*

When KYTC Division of Planning staff determine that consultant assistance is needed to carry out a task defined in the annual Planning Work Program, such assistance may be obtained in two ways:

1. Consult the [Statewide Planning](#) bulletin advertised every two years, which lists prequalified consulting firms with transportation planning expertise who may be called upon as needed.
2. Advertise using the KYTC Division of Professional Services' consultant advertisement and selection process.

For the advertisement through Professional Services, the KYTC Division of Planning Project Manager will collect the required project information for the advertisement bulletin. For example, a project planning study may contain the following:

- County
- Route
- Item Number
- District
- Project Description
- KYTC Project Manager
- Approximate Fee
- Study Purpose and Need
- Scope
- Available KYTC Studies
- Project Length
- Project Funding
- Prequalification Requirements
- Project Schedule Milestones
- Location Map
- Selection Committee Members (User Division)
- DBE Requirement
- Need for other services

**PL-206.3 CONTRACT PROCESS & OVERSIGHT (cont.)**

Requests for planning assistance in traffic forecasting, travel modeling, and traffic counting will have specific information collected that pertains directly to the consultant's assigned tasks. After the planning request for services is advertised, the selection committee identified by the KYTC Division of Professional Services will review the proposals received and select a firm to perform the work for the Division of Planning. The selection committee consists of five members: Two from the Division of Planning (the user division), two from the Secretary's pool of potential selection committee members, and one from the Governor's pool of potential selection committee members. More information on the selection committee process is available in the [Professional Services Guidance Manual](#).

After a consultant has been assigned by statewide letter agreement or selected through a Professional Services advertisement, the Division of Planning's Project Manager conducts a scoping meeting, project hours are negotiated, and the consultant contract is signed. From that point forward, the management of the contract and oversight of the consultant's work is the responsibility of the Division of Planning's Project Manager.

*What input is required to manage planning consultant contracts?*

To effectively manage planning consultant contracts, the KYTC Division of Planning Project Manager needs the full support of the identified project team or responsible planning group. Well-scoped planning efforts, projects, and assignments will lead to desired outcomes, so participation by affected parties in the initial scoping meeting or conference with the consultant is critical. Parties involved in the consultant assignment often include representatives from the KYTC Division of Planning, KYTC District Project Development, other KYTC Division interests, the respective ADD, and MPOs if the project is located within an MPO boundary. After the initial scoping meeting, the continued involvement of the project team helps to ensure that the project stays on track and accomplishes the desired result. It is also important to have the support of the KYTC Division of Planning and KYTC Division of Professional Services administrative staff to ensure that consultant contracting, invoicing, and payment issues are handled efficiently.

*What forms are used in managing a planning consultant?*

KYTC's Division of Planning uses [TC 59-7, Consultant Performance Evaluation \(Exhibit 9001\)](#) to rate planning consultant performance in meeting contract dates, managing the project toward completion, and providing high quality, accurate work.

*What are the steps in planning consultant management?*

After the selection of a consultant, planning consultant management typically involves the following steps:

**PL-206.3 CONTRACT PROCESS & OVERSIGHT (cont.)**

1. **Scoping meeting or conference.** After the consultant is selected, but before a contract or letter agreement is drafted, the KYTC Project Manager holds a meeting with the consultant, affected KYTC staff, and other interested parties to develop the scope of the planning effort.

The scope of the effort may include, but is not limited to, the following items:

- ◆ Study parameters (study area and logical termini for projects, study focus for traffic forecasting or modeling, or traffic count assignment information)
- ◆ Project schedule
- ◆ Data to be collected
- ◆ Data analysis methodology
- ◆ Number, type, and scheduling of meetings
- ◆ Other development activities for the project or assignment
- ◆ Documentation required

After the scoping meeting, a scope of work for the study must be submitted by the Consultant to the KYTC Project Manager and Division of Planning staff for approval before production hours can be negotiated.

2. **Negotiation and writing of the contract/letter agreement.** The respective KYTC Division of Planning Branch (with input from the KYTC Project Manager) and the consultant will negotiate production hours through the Division of Professional Services. In cases where there is a distinct division in the type of tasks defined in the scope of work (such as an Environmental or Geotechnical Overview) the responsible KYTC Division may negotiate these production hours separately. Once negotiated, the Division of Professional Services drafts the contract and submits the selected consultant with a notice to proceed. The KYTC Division of Planning drafts letter agreements for consultant assignments made under the statewide on-call contracts. The project award date noted in the letter agreement shall also serve as the consultant's notice to proceed and shall be documented via email.
3. **Oversight of Consultant Services.** The KYTC Project Manager is responsible for the following:
  - ◆ Ensure the consultant carries out the contracted tasks and adheres to the schedule stated in the scope of work.
  - ◆ Work cooperatively with the consultant throughout the assignment to meet stated goals.
  - ◆ Review progress reports and approve invoices submitted by the consultant.

**Note:** Most planning studies have co-project managers from KYTC's Division of Planning and Department of Highways district office.

**PL-206.3 CONTRACT PROCESS & OVERSIGHT (cont.)**

4. **Consultant Evaluation.** Upon completion of the planning effort, the KYTC Project Manager will review the final invoice and complete internal form TC 59-7, *Consultant Performance Evaluation*. The Division of Planning and the Division of Professional Services retain these consultant evaluations for future reference.

*When is a planning consultant contract complete?*

A planning consultant contract or letter agreement is complete when the terms of the contract or agreement are fulfilled completed to the satisfaction of the KYTC Division of Planning; all consultant invoices have been addressed; the consultant evaluation form has been completed; and all documents have been filed.

*What is the approval chain for planning consultant management?*

Approvals for planning consultant management are jointly shared by KYTC's Division of Planning and Division of Professional Services (Table 3). This combined effort between the two KYTC Divisions requires considerable coordination, cooperation, and communication to ensure the proper and successful use of planning consultant services.

**Table 3. Approvals for Planning Consultant Management**

<b>Division of Planning</b>	<b>Division of Professional Services</b>
<ul style="list-style-type: none"> <li>• Identifies the need for planning consultant services</li> <li>• Determines tasks assigned to the planning consultant</li> <li>• Oversees submittal of completed consultant invoicing forms and subsequent payment</li> <li>• Provides the planning consultant evaluation when the contract is complete</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitates the acquisition of planning consultant services</li> <li>• Develops invoicing procedures and forms</li> </ul>



	<b>Chapter</b>  KEY PLANS
	<b>Subject</b>  Kentucky Transportation Cabinet (KYTC) Strategic Plan

### PL-301.1 BACKGROUND

The KYTC Strategic Plan was originally prepared in the late 1990s by a team of 23 employees from various KYTC divisions and districts. The effort was professionally facilitated, and served as a broad-based visioning exercise for KYTC. In addition to producing formal vision and mission statements, the exercise also generated goals and objectives, a quality policy, and a values statement.

The original articles of the KYTC Strategic Plan were as follows:

#### ➤ **Vision and Mission**

The Kentucky Transportation Cabinet is committed to meet or exceed the needs and expectations of our customers. Our focus is on people—our customers, our employees, and our partners.

- ◆ **Vision** – Striving to be national leaders in transportation who provide transportation infrastructure and services for the 21<sup>st</sup> Century that deliver new economic opportunities for all Kentuckians. We will measure results. We will learn from our successes, our failures, and the experience of others. We will benchmark our performance and our key processes against both government and private sector organizations. We will continually strive to serve our customers more effectively and efficiently.
- ◆ **Mission** – To provide a safe, efficient, environmentally sound and fiscally responsible transportation system that delivers economic opportunity and enhances the quality of life in Kentucky. This is our fundamental purpose and how we serve the citizens of the Commonwealth.

#### ➤ **Goals & Objectives**

- ◆ *Improve Mobility and Access*—We commit to maintain and operate a safe and efficient transportation system for all Kentuckians. We will:
  - Reduce the number of transportation-related fatalities and injuries through cooperative engineering, education, enforcement and emergency response

**PL-301.1 BACKGROUND (cont.)**

- Preserve and renew our transportation system infrastructures
- Improve traffic flow and freight movement
- Improve motor vehicle licensing and permitting service to customers

◆ *Deliver Economic Opportunities*—We recognize that economic opportunities improve the standard of living and quality of life for all Kentuckians. We will:

- Improve and expand Kentucky’s transportation systems
- Maximize intermodal freight opportunities on our roads, rivers, air corridors, and railroads
- Promote sound environmental practices
- Support all modes of passenger transportation
- Enhance the beauty of Kentucky’s highways

◆ *Continually Improve Organizational Performance*—We constantly strive to do better... to learn from our experience and the experience of others. We will:

- Attract, develop, involve, and retain a qualified and diverse workforce
- Develop transparent, fair, and consistent administrative and personnel procedures
- Foster a professional, efficient, and effective management structure
- Ensure fiscal resources are properly managed and protected
- Apply technology to improve organizational effectiveness and efficiency

◆ *Strengthen Customer and Stakeholder Relationships*—We appreciate what is important to our customers, and we value their involvement in what we do. We will:

- Ensure fairness, consistency, and competitiveness in our contracting procedures
- Communicate accurate and timely traffic information to motorists and emergency responders
- Identify and participate in new federal partnership opportunities
- Continually incorporate strong ethical standards in everything we do

➤ **Quality Policy**

The Kentucky Transportation Cabinet is committed to continuous improvement. We will promote a culture where employees are involved, where customers are pleased, where teamwork is the norm, and where measurement of performance is essential. We will always strive to be better tomorrow than we are today.

**PL-301.1 BACKGROUND (cont.)****➤ Values**

We Believe In:

- ◆ Satisfying our customers
- ◆ Leadership
- ◆ Integrity
- ◆ The highest quality in all we do
- ◆ Using taxpayer's money wisely
- ◆ Continuous improvement and learning
- ◆ Employee participation, development, and opportunity
- ◆ Listening
- ◆ Systematic problem solving
- ◆ Measuring our results

**PL-301.2 EXISTING PLAN**

Since the late 1990's, the KYTC Strategic Plan has remained virtually unchanged. The "[About Us](#)" page located on the official [KYTC website](#) features an abbreviated version of the Strategic Plan that reads as follows:

**➤ Mission**

To provide a safe, efficient, environmentally sound, and fiscally responsible transportation system that delivers economic opportunity and enhances the quality of life in Kentucky.

**➤ Vision**

The Kentucky Transportation Cabinet is committed to meet or exceed the needs and expectations of our customers. Our focus is on people: our customers, our employees, and our partners.

We will continually improve both the delivery of our products and services and the processes which support that delivery. As we progress through the 21st century, we recognize that change is inevitable. We will strive to manage that change to the benefit of all our stakeholders.

**➤ Core Values**

- ◆ *Connecting the Commonwealth*—Connecting all corners of the Commonwealth through safe and reliable roads, bridges, airports, railways, waterways, and walkways
- ◆ *Driving the Economy*—Providing a comprehensive transportation system and transportation services that encourage economic growth and diversity across Kentucky
- ◆ *Serving the Taxpayers*—Providing timely, responsive service for all Kentucky taxpayers while treating taxpayer dollars as if they were our own
- ◆ *Cultivating a Dynamic Culture*—Creating a culture of honor, empowerment, and safety where all KYTC employees are holistically valued as professionals

**PL-301.2 EXISTING PLAN (cont.)**

There is no doubt that KYTC continues to believe strongly in its ability to make a difference in the daily lives of all Kentuckians. The KYTC's mission, vision, and core values serve as the context within which all KYTC plans and programs are developed, as well as the backdrop against which they are measured.



	<p><i>Chapter</i></p> <p>KEY PLANS</p>
	<p><i>Subject</i></p> <p>Kentucky Long-Range Statewide Transportation Plan</p>

### PL-302.1 OVERVIEW

The Kentucky Long-Range Statewide Transportation Plan ([LRSTP](#)) is required by federal law ([23 USC 135](#)), and governed by the federal planning regulations contained in [23 CFR 450, Subpart B](#).

The Kentucky LRSTP covers a 20-year planning horizon, considers all factors that may influence future transportation system composition and performance, and serves as the basis for subsequently approved Statewide Transportation Improvement Programs (STIPs). Additionally, the LRSTP addresses all modes of transportation in Kentucky by using the existing highway, air transport, bicycle, pedestrian, public transportation, rail, and waterway systems to develop an intermodal vision for the future. This vision encompasses potential system expansion, operational enhancement, system maintenance needs, and technological investment options.

To meet federal requirements, the LRSTP must be:

- At least a 20-year visioning exercise
- Aligned with federal, KYTC, and statewide transportation goals
- Aligned with state air quality objectives
- Intermodal, emphasizing systems integration and connectivity
- Coordinated with metropolitan and non-metropolitan transportation plans
- Performance-oriented
- Participatory with all interested parties
- Financially realistic

KYTC's Division of Planning provides online access to [Kentucky's current LRSTP](#) and state transportation planning process, including information about the metropolitan and regional planning entities that contribute directly to the LRSTP; the Strategic Highway Investment Formula for Tomorrow (SHIFT) project prioritization process; and, the most recent KYTC public involvement process guidelines.

**PL-302.1 OVERVIEW (cont.)**

The Division of Planning's SHIFT process is a project prioritization tool developed to provide a data-driven means for assessing the safety, congestion, asset management, economic growth, benefits, and costs for identified project needs. Using scores from that assessment to funnel priority projects to the KYTC's Six-Year Highway Plan, this approach has revolutionized the way in which limited state and federal highway funds are being used in Kentucky. Work is underway to connect SHIFT more directly to the performance and financial elements of future Kentucky LRSTPs. As this connection occurs, KYTC expects to see future LRSTP investment directly result in cost-effective, data-driven, intermodal solutions to Kentucky's transportation problems.

**PL-302.2 KENTUCKY LRSTP PROCESS***How is the Kentucky LRSTP initiated?*

There is no set cycle for updating the LRSTP. The LRSTP is a document that is forward-leaning and written for a prescribed 20-year planning horizon in full anticipation that baseline conditions may change in unexpected ways. Accordingly, the LRSTP is continually evaluated to ensure it remains viable. When the KYTC Division of Planning determines that baseline conditions have changed sufficiently to warrant the development of a new LRSTP, work is initiated to identify a new planning horizon and the statewide transportation planning process procedures outlined in 23 CFR 450 are formally engaged to produce a new plan.

*What inputs to the Kentucky LRSTP process are required from others?*

The KYTC Division of Planning's own transportation planning processes collect and analyze data associated with the statewide planning factors identified in [23 CFR 450.206](#) and [.208](#). Within the Division of Planning, the Data Management Branch supplies up-to-date layers of transportation system information that are considered alongside studies, plans, and programs generated by the Strategic Planning and Modal Programs Branches. This LRSTP team effort is led by the Strategic Planning Branch which coordinates closely with the KYTC district planning staff, other state agencies, Kentucky's MPOs and ADDs, and local elected officials as required by [23 CFR 450.210](#). As the new LRSTP is being developed, proactive public involvement is pursued in accordance with [23 CFR 450.212](#) to provide citizens, affected public agencies and jurisdictions, employee representatives of transportation and other affected agencies, private and public providers of transportation, and other interested parties reasonable opportunities to comment and provide input throughout the process.

*What forms are used in the Kentucky LRSTP process?*

There are no official TC-59 planning forms involved in this process.

**PL-302.2 KENTUCKY LRSTP PROCESS (cont.)***What are the steps in the Kentucky LRSTP process?*

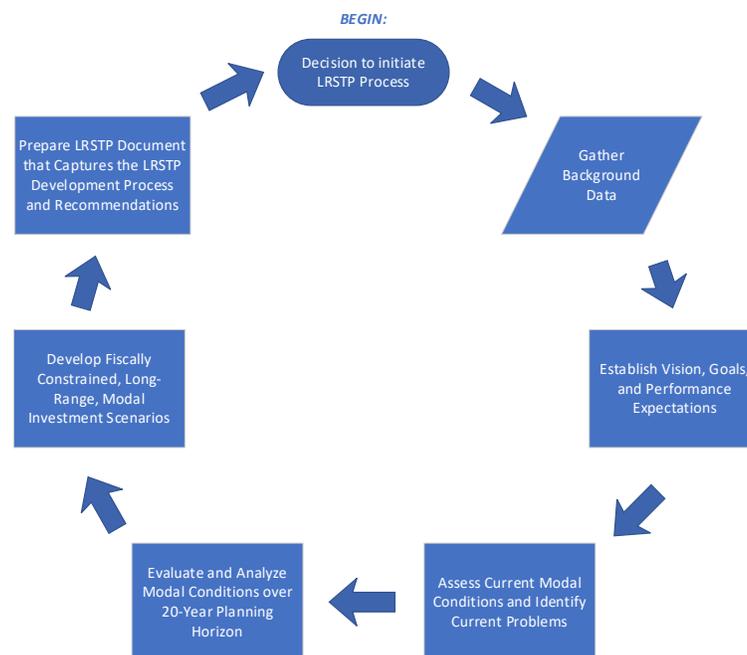
The LRSTP development process (Figure 3.) begins when the KYTC Division of Planning determines significant changes have occurred since the current LRSTP was developed and those changes warrant a new LRSTP. Recognizing that the development of a new LRSTP is a substantial undertaking, the Strategic Planning Branch drives this decision through continual monitoring of the LRSTP's validity.

The decision to embark on an update of the LRSTP requires the following (all of which are subject to public review and comment):

- Data gathering
- Vision and goal setting
- Establishment of long-range modal performance expectations
- Assessment of existing modal conditions and problems
- Evaluation of future conditions
- Application of fiscal limitations to potential investment scenarios
- Publication of a new LRSTP

Each step in the LRSTP development process involves in-depth examination of state and local plans, programs, policies, and projects of KYTC, other state agencies, MPOs, and ADDs.

**Note:** The “Highways” component of the modal investment scenarios developed for the LRSTP directly feed the SHIFT project prioritization process that produces projects for the Governor’s Recommended Six-Year Highway Plan.



**Figure 3. LRSTP Development Process**

**PL-302.2 KENTUCKY LRSTP PROCESS (cont.)***When is the Kentucky LRSTP process complete?*

The LRSTP process is considered complete when a new LRSTP has been approved by the Governor (and shared with FHWA) that demonstrates continuing compliance with 23 CFR 450 as it relates to conformance with federal statewide transportation planning requirements.

*What is the approval chain for the Kentucky LRSTP?*

The approval chain for the LRSTP first involves transparent interactions with the public throughout the process. All public input is respectfully considered, and necessary adjustments are made to ensure that the LRSTP is sensitive to citizen concerns.

The Division of Planning Director submits the final recommended LRSTP to the KYTC Secretary of Transportation for review and approval. The LRSTP is then published and provided to FHWA to demonstrate Kentucky's compliance with 23 CFR 450. Strategic Planning Branch and other Division of Planning branch activities in support of the LRSTP process are funded through the Planning Work Program.



	<i>Chapter</i> <p style="text-align: center;">KEY PLANS</p>
	<i>Subject</i> <p style="text-align: center;">Kentucky Freight Plan</p>

### PL-303.1 OVERVIEW

The Kentucky Freight Plan (KFP) has traditionally been a supplement to the Kentucky Transportation Cabinet's (KYTC) Long-Range Statewide Transportation Plan (LRSTP). In 2015, however, the federal Fixing America's Surface Transportation (FAST) Act established a National Multimodal Freight Policy and required development of a National Freight Strategic Plan within two years. This elevated the importance of state freight planning activities and its contribution to national goals set for the national freight network.

To comply with [federal FAST Act freight provisions](#), KYTC began an update of the KFP in 2015. In December 2017, the Federal Highway Administration (FHWA) approved the KFP developed as a high-level inventory and policy guidance document. Available online at Division of Planning, [Freight Planning](#), the plan presents information about the current state of operations of freight in Kentucky and develops system-wide strategies and policies consistent with the goals of the KYTC Strategic Plan, the Kentucky Long-Range Statewide Transportation Plan, the United States Department of Transportation (USDOT) Strategic Plan, and the United States National Freight Policy.

#### PL-303.1.1 National Plan Requirements

FHWA's [Freight Planning and Policy Provisions](#) expect the National Freight Strategic Plan to include:

- An assessment of:
  - ◆ The condition and performance of the national freight network
  - ◆ Barriers to improved freight transportation performance
  - ◆ Opportunities to overcome performance barriers
- Forecasts of freight volumes for the succeeding 5, 10, and 20-year periods
- An identification of:
  - ◆ Major trade gateways and national freight corridors that connect major population centers, trade gateways and other major freight generators
  - ◆ Bottlenecks on the network that create significant freight congestion

**PL-303.1.1 National Plan Requirements (cont.)**

- ◆ Corridors that access energy exploration, development, installation, or production areas
  - ◆ Corridors that access major areas for manufacturing, agriculture, or natural resources
  - ◆ Best practices for improving the performance of the network, including critical commerce corridors and rural and urban access to critical freight corridors
  - ◆ Best practices to mitigate the impacts of freight movement on communities
- A process for addressing multistate projects and encouraging jurisdictions to collaborate
  - Strategies to improve freight intermodal connectivity

**PL-303.1.2 Kentucky Plan Requirements**

The FAST Act requires the USDOT to encourage each state to establish a freight advisory committee consisting of a representative cross-section of public and private freight stakeholders.

The role of the state freight advisory committee is to:

- Advise the state on freight-related priorities, issues, projects, and funding needs
- Serve as a forum for discussion for state transportation decisions affecting freight mobility
- Communicate and coordinate regional priorities with other organizations
- Promote the sharing of information between the private and public sectors on freight issues
- Participate in the development of the state freight plan

To receive funding under the National Highway Freight Program (23 U.S.C. 167), the FAST Act requires each state to develop a freight plan, which must comprehensively address the state's freight planning activities and investments (both immediate and long-range). A state may develop its freight plan either separately from, or incorporated within, its statewide strategic long-range transportation plan required by [23 U.S.C. 135](#).

Among other requirements, a state freight plan must:

- Cover a five-year forecast period
- Be fiscally constrained
- Include a "freight investment plan" with a list of priority projects

**PL-303.1.2 Kentucky Plan Requirements (cont.)**

- Describe how the state will invest and match its National Highway Freight Program (NHFP) funds

**Note:** The state must update its freight plan at least every five years and may update its freight investment plan more frequently than the overall freight plan. [49 U.S.C. 70202(e)].

**PL-303.2 KENTUCKY FREIGHT PLAN (KFP) PROCESS***How is the Kentucky Freight Plan initiated?*

The KFP continues to be produced as a supplement to KYTC's LRSTP and is updated on the five-year cycle established by the FAST Act. The KYTC Division of Planning's Modal Programs Branch leads and initiates each update cycle using dollars budgeted through the Planning Work Program.

*What inputs to Kentucky Freight Plan development are required from others?*

The KFP is developed by the KYTC Division of Planning in partnership with the Federal Highway Administration (FHWA), the Kentucky Transportation Center (KTC), and private sector stakeholders through the Kentucky Freight Advisory Committee for Transportation (KFACT). The KTC provides technical expertise and innovations in freight management to the partnership while KFACT serves as the sounding board for FAST Act issues and federal freight requirements.

KFACT's membership includes representation from KYTC, the Kentucky Trucking Association, Kentucky's MPOs, the Kentucky Association of Manufacturers, Kentucky's railroads and riverports, the Kentucky Departments of Energy and Agriculture, and Kentucky-based logistics companies such as United Parcel Service (UPS) and Toyota Motor Manufacturing Kentucky (TMMK).

*What forms are used in the Kentucky Freight Plan development process?*

There are no official TC-59 planning forms involved in this process.

*What are the steps in the Kentucky Freight Plan development process?*

The KFP mirrors the federally required LRSTP in many respects. As the following graphic depicts, the KYTC Division of Planning engages the KFACT group in the initiation of the KFP update and uses them to guide the development of the KFP's assessment of freight conditions and performance, proposed improvements, and recommended freight investments in the coming years. The KFP development process is cyclical (occurring every five years) and designed to contribute the background information necessary for FHWA to update the National Freight Strategic Plan as required by Congress.

## PL-303.2 KFP PROCESS (cont.)

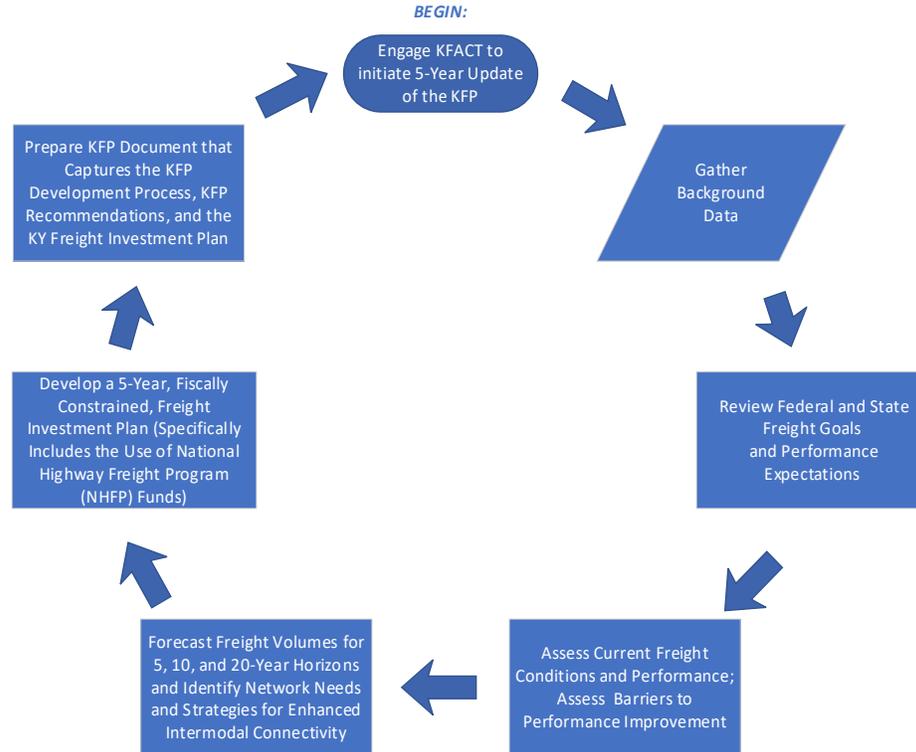


Figure 4. KY Freight Plan (KFP) Development Process

*When is the Kentucky Freight Plan development complete?*

The KFP development is complete when a new KFP has been approved by the Governor and shared with FHWA to demonstrate continuing state compliance with both [23 CFR 450](#) (as it relates to conformance with federal statewide transportation planning requirements) and the federal FAST Act (as it relates to national freight planning and policy requirements).

*What is the approval chain for the Kentucky Freight Plan?*

The approval chain for the KFP first involves transparent interactions with the members of the Kentucky Freight Advisory Committee (KFAC). This committee serves as an educated and focused public forum in which the development of the KFP occurs. The Director of the Division of Planning submits the recommended KFP to the Secretary of Transportation. After review and approval, it is published and provided to FHWA to demonstrate Kentucky's compliance with federal requirements.

The activities of the Strategic Planning Branch and other Division of Planning branches in support of the KFP effort are funded through the Planning Work Program.



	<p><i>Chapter</i></p> <p>KEY PLANS</p>
	<p><i>Subject</i></p> <p>Kentucky Statewide Rail Plan</p>

**PL-304.1 OVERVIEW**

The Federal Railroad Administration (FRA) issued final State Rail Plan Guidance on September 17, 2013. The Guidance explains the process for developing state rail plans including minimum content requirements, standardized format, and FRA’s review and acceptance process. Section 303 of the [Passenger Rail Investment and Improvement Act of 2008 \(PRIIA\)](#) requires states to develop FRA-accepted state rail plans and encourages state involvement in rail policy, planning, and development

Section 11315 of the [Fixing America’s Surface Transportation Act of 2015 \(FAST Act\)](#) made subsequent changes to state rail plan requirements, including specifying that a state-approved rail plan be submitted every four years for acceptance by FRA (rather than the five years allowed under PRIIA). Because individual state rail plans must be updated at least every four years, and state update cycles vary, there is no set schedule for when states will submit rail plans to FRA for review and acceptance.

**PL-304.1.1 Existing Plan**

The Kentucky Statewide Rail Plan (KSRP) was last updated in 2015 and is available on the KYTC Division of Planning’s [Railroads](#) site. The 2015 Kentucky Statewide Rail Plan sought to define goals, system strategies, and policies to improve the Kentucky rail transportation network and its operations while conforming to the goals established in Kentucky’s 2014 Long-Range Statewide Transportation Plan (LRSTP). In addition, this document consolidated information about Kentucky railroads and identified future rail project goals to meet Federal Railroad Administration (FRA) requirements for federal funding eligibility. The 2015 KSRP is a high-level policy guidance document that presents information about the current state of operations of the rail mode in Kentucky, including rail issues for all stakeholders and the role of railroads in a multimodal environment. It also develops system-wide strategies and policies consistent with the goals of the KYTC Strategic Plan, Kentucky LRSTP, U.S. Department of Transportation (USDOT) Strategic Plan, and United States National Freight Policy.

**PL-304.1.1 Existing Plan (cont.)**

The information and policies contained in the 2015 KSRP allow KYTC to identify initiatives to improve rail service and to prioritize those initiatives based on public and private benefits. The PRIIA, codified as Public Law 110-432, stipulates the minimum content of state rail plans.

The FRA guidance released in September 2013 further clarified that state plans accomplish the following objectives:

- Broaden the understanding of rail issues for all stakeholders
- Define the role of railroads in a multimodal environment
- Identify infrastructure and other improvements required to improve rail service
- Provide a framework to implement rail improvement initiatives
- Develop methodologies to measure public and private benefits of rail improvements
- Provide support and justification for federal, state, and private rail funding

**PL-304.1.2 Railroad Oversight & Regulation**

[KRS 174.057](#) assigns the KYTC Division of Planning with the responsibility for regulating railroads within the Commonwealth. [603 KAR 7:090](#) establishes reporting requirements for railroads to ensure adequate means for KYTC's review of state railroad activity.

This regulation requires that all freight railroads must submit the following information to KYTC:

- Kentucky Railroad Annual Report ([TC 59-102](#))
- Map of all active routes
- Written notice of abandonments
- Reports of accidents resulting in a loss of life

The annual report and map of all active routes are to be submitted to KYTC's Division of Planning on or before March 31 of each year. With these procedures in place, KYTC has information readily available for reference purposes, KSRP updates and other planning efforts KYTC may pursue.

**PL-304.2 KENTUCKY STATEWIDE RAIL PLAN (KSRP) PROCESS****How is the Kentucky Statewide Rail Plan initiated?**

The KSRP has traditionally been a supplement to KYTC's Long-Range Statewide Transportation Plan (LRSTP). The federal FAST Act required that a state-approved rail plan be submitted every four years for acceptance by FRA rather than the five years allowed under PRIIA.

**PL-304.2 KSRP PROCESS (cont.)**

As the 4-year update cycle for the KRSP approaches, KYTC's Division of Planning, Modal Programs Branch, leads the effort to gather appropriate railroad data and determine the extent to which the Kentucky Statewide Rail Plan needs revision. The Modal Programs Branch works to satisfy the State Rail Plan Guidance provided by FRA in the carrying out of this assignment.

*What inputs to the Kentucky Statewide Rail Plan are required from others?*

To pursue the most recent KRSP, KYTC chose a targeted approach in the solicitation of public and key industry stakeholder opinions about rail infrastructure needs identification and rail operations issues in Kentucky. While seeking input, KYTC made clear its very limited ability to fund rail projects or encourage changes in rail operations. In Kentucky, rail transportation is largely the responsibility of private rail companies, intermodal shippers, and others involved in the industry. KYTC has no authority over the management or disposition of the private assets of those companies. Also, funding made available from FRA, FHWA, or KYTC is typically pass-through money from federal government sources or is obligated from the Kentucky General Fund and competes against other statewide needs. The State Road Fund, KYTC's dedicated funding source, is constitutionally mandated to be used only on highways.

Since there is no dedicated funding source for rail projects, a special effort was made to seek comments from members of the railroad industry and the general public regarding the draft 2015 KSRP. Efforts included presenting information to and soliciting feedback from attendees at the Kentuckians for Better Transportation (KBT) conference in January 2014, as well as holding two public meetings in February 2014, and meeting with rail industry stakeholders in May 2014. A 45-day review and comment period was available in August and September 2014. Future editions of the KSRP Kentucky Statewide Rail Plan will likely use the same types of forums for comment and will continue to rely on Metropolitan Planning Organization (MPO) and Area Development District (ADD) input throughout the process.

*What forms are used in the Kentucky Statewide Rail Plan process?*

There is one official planning form involved in this process. TC 59-102, *Kentucky Railroad Annual Report*, is available to guide railroad compliance with the reporting provisions of [603 KAR 7:090](#). A working copy of this form may be obtained online from the [KYTC Forms Library](#).

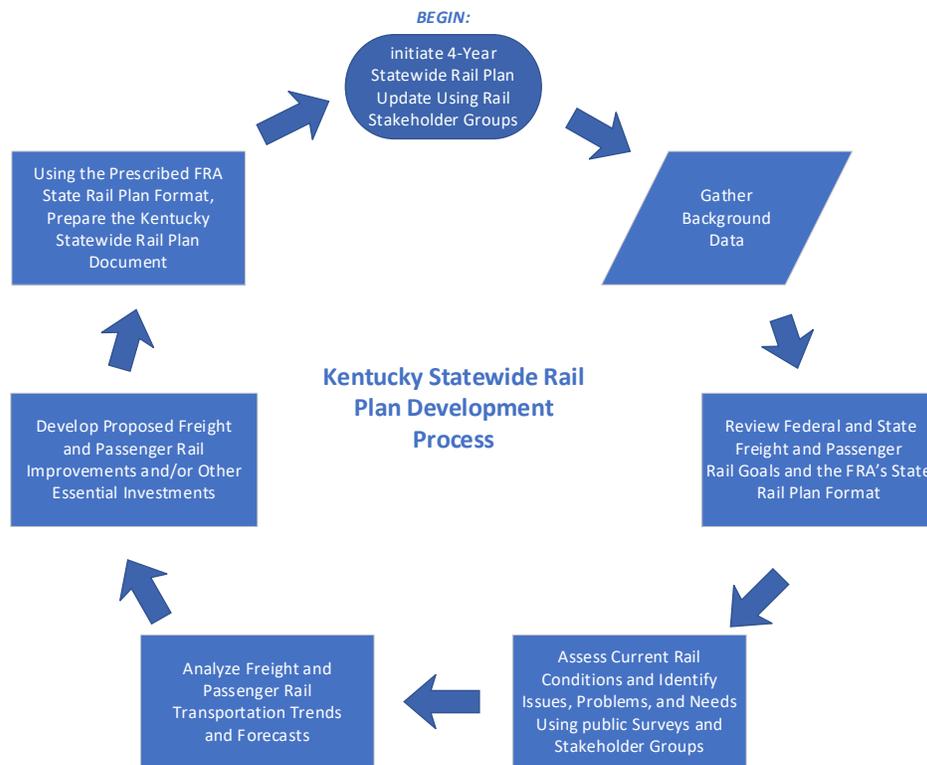
*What are the steps in developing the Kentucky Statewide Rail Plan?*

KYTC recognizes that an effective rail system will help alleviate highway congestion, contribute to economic development, improve public safety, improve energy efficiency, and reduce greenhouse gas emissions. The goals of the 2015 KSRP include:

**PL-304.2 KSRP PROCESS (cont.)**

- *Preservation*—Encourage the preservation of the largely privately owned and operated rail system within Kentucky.
- *Economic Development*—Support economic development by working to provide roadway connectivity to the national rail system and state intermodal facilities.
- *Customer Relationships/Transportation Planning Process*—Strengthen customer relationships with the rail industry through communication, cooperation, and information exchange in the KYTC transportation planning process
- *Safety and Security*—Enhance highway-railroad at-grade crossing safety and reliability to ensure mobility and maintain safe access

To address these goals, the KSRP is produced every four years as a supplement to Kentucky’s LRSTP according to the following process:



**Figure 5. KY Statewide Rail Plan Development Process**

**PL-304.2 KSRP PROCESS (cont.)**

As noted in Table 5, the FRA has identified a preferred State Rail Plan format addressing content and organization. This format is shown below; additional detail is provided for each chapter in the [September 2013 State Rail Plan Guidance](#) document:

- Executive Summary
- The Role of Rail in Statewide Transportation (Overview)
- The State's Existing Rail System
  - ◆ Description and Inventory
  - ◆ Trends and Forecasts
  - ◆ Rail Service Needs and Opportunities
- Proposed Passenger Rail Improvements and Investments
- Proposed Freight Rail Improvements and Investments
- The State's Rail Service and Investment Program
- Coordination and Review
- Technical Appendix

The state rail plan may be published and presented to FRA either as a stand-alone document or as an element of the state's LRSTP, as required in [23 U.S.C. 135](#) and [49 U.S.C. 5304](#), in accordance with the Moving Ahead for Progress in the 21st Century Act (MAP-21). Incorporation of the state rail plan within the LRSTP may provide an opportunity for states to more fully envision and present their rail program within a broader context of the state's multimodal statewide transportation system. If the state rail plan is incorporated within the state's LRSTP, it is important that the state rail plan standard format be used (for the state rail plan section of the LRSTP) and that KYTC, the designated State Rail Plan Approval Authority, explicitly approves the state rail plan element.

*When is the Kentucky Statewide Rail Plan complete?*

The KSRP is complete when the updated document has been approved by KYTC (the Governor's designee) and shared with FHWA and FRA. The sharing of this document with the federal agencies demonstrates continuing state compliance with both [23 CFR 450](#) as it relates to conformance with federal statewide transportation planning requirements. The KSRP also conforms to the federal PRIIA and MAP-21 Acts as it relates to national rail planning and policy requirements.

*What is the approval chain for the Kentucky Statewide Rail Plan?*

The approval chain for the KSRP involves transparent interactions with the public and key stakeholders, including private railroad companies, shippers, freight and passenger rail organizations, rail labor organizations, intercity bus operators, airlines, airport authorities, port authorities, chambers of commerce, tourism organizations, and other public or private entities interested in improving rail services.

**PL-304.2 KSRP PROCESS (cont.)**

The KYTC Division of Planning Director submits the final KSRP to the Secretary of Transportation (the Governor's designee) for review and approval. Once approved, the plan is published and provided to FHWA and FRA to demonstrate Kentucky's compliance with federal statewide and rail planning requirements. The activities of the Strategic Planning Branch and other Division of Planning branches in support of the KSRP are funded through the Planning Work Program.



	<p><i>Chapter</i></p> <p>KEY PLANS</p>
	<p><i>Subject</i></p> <p>Kentucky Six-Year Highway Plan</p>

**PL-305.1 OVERVIEW**

The Kentucky Six-Year Highway Plan communicates KYTC’s intent to pursue specific highway improvement projects to the Kentucky General Assembly. The desire for legislative interaction in the approval of a “road plan” culminated in the enactment of [KRS 176.430](#) by the Kentucky General Assembly in 1982. Among others, this legislation required that KYTC shall:

- Undertake a continuing study of the needs of the highways under its jurisdiction
- Develop a recommended six-year road plan that identifies the individual transportation projects
- Include a recommended biennial highway construction program

The law also defines the information required for each project and the factors to be considered when developing the six-year road plan.

Coinciding with every even-numbered year when the Kentucky General Assembly is in Regular Session, KYTC produces (on behalf of the executive branch of state government) the Governor’s Recommended Six-Year Highway Plan in compliance with [KRS 176.430](#), and establishes baseline scoring for every recommended project.

Beginning with the [2018 Governor’s Recommended Six-Year Highway Plan](#), the KYTC Division of Planning implemented the [Strategic Highway Investment Formula for Tomorrow \(SHIFT\)](#) as a method to ensure that projects with high technical scores receive highway plan funding priority. As outlined in [PL-900](#), the SHIFT process is collaborative, transparent, and produces a data-driven, objective approach to comparing capital improvement projects and prioritizing transportation spending. SHIFT provides a clear road map for KYTC’s Six-Year Highway Plan construction spending in the coming years. The formula applies to safety improvements, reconstruction, widening, and new route and new interchange highway improvement projects. The SHIFT formulas do not apply to maintenance work, local government projects, or projects financed by dedicated federal funds.

**PL-305.1 OVERVIEW (cont.)**

Using the Area Development Districts (ADDs), Metropolitan Planning Organizations (MPOs), and KYTC district staff for local input, KYTC has developed an 18-month process to implement SHIFT in advance of each biennial highway plan cycle. This process includes:

- Continuing the development and evaluation of SHIFT process and scoring formulas
- Obtaining project sponsors for each project evaluated by SHIFT
- Verifying baseline data
- Generating statewide priorities
- Involving ADD and MPO transportation committees in the Regional prioritization effort
- Finalizing project selection for the KYTC's Recommended Six-Year Highway Plan

Working in tandem with the KYTC Division of Program Management and with direct input from both the KYTC State Highway Engineer's Office and the Secretary of Transportation, the SHIFT process elevated the priority for bridge and pavement asset management in the 2018 Recommended Six-Year Highway Plan. The remaining funds were distributed using individual project priorities identified through the SHIFT prioritization process.

**PL-305.2 SIX-YEAR HIGHWAY PLAN PROCESS****How is the Six-Year Highway Plan initiated?**

The development of each edition of the Governor's Recommended Six-Year Highway Plan begins with the legislative enactment of a highway plan in April of every even-numbered year. The SHIFT project prioritization process is reviewed and adjusted by the KYTC Division of Planning as necessary before being applied to candidate highway plan projects over the months leading up to the Fall of each odd-numbered year.

The SHIFT process culminates in a list of project priorities for consideration in the development of the Governor's Recommended Six-Year Highway Plan, as spearheaded by the KYTC Division of Program Management. The KYTC Division of Program Management prepares the Governor's Recommended Six-Year Highway Plan and submits it to the Kentucky General Assembly in January of each even-numbered year.

**PL-305.2 SIX-YEAR HIGHWAY PLAN PROCESS (cont.)***What inputs to the Six-Year Highway Plan process are required from others?*

Unparalleled commitment and contribution are vital to the production of a data-driven highway plan. The Division of Planning has established an internal process for identification of project needs, scoping those needs, obtaining sponsors for those projects, using SHIFT to score those projects, and providing the results to the Division of Program Management for assimilation into the Six-Year Highway Plan.

The KYTC district planning staff develops district scoring priorities and helps to coordinate the SHIFT prioritization process with local partners. Other KYTC divisions and district staff assist with development of the Six-Year Highway Plan by updating highway plan costs and schedules, recommending pavement and bridge asset management needs, and recommending projects associated with other fund sources, such as safety programs or projects. Assistance is also provided by the KYTC Office of Budget and Fiscal management (revenue estimates and assumptions), KYTC State Highway Engineer's Office (technical review), and Secretary of Transportation (policy review).

External to KYTC, the MPOs, ADDs, and local elected officials participate directly in the SHIFT process and help establish the regional scoring results. The Governor's endorsement of the Recommended Six-Year Highway Plan and his submittal of the document to the Kentucky General Assembly for legislative review and approval are also critical contributions to the Kentucky Six-Year Highway Plan process.

*What forms are used in the Six-Year Highway Plan process?*

There are no official TC-59 planning forms involved in this process.

*What are the steps in the Six-Year Highway Plan process?*

The Six-Year Highway Plan development process begins with a review of the KYTC vision, goals, and performance targets to establish the proper context for the new edition of the plan (Figure 6). Prioritized project inputs are received from SHIFT, asset management needs are quantified, existing project updates are made, and revenue estimates are generated to develop funding scenarios. The final mix of projects is determined through an iterative, year-by-year, fiscal balancing effort.

The final list of projects is presented to the Kentucky General Assembly at the beginning of each Regular Session as the Governor's Recommended Six-Year Highway Plan. The General Assembly reviews the recommended plan during the Regular Session and produces the Enacted Highway Plan on or about April 15, with publication by July 1.

## PL-305.2 SIX-YEAR HIGHWAY PLAN PROCESS (cont.)

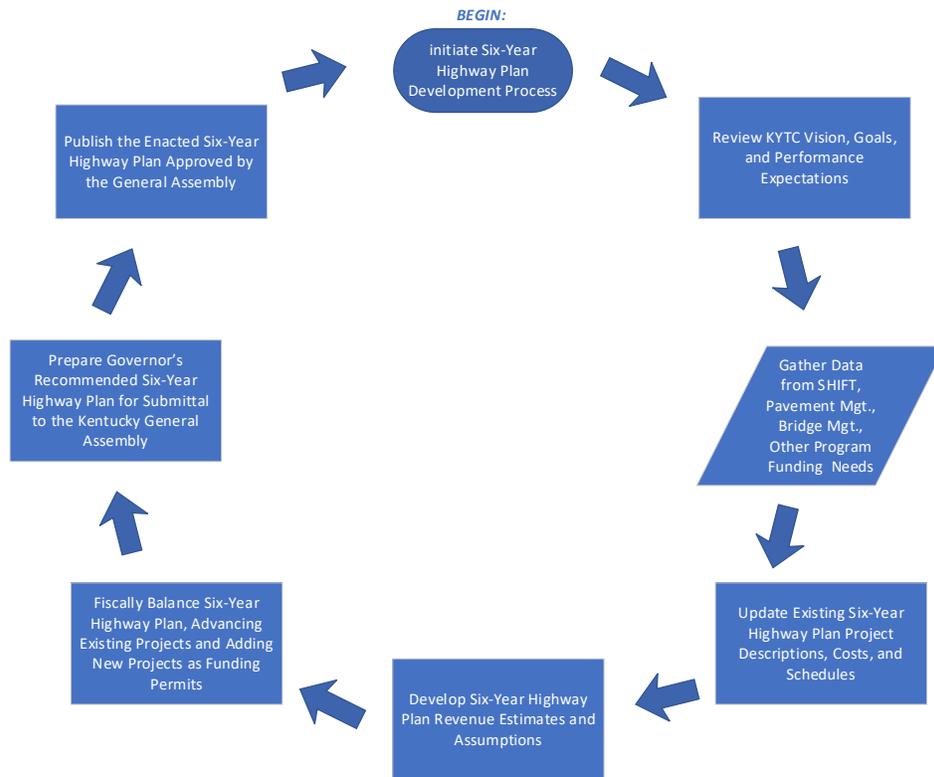


Figure 6. Six-Year Highway Plan Development Process

When is the Six-Year Highway Plan complete?

The Six-Year Highway Plan is complete when the Kentucky General Assembly has addressed the Governor's Recommended Six-Year Highway Plan during the General Session and has officially produced its own Enacted Six-Year Highway Plan. While that action technically represents the culmination of the process, the Six-Year Highway Plan is not fully complete until the KYTC Division of Program Management publishes the final enacted highway plan for distribution by July 1.

What is the approval chain for the Six-Year Highway Plan?

The Six-Year Highway Plan development process is managed by the KYTC Division of Program Management. The production of the Governor's Recommended Six-Year Highway Plan is a collaborative effort between the Division of Program Management State Highway Engineer's Office, KYTC Office of Budget and Fiscal Management, and Secretary of Transportation. As the head of the Executive Branch of state government, the Governor approves the submittal of the recommended plan to the General Assembly, which is the ultimate authority responsible for ensuring that the recommended highway plan meets the requirements of [KRS 176.430](#) and enacting the final biennial road plan.



	<p><i>Chapter</i></p> <p>FEDERAL-AID HIGHWAY PROGRAM</p>
	<p><i>Subject</i></p> <p>Funding Availability &amp; Use</p>

**PL-401.1 FUNDING SOURCES**

State Planning and Research (SPR) and federal Metropolitan Planning (PL) funds are provided annually through each state’s regularly apportioned Federal-Aid Highway Program. These funds are apportioned according to the [2015 Fixing America’s Surface Transportation \(FAST\) Act](#) and governed by [23 CFR Part 420](#), Planning and Research Program Administration.

To support the provisions of [23 USC 135](#), funding is provided for the statewide and non-metropolitan planning component of SPR from each state’s apportionments of five core federal programs:

- National Highway Performance Program (NHPP)
- Surface Transportation Block Grant Program (STBG)
- Highway Safety Improvement Program (HSIP)
- Congestion Mitigation and Air Quality Program (CMAQ)
- National Highway Freight Program (NHFP)

The FAST Act also supports the Metropolitan Planning (PL) program provisions as outlined in [23 USC 134](#).

The Federal Highway Administration’s (FHWA’s) FY 2019 [Notice 4510.832, Table 7](#), provides an example of Kentucky’s annual SPR and PL funding calculations. The amount shown for State Planning and Research includes 25% for research, with the remaining 75% supporting statewide and non-metropolitan planning efforts. For the SPR Program, the federal share for program activities is 80%. Each state’s PL Program is authorized as a lump-sum total of PL funds each year. KYTC’s Division of Planning, in consultation with the MPOs, determines the allocation of PL funds and the accompanying matching fund responsibilities for each individual Metropolitan Planning Organization (MPO) for a specific year. In general, SPR and PL Funds are used to assist KYTC and the MPOs in meeting federal planning and reporting requirements.

**PL-401.2 USE OF FUNDS**

The appropriate use of SPR and PL Funds is set forth in multiple sections of federal law, including the following:

- [FAST Act](#)
- [23 CFR 420](#)
- [23 USC 134](#) and [135](#)
- [23 USC 505](#)
- [49 USC 5303-5305](#) and [5313\(b\)](#)
- [49 CFR 18](#)
- [2 CFR 200](#)
- [23 CFR 450](#)

These laws and accompanying regulations also outline program eligibility, annual work program requirements, audit requirements, and annual performance and expenditure reporting. Program oversight is a joint Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) responsibility even though the details of Kentucky's transit program are processed and approved separately by FTA.

The implementation of a continuing, comprehensive, and cooperative (3C) transportation planning process for the Commonwealth of Kentucky is rooted in these federal laws and based on the appropriate activities funded by SPR and PL funds. KYTC's Division of Planning consults with the transportation planning staff in twelve KYTC highway district offices, nine Metropolitan Planning Organizations (MPOs), and fifteen Area Development Districts (ADDs) across the state. The Planning Work Program contains annual goals and objectives, as well as consultant usage and training needs, and is prepared and submitted for FHWA and FTA joint approval prior to the beginning of each state fiscal year.



	<p><i>Chapter</i></p> <p>FEDERAL-AID HIGHWAY PROGRAM</p>
	<p><i>Subject</i></p> <p>Planning Work Program</p>

**PL-402.1 OVERVIEW**

KYTC’s Division of Planning submits the annual Planning Work Program to FHWA in mid-to-late May of each year. The submission is made in anticipation of a mid-June approval and commencement of work activities on or before the beginning of the state’s fiscal year on July 1. The Planning Work Program request details the use of State Planning and Research (SPR) funds dedicated to statewide and non-metropolitan planning and is referenced by the Federal Highway Administration (FHWA) as “SP&R Work Program-Subpart A.” KYTC research professionals submit separate documentation for the SPR Funds dedicated to research, development, and technology (RDT) activities. FHWA serves as the single point of federal contact and closely coordinates its review of the Planning Work Program with the Federal Transit Administration (FTA). Commensurate with the federal Planning Work Program review each year, KYTC’s Division of Program Management processes a federal-aid project agreement that establishes the SPR Funds in the federal Financial Management Information System (FMIS), thereby ensuring that KYTC can be appropriately reimbursed for the federal share of costs incurred for annual Planning Work Program activities.

**PL-402.2 PLANNING WORK PROGRAM PROCESS**

*How is the Planning Work Program initiated?*

The Director of KYTC’s Division of Planning and the Customer Service Branch consult with KYTC’s Office of Budget and Fiscal Management in mid-December to estimate federal SPR and Metropolitan Planning (PL) funds available for the upcoming year’s activities. KYTC’s Office of Budget and Fiscal Management also provides information on the availability of State Road Funds to match the federal dollars, as well as anticipated State Road Fund and State General Fund contributions for Area Development District (ADD) regional transportation planning. Local funding commitments are also estimated from each of the Metropolitan Planning Organizations (MPOs) to match their respective PL fund allocation and from the ADDs in support of the ADD Regional Transportation Program.

**PL-402.2 PLANNING WORK PROGRAM PROCESS (cont.)**

The allocation of anticipated PL Funds to the MPOs in accordance with a formula developed by KYTC's Division of Planning (after consultation with the MPOs and approval by FHWA), is essential to preparation of the Planning Work Program budget. In developing the allocation formula, KYTC's Division of Planning considers population, status of planning, attainment of air quality standards, metropolitan area transportation needs, and other factors necessary to provide for an appropriate distribution of funds to carry out the requirements of [23 USC 134](#) and other applicable requirements of federal law. This formula may create a PL Discretionary Funding account administered by KYTC's Division of Planning to address unforeseen or special metropolitan planning needs, if such discretionary funding is agreeable to the MPOs and FHWA.

*What input is required from others?*

To determine the SPR-funded planning activities required in the upcoming year, KYTC's Division of Planning, Customer Service Branch, uses its SPR administrative, budgetary, and expenditure tracking activities to assess the Planning Work Program status. Assessment tools include:

- Monthly expenditure reports for each chapter of the Planning Work Program
- Quarterly program accomplishments
- Direct communication with each KYTC Division of Planning Branch Manager

Using the mid-year status and expected accomplishments for the remainder of the year, each Branch forecasts work items, consultant assistance, and training needs for the upcoming year. KYTC district planning supervisors are also given the opportunity to provide input regarding Planning Work Program needs for the upcoming year at quarterly statewide transportation planning meetings. When the needs have been assimilated according to the type of work and their priority within the appropriate Planning Work Program chapter, cost estimates for each activity are generated by the respective Planning Branch Manager and budgetary limitations are set by KYTC's Division of Planning Director. This results in an iterative process that culminates in the submission of a draft Planning Work Program document to FHWA for approval in mid-to-late May.

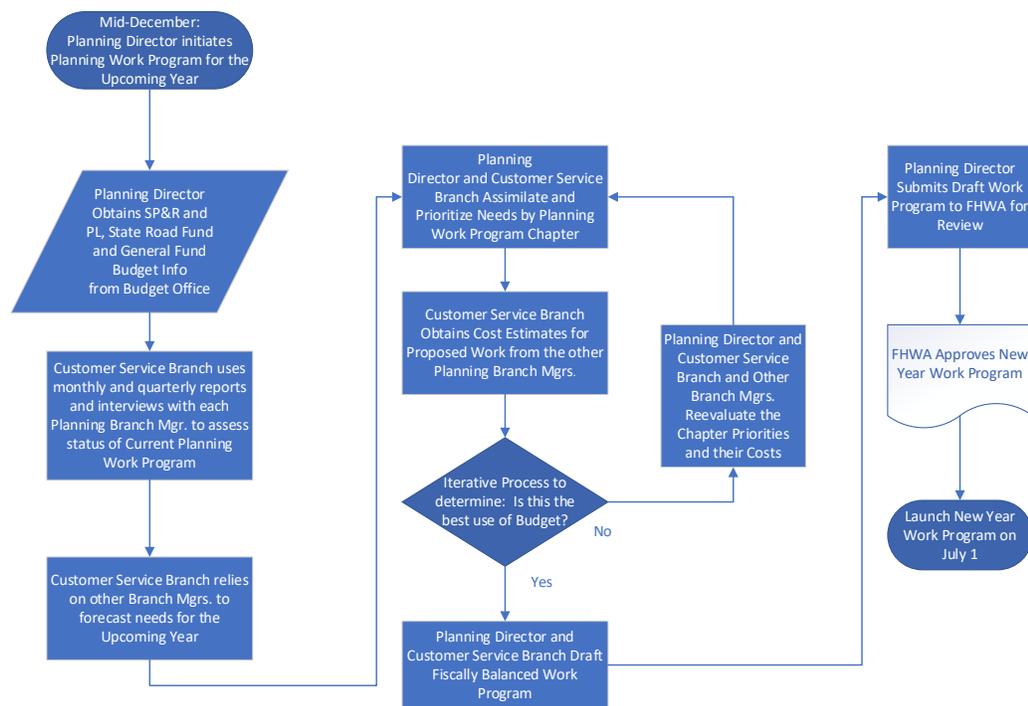
*What forms are used?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in the process?*

Figure 7. outlines the process for developing the Planning Work Program for the upcoming year.

**PL-402.2 PLANNING WORK PROGRAM PROCESS (cont.)**



**Figure 7. Planning Work Program Process**

*When is the Planning Work Program complete?*

The **Planning Work Program** is complete when FHWA approves and authorizes new program activities to begin effective July 1 of the new fiscal year.

*What is the approval chain for the product?*

The Customer Service Branch develops the annual Planning Work Program in concert with KYTC’s Division of Planning branch managers. KYTC’s Division of Planning Director approves and submits the draft Planning Work Program document to FHWA for review. FHWA, in consultation with Region 4 of the Federal Transit Administration (FTA), provides final approval of the Planning Work Program.

**PL-402.3 PROJECT SELECTION**

KYTC’s Division of Planning routinely undertakes technical highway project studies to determine conceptual scoping parameters. These studies include:

- Existing corridor evaluations
- New route conceptualization studies
- Small Urban Area (SUA) Studies

**PL-402.3 PROJECT SELECTION (cont.)**

- Interchange Justification Studies (IJS)
- Interchange Modification Report (IMR)
- Special studies

Funding sources are varied and include SPR Funds through the [KYTC Planning Work Program](#). SPR projects are generated through a biannual process in which project nominations are solicited from KYTC's Division of Planning, Strategic Planning Branch, and KYTC districts. The nominating entity designates nominated projects as high, medium, or low priority. Projects must exist in the Continuous Highway Analysis Framework (CHAF) database, and must have a scope accomplished for less than \$250,000 (the cost limit for projects assigned by letter agreement to a Statewide Planning consultant). Project selection is a function of the annual SPR funding budgeted for such studies and is the responsibility of KYTC's Division of Planning Director. See [PL-206](#) for information on the management and use of statewide planning consultants to perform a planning study.



	<p><i>Chapter</i></p> <p>FEDERAL-AID HIGHWAY PROGRAM</p>
	<p><i>Subject</i></p> <p>Training for Planning Personnel</p>

### PL-403.1 OVERVIEW

Timely training is critical to the success of any quality organization, especially when applicable methodologies and techniques are changing rapidly. KYTC's Division of Planning keeps pace with advances in transformative technologies (automated vehicles), as well as new approaches to prioritizing transportation projects, such as the Strategic Highway Investment Formula for Tomorrow (SHIFT) criteria. It is essential that employees understand and value training needs in order to maintain professional core competencies, and are cross-trained to appreciate a wider array of transportation planning options.

KYTC's Division of Planning, Customer Service Branch, works closely with the Division Director, other branches within the Division, district planning supervisors, and Metropolitan Planning Organization (MPO) and Area Development District (ADD) planning staffs, to identify training needs and provide support for individual employee training (including workshops, classes, conferences, and other means of enhancing the abilities of those engaged in the art of transportation planning).

#### *How is training for planning personnel initiated?*

The Customer Service Branch routinely assesses Division of Planning staff training needs during preparations for and implementation of each State Planning and Research (SPR) Planning Work Program. As an eligible SPR expense, the identification of each Branch's training needs is integral to the allocation of SPR funds through the Planning Work Program. The Customer Service Branch identifies a list of upcoming conferences and training events and cross-references those conferences and events to the respective KYTC Division of Planning Branch and MPOs that express interest ([Exhibit 9002](#)). As these conferences and events occur, the Division of Planning Director determines relative individual training needs across the organization and assigns available transportation planning training opportunities.

#### *What input is required from others?*

It is imperative that each KYTC Division of Planning branch manager understands the requirements of their respective branch and the capabilities of the employees within that branch.

**PL-403.1 OVERVIEW (cont.)**

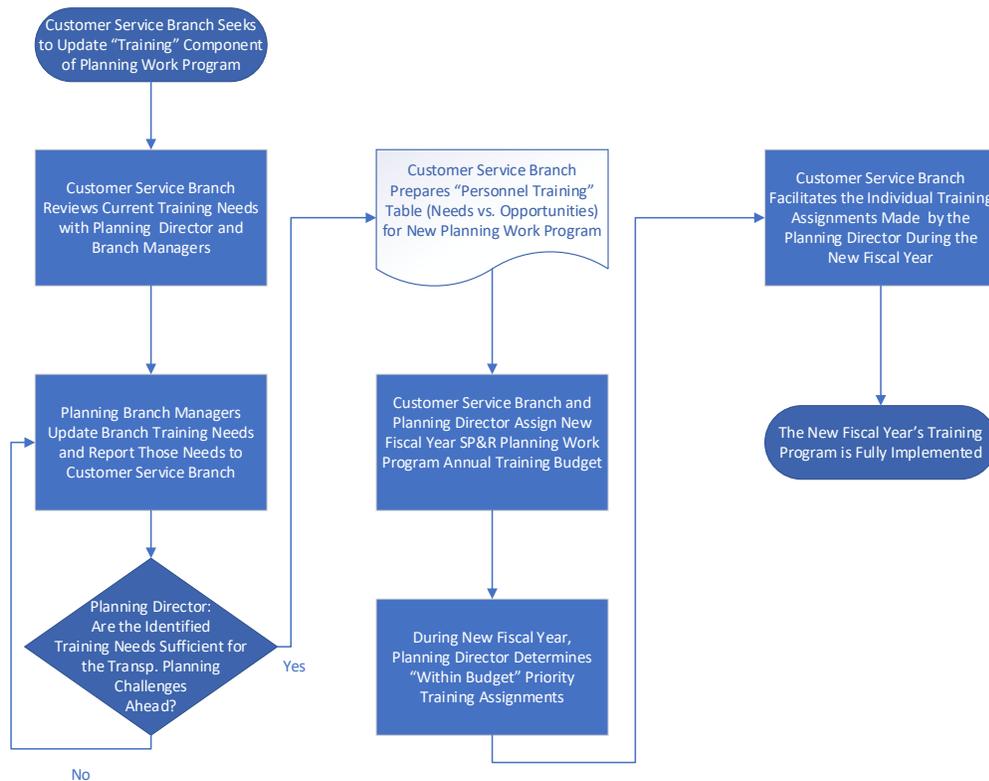
Each Division of Planning branch manager must recommend appropriate training opportunities to the Customer Service Branch for possible inclusion in the Planning Work Program. Each Division of Planning branch manager should convey training needs to the Division Director for his or her prioritization of training expenditures.

What forms are used?

There are no official TC 59 planning forms for this process.

What are the steps in this process?

Figure 8 outlines the process for identifying KYTC Division of Planning training needs.



**Figure 8. Training for KYTC Division of Planning Personnel: Needs Identification and Support**

When is the process complete?

Training for Division of Planning personnel is never complete, but each year’s training needs and support process is complete when the available SPR training budget has been expended.

**PL-403.1 OVERVIEW (cont.)***What is the approval chain for the training of planning personnel?*

As the flowchart indicates, the KYTC Division of Planning training budget is closely tied to the development of the annual Planning Work Program. KYTC's Division of Planning Director approves the Planning Work Program and annual SPR training budget, and then submits both to FHWA for approval. Following federal approval of the Planning Work Program, KYTC's Division of Planning Director makes individual training assignments in consultation with branch managers.

**PL-403.2 STATEWIDE TRANSPORTATION PLANNING (STP) MEETINGS**

KYTC's Division of Planning coordinates quarterly meetings with Kentucky planning partners and other related disciplines for the purpose of training, collaboration, and dissemination of information. Partners include ADDs, MPOs, KYTC District Planning staff, and the Federal Highway Administration (FHWA). Invited speakers provide insight on a myriad of issues and represent entities responsible for environmental, research, emergency management, tourism, census demographics, and other disciplines with whom state and local transportation planning staff routinely interact.

The Division of Planning Director shall assign a staff member to coordinate STP meetings. The STP meeting coordinator is responsible for performance or oversight of the following tasks:

- Document STP efforts
- Reserve meeting spaces
- Develop meeting agenda
- Issue meeting invitations
- Schedule presenters
- Facilitate meeting
- Update STP webpage
- Serve as point of contact with KYTC security when meetings are held at the Transportation Cabinet Office Building
- Seek continuous improvement of the STP meeting program

**PL-403.3 FOCUSED TRAINING**

Staff training shall reflect professional career development or improvement of staff technological skills. Such training may include workshops, classes, conferences, or other resources meant to enhance the employee performance of job duties and responsibilities. KYTC's Division of Planning provides training opportunities for planning personnel whenever instruction in procedures, regulations, or technical issues is deemed necessary to provide improved program coordination and efficiency.



	<p><i>Chapter</i></p> <p>HIGHWAY INFORMATION &amp; MONITORING SYSTEMS</p>
	<p><i>Subject</i></p> <p>Overview</p>

**PL-501.1 ORGANIZATION**

The Highway Information System (HIS) and Highway Performance Monitoring System (HPMS) are both housed within KYTC’s Division of Planning, Data Management Branch.

**PL-501.2 HIGHWAY PERFORMANCE MONITORING SYSTEM (HPMS) DATA**

HPMS data encompasses the extent, condition, performance, use, and operating characteristics of the nation’s highways. Since the system’s development in 1978, HPMS has driven KYTC’s collection and storage methods for roadway data. KYTC has embraced the requirements of HPMS. As a result, data collection and management processes have evolved into a robust Highway Information System (HIS) database.

**PL-501.3 HIGHWAY INFORMATION SYSTEM (HIS) DATA**

HIS is an Oracle-based, spatially enabled, Linear Referencing System (LRS), based on the Geographic Information System (GIS) and rooted in the geospatial data that forms the HIS base map. HIS data may be maintained, reported, and displayed both in tabular and spatial form. The data is geospatially attached to and located along the GIS centerlines based upon county, route, and mile point information.

**PL-501.4 HPMS & HIS DATA USE**

In compliance with [23 USC 502\(h\)](#), Congress mandates a biennial Conditions and Performance Report of the nation’s future highway investment needs. HPMS data is used for assessing highway system performance under the U.S. Department of Transportation’s (USDOT) and the Federal Highway Administration’s (FHWA) strategic planning and performance reporting process in accordance with the Government Performance and Results Act (GPRA, Sections 3 and 4). HPMS data is also used for apportioning federal-aid highway funds in accordance with Title 23 USC.

**PL-501.4 HPMS & HIS DATA USE (cont.)**

[KRS 176.055](#) authorizes the Department of Highways to make and circulate maps and other artwork for the dissemination of information concerning its roads and highways. From the geospatial detail, a variety of maps are produced; state and federal highway system designations and functional classification information is supported and retrieved; traffic count data is stored; and accommodates other special needs such as the Coal Haul System, the Appalachian Development Highway System, and Alternative Fuel Corridors.



	<b>Chapter</b> HIGHWAY INFORMATION & MONITORING SYSTEMS
	<b>Subject</b> Geospatial Data & Maps

**PL-502.1 GEOSPATIAL DATA PRODUCTION**

*How is geospatial data produced?*

The Highway Information System (HIS) database is a Linear Referencing System (LRS) network of Kentucky’s publicly-owned (and some privately-owned) roadway centerlines that serve as a base for locating roadway information. This LRS network is maintained with a goal of 2 to 4-meter accuracy of centerline locations throughout the state.

Each segment of roadway in the LRS network is referred to as a base datum, and each set of roadway information can be stored on each individual base datum. This allows the roadway information to be changed (route number, mile point, road name) without changing the spatial location of the roadway information (functional class, lane width, traffic count).

The base datum only contains pertinent information about the individual segment of roadway and typically is defined to break between intersections of roads, county lines, and changes to individual attributes on each base datum.

HIS contains multiple sets and layers of roadway features that are connected to the base datum. The data listed in Table 4. is collected, stored, and maintained by KYTC’s Division of Planning.

**Table 4. Division of Planning Data Collections**

ASSET TYPE	ASSET NAME	ASSET TYPE	ASSET NAME
AL	Auxiliary Lanes	MD	Median
AP	Appalachian Development Highway System	NHFN	National Highway Freight Network
BD	FT INV for “Base Datum”	OP	Type of Operation
BI	Bicycle Routes	PASS	Passing

**PL-502.1 GEOSPATIAL DATA PRODUCTION (cont.)****Table 4. Division of Planning Data Collections (cont.)**

ASSET TYPE	ASSET NAME	ASSET TYPE	ASSET NAME
BKPD	Bike /Ped Facilities	PV	Pavement
CA	Access Control	RA	Ratings
CH	Coal Haul	RBRT	Rec. Bike Rides Route Segment
CHRP	Coal Haul Route Plan	RBSP	Rec. Bike Rides Sponsor
CHRT	Coal Haul Route Segment	RBST	Rec. Bike Rides Start
CREV	Critical Rate Factor on Evaluation Sections	RL	DMI Route Log
CU	Horizontal Curve	RW	Right-of-Way
EV	Rating Evaluation Section	SD	Measured Travel Speed
EW	Extended Weight System	SH	Shoulders
FB	Ferry Boats	SS	State System
FH	Forest Highway System	TF	Traffic Flow Section
FS	Federal System	TR	Truck Network
GR	Grade (Vertical Curve)	TS	Traffic Count Station
KHFN	Kentucky Highway Freight Network	TSA	Traffic Count Station Annual
LN	Through Lanes		

Other KYTC divisions may collect additional data for storage in HIS or other KYTC divisions' databases, and update information in HIS for reporting and analysis needs by KYTC's Division of Planning. The data layers stored in HIS are categorized as follows:

- Highway Systems (State System, Functional Class, Truck Network)
- Roadway Information (Control of Access, Posted Speed Limit)
- Roadway Features (Number of Lanes, Shoulder Type, Median Type)
- Route Log (mile point of intersections and bridges along the route)
- Traffic Counts (traffic count data on routes)
- Bridge (location only in HIS on both the actual route location and the route mainline location for federal reporting)

**PL-502.1 GEOSPATIAL DATA PRODUCTION (cont.)**

Database processing joins the location along the base datum and the route layer, which allows real-time assignment of correct mile points to each set of roadway information. This permits certain changes without requiring a total rebuild of the data set for that particular segment of roadway. For instance, this feature allows KYTC staff to remove a curve at the beginning of a route, thereby shortening the rest of the route, and the database recalculates all roadway information associated to the base datum concerning its correct mile point assignment.

The database goes through a weekly “refresh” process that exports all data (both roadway centerlines and roadway asset information) to Transportation Enterprise Data (TED), a centralized reporting database. The data is also exported to the Geographic Information System (GIS) servers. Since the roadway data route and mile point information is kept up-to-date in real time, dynamic segmentation can be accomplished to match the roadway information to the route layer so that GIS files of all the data can be accurately reported and provided to GIS customers.

*What input is required for geospatial data production?*

For HIS to work seamlessly, KYTC must maintain accurate and readily available data. KYTC’s data quality assurance effort is led by the Office of Information Technology, which also oversees the TED database and the Cabinet’s GIS servers. For local roads, Area Development District (ADD) transportation planners coordinate with local officials on behalf of KYTC to provide Global Positioning System (GPS) roadway centerline data that can be uploaded to HIS where it will serve as the base datum for local roads. Substantial effort is required to ensure that the data collected by ADDs is acceptable to KYTC’s Division of Planning, Data Management Branch.

*What forms are used?*

There are no official TC 59 planning form for this process.

*What are the steps in the production of geospatial data?*

Unlike other Division of Planning processes, the ongoing and ever-evolving production of geospatial data is not easily reduced to a flowchart. Data is collected, analyzed, processed, and reported to support a myriad of KYTC processes and functions. Maintaining the HIS geospatial reference frame is an exercise in continuous improvement. KYTC is constantly seeking new ways to verify the accuracy of collected data, ensure the data’s appropriate use, and secure the data as a critical KYTC asset.

*When is the geospatial data production process complete?*

The geospatial data production process is ongoing with continual updates in response to changes, such as the following:

**PL-502.1 GEOSPATIAL DATA PRODUCTION (cont.)**

- New roadway alignments
- Roadway reconstruction
- Elimination of a route from the State Primary Road System (SPRS)
- Roadway relocation on new alignment
- New description of a roadway segment
- Roadway system re-designation
- Minor data revision for a roadway segment
- Roadway transfer to another entity

Since roadways are continually changing, this is a process that is never technically complete.

*What is the approval chain for the geospatial data production process?*

KYTC's Division of Planning, Data Management Branch, manages the geospatial data. Day-to-day interactions are under the direct purview of the Data Management Branch Manager. Any data concerns or issues may be elevated to KYTC's Division of Planning Director as necessary.

**PL-502.2 MAP PRODUCTION**

*How are maps produced from HIS?*

[23 CFR 470](#) allows state transportation agencies to map their highway networks and publish that information for the public. The Cartography Team within KYTC's Division of Planning, Transportation Systems Branch, oversees the production of HIS maps (electronic and paper) for KYTC personnel, other state government agencies, and authorized entities outside state. The Cartography Team creates, updates, and distributes a variety of standard cartographic products using current and historical spatial and tabular data regarding transportation and other geographic features. Additionally, the Cartography Team works to develop procedural and technical standards for digital mapping.

*What kinds of maps are produced?*

The types of maps produced by the Cartography Team include the following:

- **Official Highway Maps** are printed and distributed through rest areas, welcome centers, and other venues. Additional versions are created in multiple graphic and spatial formats for publication on the web and large-scales (for example, locator maps to be posted on the walls of rest areas).
- **Standard Maps** depict cartographic features and are used as base maps for State Primary Road System (SRPS) maps, functional classification maps, traffic count maps, and other purposes as needed by city, county, and KYTC district offices. Maps and labeling are updated as systems or features change.

**PL-502.2 MAP PRODUCTION (cont.)**

- **National Highway System (NHS) and National Truck Network (NN) Maps** are updated annually.
- **Exhibit Maps** are used for strategic planning studies and produced upon request.
- **Updates of Urbanized Area Boundaries** are produced in coordination with local officials following every decennial census and forwarded FHWA for final approval.
- **Other General and Special Purpose Maps** are produced as requested by KYTC or other entities.

[KRS 154.022-040](#) requires KYTC's annual certification of roadway quality for each county be forwarded to the Economic Development Cabinet as a part of the Kentucky Rural Economic Development Assistance Program.

*What forms are used?*

There are no official TC 59 planning forms for this process.

*What are the steps in the map production process?*

The Cartography Team updates the Official Highway Map for printing in January of every even-numbered year using a snapshot of HIS's continually evolving roadway data. Other maps produced by the Cartography team require specific levels of detail, each using appropriate electronic data layers to produce the desired product to a particular scale. For each type of map, the production steps are essentially the same:

1. Initiate electronic production of the map as required or requested
2. Use the appropriate base map
3. Turn on the essential GIS data layers
4. Properly label the map
5. Save the map for printing or electronic transmittal

While this process appears relatively simple, electronic cartography is its own art form, representing the visualization medium for the extracted geospatial data. KYTC's DataMart website captures the map production feature and allows on-line composition of maps from the spectrum of HIS data. With electronic mapping technologies in place, conceptualizing and generating HIS-based maps is virtually an on-demand process.

**PL-502.2 MAP PRODUCTION (cont.)***When is the map production process complete?*

The need for maps, especially electronic maps, is expected to continue to grow, thereby remaining an integral responsibility of KYTC's Division of Planning. Map production is an ongoing process that is never completed.

*What is the approval chain for map production?*

Map production is managed by KYTC's Division of Planning, Transportation Systems Branch. Day-to-day interactions are under the direct purview of the Transportation Systems Branch Manager. Any data concerns or issues may be elevated to KYTC's Division of Planning Director, as necessary.



	<b>Chapter</b>  HIGHWAY INFORMATION & MONITORING SYSTEMS
	<b>Subject</b>  Transportation Systems

### PL-503.1 TRANSPORTATION SYSTEMS BRANCH RESPONSIBILITIES

KYTC's Division of Planning, Transportation Systems Branch, is assigned the following tasks:

- Maintain official KYTC highway system records.
- Conduct and coordinate necessary research and evaluation relative to proposed system changes.
- Prepare official documentation for approval and signature.
- Notify all necessary personnel of approved revisions to the following systems:
  - ◆ National Highway System (NHS)
  - ◆ Kentucky Designated National Truck Network (NN)
  - ◆ State Primary Road System (SPRS)
  - ◆ Functional Classification System
  - ◆ Extended-Weight Coal or Coal By-products Haul Road System
  - ◆ Appalachian Development Highway System (ADHS)
  - ◆ Alternative Fuel Corridors
- Prepare and submit significant route numbering changes to AASHTO for approval, as needed.
- Report roadway mileage removed from state maintenance to the KYTC Office of Budget and Fiscal Management for inclusion in a federally required, annual report regarding state compliance with the GASB 34 accounting standard

The following seven sections detail ongoing support of Kentucky's official highway system by the Transportation Systems Branch.

### PL-503.2 NATIONAL HIGHWAY SYSTEM (NHS)

#### How is the National Highway System defined?

The National Highway System (NHS) was established in 1995 by the National Highway System Designation Act as required by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). This system was developed by the U. S. Department of Transportation (USDOT) in cooperation with the states, local officials, and metropolitan planning organizations (MPOs).

**PL-503.2 NATIONAL HIGHWAY SYSTEM (NHS) (cont.)**

The NHS includes the interstate highway system and other principal arterial roads that serve major population centers, international border crossings, ports, airports, public transportation facilities, other intermodal transportation facilities, and other major travel destinations. The NHS must meet national defense requirements of the Strategic Highway Network (STRAHNET) and serve interstate and interregional travel.

"Enhanced NHS" is a colloquial term used to refer to the National Highway System that was expanded or enhanced by MAP-21, the 2012 federal reauthorization act. On October 1, 2012, Section 1104 of MAP-21 added approximately 230,000 miles of roadway to the NHS that were functionally classified as principal arterials, but were not yet part of the NHS. A statewide map and metro area inset maps showing the resulting Kentucky portion of the NHS are available at [KYTC Division of Planning](#) online.

*What input is required to maintain the NHS listing?*

[23 CFR 470](#) regulates the Federal-Aid Highway System, including the provisions of [23 USC 103](#) described above. [23 CFR 470](#) and its [Appendix D](#) require that any revisions to the NHS be approved by FHWA. MPOs or other local officials must initiate system modifications for approval by the KYTC district and KYTC's Division of Planning through the official order process ([PL-600](#)), and transmittal to the Federal Highway Administration (FHWA) for approval.

*What forms are used?*

There are no official TC 59 planning forms used in the NHS maintenance process.

*What are the steps in maintaining the NHS?*

Maintaining the NHS requires a regular assessment of existing system data, incorporation of newly collected NHS data into HIS, and constant awareness of all KYTC activities that may materially change conditions on the ground for any NHS route segment. KYTC's district planning staff routinely field-check NHS data and recommend HIS updates as needed in cooperation with KYTC's Division of Planning, Data Management Branch. The Division of Planning also updates HIS by using Global Positioning System (GPS) collection methods, CAD project construction centerline data, and "Photo Vans" which traverse the roadways of the Commonwealth while streaming real-time roadway data to HIS.

KYTC's Division of Planning, Data Management Branch, collaborates with the Transportation Systems Branch to assess the degree to which individual projects (from resurfacing, to construction on a new location) modify NHS characteristics.

**PL-503.2 NATIONAL HIGHWAY SYSTEM (NHS) (cont.)**

The Transportation Systems Branch is also responsible for preparing an official order ([PL-600](#)) detailing project changes of any kind, and obtaining the Secretary of Transportation's approval to make adjustments to the NHS. As prescribed by federal law, changes to the NHS also require the approval of the Federal Highway Administration (FHWA). By continually updating NHS data in this manner, KYTC maintains quality HIS information from which the Highway Performance Monitoring System (HPMS), national performance measure reporting, and other state and federal reporting and mapping efforts can draw.

*When is NHS maintenance complete?*

NHS maintenance is an ongoing practice. System deterioration and improvements, changes in route segmentation or length, addition of new roadbeds, deletion of old roadbeds, and many other potential changes in the NHS create a process that is never truly complete.

*What is the approval chain for NHS maintenance?*

KYTC's Division of Planning, Transportation Systems Branch and Data Management Branch, jointly manage NHS maintenance. The preparation of official orders to approve systems modifications follows the approval chain outlined in [PL-600](#). Any specific data concerns or issues within the process of maintaining the NHS may be elevated to KYTC's Division of Planning Director at any time.

**PL-503.3 NATIONAL TRUCK NETWORK (NN)**

*How in the NN defined?*

The Surface Transportation Assistance Act (STAA) of 1982 authorized the establishment of a national network of highways designated for use by large trucks. Federal limits for truck width and length apply to these highways. Comprising more than 200,000 miles, the National Truck Network (NN) includes most of the Interstate Highway System and other specified non-interstate highways.

The Kentucky portion of the NN contains about 3,700 miles of roadway as indicated on the [Kentucky Statewide NN](#) and [Kentucky Urban Area NN](#) maps. KYTC's Division of Planning also provides online access to the following:

- A [listing of Kentucky's NN by route number](#)
- An interactive, HIS-based "Truck Weight Limits on State Maintained Routes" query that can be used to easily determine the weight class allowed on all SPRS roadways
- A list of [Exceptions to Automatic Access](#) set forth in [603 KAR 5:070](#) that spells out specific locations in Kentucky where trucks are prohibited by state law or local ordinance.

**PL-503.3 NATIONAL TRUCK NETWORK (NN) (cont.)**

In accordance with [23 CFR 658](#), the NN requires states to allow conventional combinations on "the Interstate System and those portions of the Federal-aid Primary System... serving to link principal cities and densely developed portions of the States... [on] high volume route[s] utilized extensively by large vehicles for interstate commerce... [which do] not have any unusual characteristics causing current or anticipated safety problems."

**Note:** "Conventional combinations" are tractors with one semitrailer up to 48 feet long or with one 28-foot semitrailer and one 28-foot trailer. They may be up to 102 inches wide.

Kentucky has established a network of highways on which motor vehicles may operate in addition to those specified in 23 CFR 658. This is known as the State-Authorized Truck Network and includes 991 miles of road regulated by KYTC in accordance with [603 KAR 5:250](#). Both the federal- and state-authorized truck networks make up the NN.

The provisions of 603 KAR 5:250 are as follows:

- Grants automatic access to STAA vehicles transporting household goods to any points needed to load and unload, except where STAA vehicles are prohibited
- Establishes design deficiencies which disqualify a route from consideration for inclusion into the National Truck Network, such as:
  - ◆ A two lane, two directional route with lane width of less than 10 feet
  - ◆ A route which has a structure on which the bridge weight allowance is less than 80,000 pounds for use by a tractor semitrailer combination with 5 or more axles or is less than 73,500 pounds for use by a straight truck with 4 or more axles
  - ◆ A route which has an underpass that has a vertical clearance of less than 13'6"
  - ◆ A route which has a bridge structure with a width, measured curb to curb, of less than 22 feet
  - ◆ A route greater than one mile in length where the sight passing distance over 50% of any segment of the route is restricted to lengths less than 1,500 feet
  - ◆ A route where a combination of two (2) or more of the following conditions on any segment of the route is of a magnitude to constitute a clearly-evident safety hazard:
    - There exist high degrees of horizontal or vertical curvature
    - The roadway shoulders are less than four (4) feet in width
    - There is a narrow bridge on the road segment

**PL-503.3 NATIONAL TRUCK NETWORK (NN) (cont.)**

- ◆ A route on which the turning radii of urban intersections are insufficient, as measured by template or on-site observation, to permit safe turning maneuvers by an STAA vehicle or a route on which the operation of an STAA vehicle constitute a safety hazard to other vehicle operators or public or private property by reason of vehicle off-tracking or opposing lane encroachment
- ◆ A route on which the incidence of traffic accidents is of a magnitude to indicate that any portion of the route is unsafe for use by STAA vehicles
- Grants KYTC power to prohibit STAA vehicles if there are significant, clearly-evident safety problems
  - ◆ If the route is state maintained, an official order shall be issued by the Transportation Secretary with the approval of the State Highway Engineer
  - ◆ If the route is locally owned, the local jurisdiction shall provide KYTC with copies of the appropriate ordinance
- Requests for new routes to be available for STAA travel are made in writing to the KYTC Division of Planning in Frankfort
  - ◆ Written requests must include a map with the routes indicated, a description of the vehicle proposed to be operated, and supply a vehicle to demonstrate vehicle performances
  - ◆ KYTC has 90 days to review the application and provide a recommendation

The NN differs in extent and purpose from the National Highway System (NHS), which was created more than a decade later by the National Highway System Designation Act of 1995. Both are roughly 200,000 miles. However, the NN includes approximately 65,000 miles of highways outside the NHS, and supports interstate commerce by regulating the size of trucks. Alternatively, the NHS includes about 50,000 miles of highways that are not on the NN, supports interstate commerce by focusing on federal investments.

*What input is required to maintain the NN?*

The federal NN has not changed significantly in a quarter century. It is modified only if segments are added to the interstate highway system, or if states petition to have a segment beyond the interstate highway system added or deleted. Such petitions for modifications have not been submitted in several years, even with the growth of smaller communities and the emergence of new, densely developed areas significantly changing the geography of interstate commerce. Moreover, consistency is not required between the NN and freight-related portions of the more recent NHS.

**PL-503.3 NATIONAL TRUCK NETWORK (NN) (cont.)**

The definition of “conventional combinations” is also unchanged even though 48 feet is no longer the maximum length of a single trailer in most states. Single 53-foot trailers are allowed in 25 states without special permits, and in an additional 3 states subject to limits on distance of kingpin to rearmost axle. The effort to maintain the Kentucky portion of the NN is minimal from the perspective of the NN itself. The routes that are included in the NN, however, are part of the NHS and SPRS and receive full attention in the data update processes for those systems.

What forms are used?

There are no official TC 59 planning forms used in the NN maintenance process.

What are the steps in modifying the NN?

To ensure the NN remains substantially intact, FHWA retains the authority to rule upon all requested additions to and deletions from the NN as well as requests for the imposition of certain restrictions. FHWA approval or disapproval will constitute the final decision of the U.S. Department of Transportation. The process for changing the NN is expressly set forth in [23 CFR 658, Chapter 5658.11](#).

Additions to the NN must include the following:

- Governor or Governor’s authorized representative’s endorsement accompanied by an analysis of suitability based on the following criteria:
  - ◆ The route is a geometrically typical component of the Federal-Aid Primary System, serving to link principal cities and densely developed portions of the states.
  - ◆ The route is high-volume and utilized extensively by large vehicles for interstate commerce.
  - ◆ The route has adequate geometrics to support safe operations when considering sight distance, severity and length of grades, pavement width, horizontal curvature, shoulder width, bridge clearances and load limits, traffic volumes and vehicle mix, and intersection geometry.
  - ◆ The route consists of lanes designed to be a width of 12 feet or more, or is otherwise consistent with highway safety.
  - ◆ The route does not have any unusual characteristics causing current or anticipated safety problems.
  
- Proposals for additions will be published in the Federal Register for public comment as a notice of proposed rulemaking and, if accepted, as a final rule.

**PL-503.3 NATIONAL TRUCK NETWORK (NN) (cont.)**

Deletions from the NN must include the following:

- FHWA must approve deletions or imposition of restrictions on any segment of the interstate highway system on the NN. FHWA may take such action on its own initiative or at the request of the Governor or Governor's authorized representative.
- Requests must be made in writing with justification, including:
  - ◆ Analysis of evidence of safety problems supporting the deletion or restriction as identified in § 658.11(c)
  - ◆ Analysis of the impact on interstate commerce
  - ◆ Analysis and recommendation of any alternative routes that can safely accommodate commercial motor vehicles of the dimensions and configurations described in §§ 658.13 and 658.15 and serve the area in which such segment is located
  - ◆ Evidence of consultation with the local governments in which the segment is located, as well as the Governor or the Governor's authorized representative of any adjacent state that might be directly affected by such a deletion or restriction

**Note:** FHWA has the authority to delete any route from the National Truck Network on an emergency basis due to safety considerations. Emergency deletions are not considered final.

*When is NN modification complete?*

Modifications of the NN are very infrequent and require FHWA approval. Proposed modifications are officially complete once the Governor (or the Governor's authorized representative) forwards the request to FHWA's Division Office for coordination of approval by FHWA Headquarters in Washington, DC.

*What is the approval chain for NN modification?*

The approval chain for modifying the NN are as follows:

1. KYTC's Division of Planning, Transportation Systems Branch:
  - a. Prepares the recommended modification request
  - b. Submits the request to the Secretary of Transportation
2. Secretary of Transportation submits the request to the Governor for approval
3. KYTC's Division of Planning submits approved requests to FHWA's Division Administrator for final approval

**PL-503.4 STATE PRIMARY ROAD SYSTEM (SPRS)***How is the SPRS defined?*

The primary purpose of any transportation system is the efficient transport of commodities. By classifying all roads, streets, and highways into groupings or classifications based upon the amount of service that a facility provides, the administrators of various funding programs can make better judgments and ensure that the roads serving the most people get the most attention. Federal and state agencies use the highway systems described in this manual to distribute funds for the maintenance and improvement of the highway transportation system in the Commonwealth of Kentucky.

The purpose of the United States (U.S.) Numbered Highway System is to facilitate travel on the main interstate highways over the shortest routes and the best available roads. The AASHTO Route Numbering Committee ensures that any such route is compatible through two or more states and accommodates the most important and heaviest motor traffic flow in the area. The routes comprising the National System of Interstate and Defense Highways are marked with a distinctive route marker shield and has a numbering system separate from the U.S. Numbered Highway System.

To meet driver expectations and enhance driver safety, there must be continuity in marking and numbering interstate routes without regard to state lines. The U.S. Numbered Highway System was established in 1926 and the Interstate Numbered System was established in 1956. Both have reached the period of review, revision, and consolidation. They now need perfecting rather than expanding. Therefore, any proposed alteration to the established systems must be thoroughly (albeit, concisely) justified and explained through the [AASHTO Route Numbering application](#) process. This will allow both AASHTO's Special Committee on U.S. Route Numbering and the Standing Committee on Highways to give appropriate consideration to every request made by a member department.

The development and revision of these systems involve the joint participation of all affected jurisdictional bodies and are regulated by standardized policies and approval procedures. The systems—and in many cases, the classifications described below—are mandated by U.S. Code, federal regulations, or Kentucky Revised Statutes (KRS). These mandates are listed under the appropriate system. Further documentation on the federally controlled systems and classifications described in this chapter may be found in the [Federal-Aid Highway Program Policy and Guidance Center](#).

[KRS 177.020](#) charges KYTC with the establishment, construction, and maintenance of a State Primary Road System (SPRS). In executing this responsibility, KYTC is authorized to:

**PL-503.4 STATE PRIMARY ROAD SYSTEM (SPRS)**

- Select new routes
- Deviate from an existing route when deemed necessary
- Eliminate roads or city streets from the SPRS when they have been replaced by the construction of a new facility or a new route has been identified

The Roadway Systems Team of KYTC's Division of Planning is responsible for coordinating the development and revision of the SPRS. Each district planning supervisor is assigned a primary contact in the Division of Planning to provide support and assistance in the system change process.

Acceptance into, reclassification, re-designation, elimination, or transfer from the SPRS shall be by an official order of the Secretary of Transportation (or authorized representative). Official orders designating the SPRS are official records of the KYTC.

The official order accepting a public road into the SPRS essentially transfers the public responsibility to KYTC. No action is necessary to transfer title to KYTC for such a road as it is already vested in the public.

An approved official order eliminating a public road from the SPRS relieves KYTC from further responsibility for the road, including maintenance and title. The title shall be transferred from KYTC to the appropriate authority or private interest.

As defined in [603 KAR 3:030](#), each route in the SPRS shall be evaluated in accordance with its level of significance and the type of service it provides, according to the following classifications:

- **State Primary Route:** Interstates, parkways, and other long-distance, high-traffic-volume intrastate routes of statewide significance. State Primary Routes usually link major urban areas within the state or serve major interregional corridors.
- **State Secondary Route:** Shorter-distance routes of regional significance with both access to land use activity and mobility as their functions. State secondary routes usually serve smaller cities and county seats within a region.
- **Rural Secondary Route:** Routes of sub-regional significance with access to land use activity as their prime function. Rural secondary routes link locally important traffic generators with their service areas and are usually considered farm-to-market roads and other collector facilities.
- **Supplemental Road:** These routes are state maintained for assorted reasons, but they are not included in higher classifications. They are generally short-distance routes such as frontage roads, crossroads, or local access roads.

**PL-503.4 STATE PRIMARY ROAD SYSTEM (SPRS) (cont.)**

The following KYTC policy guides acceptance of mainline facilities, frontage roads, crossover roads, county roads, city streets, and private roads constructed, reconstructed, or relocated by KYTC into the State Primary Road System:

- Only those facilities that are germane to the total state roadway system shall become a part of one of the system networks (interstate, parkway, state primary, state secondary, rural secondary).
- The maintenance responsibility for facilities that do not logically belong in the SPRS falls to the appropriate authority. This authority may be county or city governments and in some instances, business corporations or private interests.
- Facilities classified as supplemental roads shall be eliminated from state maintenance whenever possible.
- Designation of maintenance responsibilities for any new roadways will be made by official order upon completion of the project.

*What input is required to maintain the SPRS?*

SPRS maintenance is ongoing within KYTC's Division of Planning, and involves both the Transportation Systems Branch and Data Management Branch. Daily activities include:

- Continually monitoring physical and operational characteristics of the system
- Making modifications to the system when required
- Routinely evaluating and updating system performance metrics
- Seeking feedback from KYTC district planning staff, local governments, ADDs, MPOs, other KYTC divisions and offices

The coordination of the SPRS data and its use involves interactions on a variety of working levels, all geared toward producing the quality base mapping and reference materials that undergird KYTC's mission and goals.

**Note:** The Kentucky Finance Cabinet approves all property transfers, and FHWA approves any systems modifications involving federal funding interests.

*What forms are used?*

While there are no official TC 59 planning forms explicitly used in the process of maintaining the SPRS, every official KYTC planning form supports the maintenance of the SPRS in some way.

*What are the steps in maintaining the SPRS?*

Maintenance of the SPRS is a large data update process occurring under the direct supervision of KYTC's Division of Planning, Transportation Systems Branch, in concert with the Data Management Branch.

**PL-503.4 STATE PRIMARY ROAD SYSTEM (SPRS) (cont.)**

The Data Management Branch utilizes databases under the purview of 8 different owners and works with 14 different database custodians to extract more than 53 types of data for inclusion in HIS. This data is produced on various update cycles with fluctuating levels of background documentation referenced. The step-by-step effort by the Transportation Systems Branch to continuously update the SPRS is based on the HIS metadata and incorporates data produced from virtually every process identified in this Planning Guidance Manual to generate a continual stream of SPRS updates.

*When is SPRS maintenance complete?*

SPRS maintenance is perpetual due to system deterioration, system improvements, changes in route segmentation or length, addition of new roadways, the deletion of old roadways, and many other potential changes in the SPRS.

*What is the approval chain for SPRS maintenance?*

SPRS maintenance is jointly managed by KYTC's Division of Planning, Transportation Systems Branch and Data Management Branch, and is overseen by the respective branch managers. The preparation of official orders to approve systems modifications follows the approval chain outlined in [PL-600](#). Specific data concerns or issues encountered within the SPRS maintenance process may be elevated to KYTC's Division of Planning Director.

**PL-503.5 FUNCTIONAL CLASSIFICATION**

*How is the Functional Classification system defined?*

[Functional classification](#) is the process of grouping streets and highways according to the character of travel service they provide. This classification system recognizes that travel involves movement through a hierarchical system of facilities that progress from lower classifications handling short, locally oriented trips, to higher classifications that serve longer-distance travel at a higher level of mobility. The function performed by a roadway within this hierarchical system determines its classification. Functional classification is an important transportation planning tool used for programs such as federal-aid funding and eligibility, traffic modeling, reporting of highway statistics, highway and pavement design, and measurement of highway system performance.

A roadway's classification is further defined as either urban or rural, based upon its location within one of the [FHWA Adjusted Urban Area Boundaries](#). All public roadways, including those maintained by non-state agencies, are assigned one of the following functional classifications:

**PL-503.5 FUNCTIONAL CLASSIFICATION (cont.)**

- **Interstates:** Roadways that comprise the Dwight D. Eisenhower National System of Interstate and Defense Highways and other interstates as designated by the U. S. Secretary of Transportation
- **Other Freeways & Expressways:** Non-interstate roadways with access points limited to on-ramp and off-ramp locations and directional travel lanes usually separated by a physical barrier
- **Other Principal Arterials:** Roadways that provide a high level of traffic mobility for substantial statewide travel, or serving major activity centers and the longest trip demands within urban areas
- **Minor Arterials:** Roadways that serve trips of moderate length to smaller geographic areas and at slightly lower level of traffic mobility than principal arterials
- **Major Collectors:** Roadways that distribute and channel trips between roadways with lower classifications and the arterial systems
- **Minor Collectors:** Roadways that distribute and channel trips between local roads and roadways with higher classifications at a lower level of traffic mobility than major collectors
- **Local Roads:** Roadways that primarily provide direct access to adjacent land and are not intended for use in long distance travel

FHWA establishes classification criteria and procedures but relies on state and local transportation planning professionals to assign the classifications. Further guidance is accessible from FHWA's [Highway Functional Classification Concepts, Criteria and Procedures](#).

*What input is required to maintain the Functional Classification System?*

KYTC's Division of Planning, Transportation Systems Branch and Data Management Branch, ensure functional classifications of Kentucky's roadways are updated regularly. In concert with ADDs and MPOs, KYTC reviews its highway systems every 10 years to coincide with the decennial census and the adjusted urban area boundary update cycle.

*What forms are used?*

There are no official TC 59 planning forms for this process.

*What are the steps in maintaining the Functional Classification System?*

This maintenance process involves ongoing coordination with local planning partners to identify roadways that require changes to their functional classification due to changes in transportation network and land use patterns.

These changes can involve:

- Adding newly constructed or extended roadways to the network, which can in turn affect the functional classification of connecting or nearby roadways

**PL-503.5 FUNCTIONAL CLASSIFICATION (cont.)**

- Upgrading the functional classification of an existing roadway due to land use changes or an improvement made to the roadway
- Downgrading the functional classification of an existing roadway due to land use changes, traffic controls that discourage through traffic, or other controls that limit the speed and capacity of a road

KYTC maintains the functional classification attributes of roadways to reduce effort needed for periodic updates. Issues related to functional classification are kept in mind as KYTC works with local transportation planning partners on various initiatives, such as long-range planning activities and project programming and development.

It is useful to consider the following questions when determining if a classification change may be necessary:

- Have new significant roadways been constructed that may warrant arterial or collector status?
- Has any previously non-divided principal arterial roadway been reconstructed as a divided facility?
- Has any new major development (such as an airport, regional shopping center, or major medical facility) been built in a location that has caused traffic patterns to change?
- Has there been significant overall growth that may have caused some roadways to serve more access or mobility needs than they have previously?
- Have any arterial or collector roadways been extended or realigned in such a way as to attract more through-trip movements?
- Has a roadway experienced a significant growth in daily traffic volumes?

Should a change in functional classification be deemed necessary, KYTC's Division of Planning, Transportation Systems Branch, prepares and processes an official order in accordance with [PL-600](#). The change is made when the official order is signed by the Secretary of Transportation.

*When is Functional Classification System maintenance complete?*

KYTC's Division of Planning, Transportation Systems Branch, manages functional classification maintenance, with day-to-day interactions under the direct purview of the branch manager. The approval chain for the preparation of official orders approving functional classification systems modifications follows the approval chain outlined in [PL-600](#). Any specific data concerns or issues encountered within the functional classification system maintenance process may be elevated at any time to KYTC's Division of Planning Director.

**PL-503.6 COAL HAUL***How is the Coal Haul System defined?*

[KRS 177.977](#) requires KYTC to publish a directory each year, including maps and other documents, designating the official coal haul road system. One of the documents accompanying the directory is an official order signed by the Secretary of Transportation designating the Extended Weight Coal or Coal By-Products Haul Road System (EWCHRS). The directory must include all reported public roads, local and state, on which coal was hauled in the preceding calendar year. KYTC must also publish total county coal haul road mileage and total ton-miles. [KRS 42.455](#) charges KYTC with the responsibility of providing the directory to the Kentucky Department for Local Government (DLG) for use in calculating the return of coal severance tax monies to coal-producing and coal-impact counties.

In June and December of each year, KYTC's Division of Planning sends TC 59-100, *Coal Shipment Route and Tonnage Report* ([Exhibit 9003](#)), and TC 71-227, *Cooperative Agreement* ([Exhibit 9004](#)), to each known coal transporter.

Using the information from the completed forms, KYTC's Division of Planning drafts a haul agreement between KYTC and the coal operator and enters the following information into a database:

- Origin and destination of the coal
- Routes traveled
- Number of tons transported

KYTC's Division of Planning then uses the agreement to secure necessary approvals; calculate the tons, mileage, and ton-miles for each county; and compile text, data, and maps into an on-line directory.

The EWCHRS consists of reported Coal Haul Highway System segments over which more than 50,000 tons of coal or coal by-products were transported by motor vehicles during the previous calendar year. Routes may also be designated on the EWCHRS at the request of a county fiscal court or through a cooperative agreement with KYTC. KYTC's Division of Planning, Transportation Systems Branch, identifies these segments and forwards the information to KYTC's Division of Maintenance.

The Division of Maintenance will then identify impacted bridges and evaluate those bridges to determine potential weight restrictions or other structural problems that may prohibit an "Extended Weight" designation for that road. The official order designating the EWCHRS is not prepared for the Secretary of Transportation's signature until the Division of Maintenance declares the affected bridges suitable.

**PL-503.6 COAL HAUL (cont.)**

What input is required to maintain the Coal Haul System?

KYTC’s Division of Planning must work in concert with DLG, local governments, and coal producers to maintain the EWCHRS and determine an equitable means for distributing coal severance tax dollars to coal-producing and coal-impact counties. KYTC’s Division of Planning, Transportation Systems Branch, is responsible for identifying the roads upon which coal or coal by-products are being hauled, the origin and destination of these products, and the tonnage being transported during a specific calendar year. From that information, DLG uses an established distribution formula to return coal-severance tax dollars to those counties. Data from the coal product and by-product producers is key to this process. Every facet of the interaction between KYTC, the coal producers, the counties, and DLG must work seamlessly for this effort to succeed.

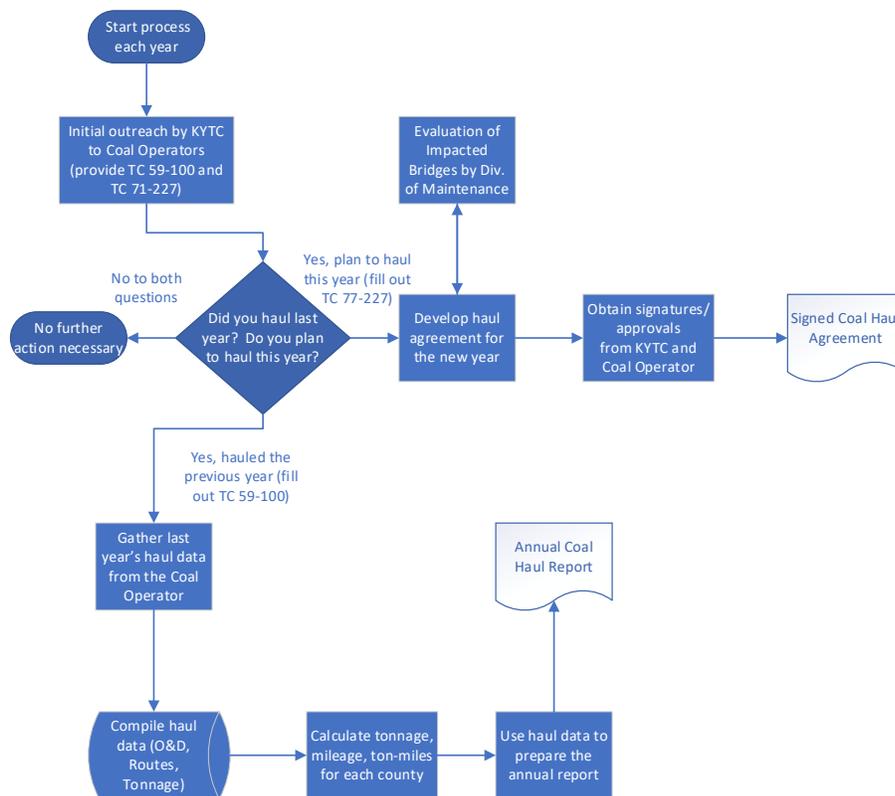
What forms are used?

Two official TC 59 forms are used extensively in the EWCHRS process:

- TC 59-100, *Coal Shipment Route and Tonnage Report*
- TC 71-227, *Cooperative Agreement*

What are the steps in maintaining the Coal Haul System?

To maintain the EWCHRS and its reporting requirements, KYTC’s Division of Planning undertakes the process outlined in Figure 9.



**Figure 9. Annual Coal Haul & Extended Weight Highway Systems Update Process**

**PL-503.6 COAL HAUL (cont.)***When is the Coal Haul System maintenance complete?*

The EWCHRS and reporting mechanism are supported by a biannual process that identifies and officially permits would-be haulers, and relies on accurate reporting of past hauling by active haulers. The process is initiated in December and June of each year, with resulting data used to update the online report and permit new haulers. On or before November 1 each year, the Secretary of Transportation uses generated data to designate the EWCHRS by official order.

*What is the approval chain for Coal Haul System maintenance?*

The EWCHRS maintenance process is the responsibility of KYTC's Division of Planning, Transportation Systems Branch. Agreements permitting extended-weight hauling are developed in concert with KYTC's District Planning Supervisor and are approved by KYTC's Chief District Engineer, State Highway Engineer, and Secretary of Transportation. The Secretary of Transportation also signs an official order updating the EWCHRS on or before November 1 each year.

**PL-503.7 APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM***How is the Appalachian Development Highway System (ADHS) defined?*

In 1965, Congress passed the Appalachian Regional Development Act (ARDA). Title II of this Act designated the [Appalachian Development Highway System \(ADHS\)](#) and authorized the construction or reconstruction of 2,350 miles of highways throughout Appalachia. The intent of ADHS in Kentucky was to improve interregional access to the Interstate Highway System and eventually lead to improved economic prosperity for economically distressed counties ADHS would serve. The Appalachian Regional Commission (ARC) and FHWA have traditionally shared oversight responsibilities for ADHS.

The Kentucky portion of ADHS features eight official ADHS corridors totaling 575 miles. ARC has designated each corridor with a letter that may transcend state boundaries. A complete list and a map of the official [Kentucky ADHS corridors](#) may be found online. Every five years, KYTC updates the [Appalachian Cost Estimate](#) (cost to complete the ADHS in Kentucky) and submits a report to ARC.

*What input is required to maintain ADHS data?*

The ADHS is nearing completion in Kentucky, with only a few sections of Corridors F and Q remaining to be built. (See [Kentucky ADHS map](#).) KYTC's Division of Planning, Transportation Systems Branch and Data Management Branch, work with KYTC's district planning staff to update ADHS route data as part of the ongoing SPRS and NHS systems review and update process. All changes to ADHS must be approved by ARC, which is currently focused on system completion. Accordingly, most ADHS route updates occur as new sections are completed, and the resulting changes are assimilated into ADHS via the official order process.

**PL-503.7 APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM (cont.)***What forms are used?*

There are no official TC 59 planning forms used to support the maintenance of ADHS.

*What are the steps in maintaining ADHS data?*

Other than reporting the “cost to complete” to ARC, regular ADHS data maintenance is accomplished using the procedures outlined in [PL-503.4](#).

*When is ADHS data maintenance complete?*

The ongoing updates to ADHS data is routinely accomplished through field checks, analysis of upcoming lettings for roadway systems impacts, and adjustments by official order as applied to SPRS. As new sections of ADHS are finished, Kentucky moves closer to completing the ADHS as originally designated for our state. The ADHS data maintenance effort will ultimately be addressed through routine SPRS reviews.

*What is the approval chain for ADHS data maintenance?*

All official Kentucky ADHS route listing additions or deletions must be recommended by the Secretary of Transportation and approved by both FHWA’s Kentucky Division Administrator and ARC Federal Co-Chair. Routine modifications to ADHS or the adoption of completed construction projects into the system are treated like SPRS modifications and require federal approval. Per [PL-600](#), such modifications are recommended by KYTC’s Division of Planning, Transportation Systems Branch, with the resulting official order approved by the Secretary of Transportation and endorsed by FHWA’s Kentucky Division Administrator.

**PL-503.8 ALTERNATIVE FUEL CORRIDORS***How are Alternative Fuel Corridors defined?*

Section 1413 of the Fixing America’s Surface Transportation (FAST) Act requires FHWA to designate a national network of alternative fueling and charging infrastructure along major national highway corridors. FHWA used the NHS as the base national system and initially designated fifty-five routes across the country as Alternative Fuel Corridors in November 2016. FHWA has also developed a process for the continuous expansion of the [Alternative Fuels Corridor network](#).

This process accomplishes the following:

- Provides the opportunity for formal corridor designations on an annual basis
- Ensures that corridor designations are selected based on criteria that promote the build-out of a national network

**PL-503.8 ALTERNATIVE FUEL CORRIDORS (cont.)**

- Develops national signage and branding to help catalyze applicant and public interest
- Encourages multi-state and regional cooperation and collaboration
- Brings together a consortium of stakeholders including state agencies, utilities, alternative fuel providers, and car manufacturers to promote and advance alternative fuel corridor designations in conjunction with the U.S. Department of Energy

This network supports the following alternative fuel types: Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG), Electric Vehicles (EV), Liquefied Petroleum Gas (Propane/LPG), and Hydrogen (HYD). Every fuel type has a refueling station in Kentucky, except for HYD. FHWA has approved “Corridor Ready” and “Corridor Pending” lists for KYTC; therefore, “Alternative Fuel Corridor” signs may be placed along the “Corridor Ready” routes. “Corridor Pending” routes still need a few more available alternative fueling stations to meet the minimum corridor designation threshold.

Kentucky’s “Corridor Ready” alternative fuel routes:

- **CNG:** I-75 in its entirety from the Tennessee border to the Ohio border, and I-71 from Carrollton to the Ohio border
- **LNG:** I-75 in its entirety from the Tennessee border to the Ohio border
- **EV:** I-275 in its entirety from the Indiana border to the Ohio border, and I-71/75 from Florence to the Ohio border
- **LPG:** I-65 in its entirety from the Tennessee border to the Indiana border

Kentucky’s “Corridor Pending” alternative fuel routes:

- **CNG:** I-265 from Louisville at I-71 to Louisville at I-65, and I-275 in its entirety from the Indiana border to the Ohio border
- **EV:** I-71 from Florence to Louisville, I-75 from the Tennessee border to Florence

It is conceivable that a portion of future federal transportation funding may be tied to these Alternative Fuel Corridors. The effort is currently focused on enhancing public awareness about the availability of these corridors and, as the Alternative Fuel Corridor signs are put in place, to better facilitate travel for those who choose to use alternative fuel vehicles. It is KYTC’s goal to add more alternative fuel corridors to FHWA’s listing as the corridor fueling station requirements are met. FHWA’s [“Alternative Fuel Corridors Frequently Asked Questions”](#) is available online and details the corridor requirements for each fuel technology.

**PL-503.8 ALTERNATIVE FUEL CORRIDORS (cont.)***What input is required to maintain the Alternative Fuel Corridors identification and mapping?*

KYTC's Division of Planning, Modal Programs Branch, Air Quality Team, monitors the eligibility of alternative fuel corridors. When FHWA approves designations for Kentucky's alternative fuel corridors, KYTC's Division of Planning, Data Management Branch, updates the assigned designation in HIS.

*What forms are used?*

There are no official TC 59 planning forms used to support the alternative fuel corridors identification and mapping process.

*What are the steps in the Alternative Fuel Corridors identification and mapping process?*

Based on the rapid changes in both vehicle and fuel technologies, FHWA determined that it is appropriate for corridor designations to be made on an annual basis. Initial designations were made in November 2016, and the second round was announced in March 2018. FHWA anticipates designating Round 3 nominations in spring 2019. Each time the call for nominations is made, FHWA works to provide the best possible assistance from a variety of sources to help the states through the corridor identification process. States use information such as the U.S. Department of Energy (USDOE), Alternative Fuels Data Center's [Station Data for Nominating Alternative Fuel Corridors](#) to facilitate a proper assessment of "Corridors Ready" and "Corridors Pending." When KYTC's Division of Planning, Modal Branch, has coordinated the data review with FHWA and FHWA has concurred in recommended updates to Kentucky's Alternative Fuel Corridor designations, KYTC's Division of Planning, Data Management Branch, adjusts HIS data accordingly.

*When is Alternative Fuel Corridors identification and mapping complete?*

Identification and mapping of Kentucky's Alternative Fuel Corridors is conducted annually to update the data available on the FHWA and USDOE websites. As the number and locations of alternative fueling stations grow over time, this annual update process will continue.

*What is the approval chain for Alternative Fuel Corridors identification and mapping?*

KYTC's Division of Planning, Modal Branch, monitors eligibility for designation as an Alternative Fuels Corridor. During FHWA's annual call for corridor nominations, KYTC's Division of Planning Director shall submit proposed designations to FHWA's Kentucky Division Administrator who coordinates federal approval of the designation. Once federal approval is received, KYTC's Division of Planning, Data Management Branch, is directed to make the adjustments in HIS.



	<b>Chapter</b>  HIGHWAY INFORMATION & MONITORING SYSTEMS
	<b>Subject</b>  Traffic Count Data

### PL-504.1 OVERVIEW

Virtually every decision in transportation engineering takes traffic data into consideration. Applications of this information include, but are not limited to: project/program planning, project selection, pavement design, safety analysis, capacity analysis, and air quality assessment. KYTC's Division of Planning, Traffic and Equipment Management Branch, is responsible for the collection, analysis, and dissemination of traffic count data for KYTC and strives to promote efficiency, accuracy, and uniformity throughout this process.

Additional background information for KYTC's traffic data management program may be found in the current editions of the following references:

- *Traffic Monitoring Guide*, Federal Highway Administration (FHWA)
- *Highway Performance Monitoring System Field Manual*, FHWA
- *Guidelines for Traffic Data Programs*, American Association of State Highway and Transportation Officials (AASHTO)
- *Manual on Uniform Traffic Control Devices*, FHWA
- *Standard Specifications for Road and Bridge Construction*, Kentucky Transportation Cabinet (KYTC), Department of Highways
- *NFPA 70: National Electrical Code Handbook*, National Fire Protection Association
- *Employee Safety and Health Manual*, KYTC, Office of Human Resource Management
- *General Administration and Personnel Guidance Manual*, KYTC, Office of Human Resource Management
- *Division of Fleet Management Guidance Manual*, Kentucky Finance Cabinet, Division of Fleet Management
- *Division of Equipment Guidance Manual*, KYTC, Division of Equipment
- *Safety and Health Manual*, Commonwealth of Kentucky
- *Standard Drawings*, KYTC, Department of Highways
- *Division of Planning Standard Detail Sheets*, KYTC, Division of Planning
- *KYTC Traffic Monitoring System Handbook*, KYTC, Division of Planning

**PL-504.1 OVERVIEW (cont.)**

KYTC's Division of Planning, Traffic and Equipment Management Branch, has multiple day-to-day responsibilities involved in the oversight and management of KYTC's traffic data program, many of which are outlined below. As required by federal law ([23 CFR 500.203\(a\)](#) and [23 CFR 500.204](#)), "Each state shall develop, establish, and implement on a continuing basis, a Traffic Monitoring System (TMS) to be used for obtaining highway traffic data." The TMS shall address, but not be limited to:

- Precision of reported data
- Continuous data collection operations
- Short term traffic monitoring
- Vehicle occupancy monitoring
- Field operations
- Source data retention
- Office factoring procedures

In addition to these federal requirements, the TMS should also provide specific information and methods regarding general topics under the purview of KYTC's Division of Planning, Traffic and Equipment Management Branch. To conform with TMS requirements, KYTC's TMS Handbook has been drafted by the Division of Planning, Traffic and Equipment Management Branch, and district office planning personnel to detail collecting, processing, storing, and reporting traffic data for use by KYTC, other governmental and private agencies, and to meet FHWA reporting requirements.

**PL-504.2 KYTC TRAFFIC DATABASE**

KYTC's Division of Planning and district planning staff shall collect various traffic data to provide useful analytical information to aid in engineering decisions. This data is entered into the [KYTC Traffic Database](#) and includes traffic volumes, vehicle classifications, vehicle weights, vehicle speeds, and turning movements. Methods used to locate, combine, add, and delete stations from which data is collected shall be included in KYTC's TMS Handbook.

**How is KYTC Traffic Database work initiated?**

Use of the KYTC Traffic Database depends on the type of data needed by the user. The following types of data are made available in the database:

- **Vehicle Volume Data:** Vehicle volume data is a measure of how many vehicles pass a given point over a period of time. All traffic data stations should collect vehicle volume data.
- **Vehicle Classification Data:** Vehicle classification data is traffic volume data sorted by vehicle type and axle configuration. Vehicle classification data may be length-based or axle-based.

**PL-504.2 KYTC TRAFFIC DATABASE (cont.)**

Vehicles shall be classified per the “Scheme F” algorithm developed by the Maine Department of Transportation and referenced in the *FHWA Traffic Monitoring Guide*. Twenty-five percent of all traffic data stations should collect vehicle classification data.

- **Vehicle Weight Data:** Vehicle weight data includes a vehicle’s static gross weight and the portion of that weight carried by each wheel, axle, axle group, or combination thereof.
- **Vehicle Speed Data:** Vehicle speed data details speed characteristics at a specified location under prevailing traffic and environmental conditions. Speed data may be applied to various transportation engineering activities, including determination of roadway capacity, evaluation of the effectiveness of improvements, location of speed zones, or development of traffic signal timing. Speed data may be presented as an average speed for specific times of day, by day of week, by month, or by annual average.
- **Turning Movement Data:** Turning movement data are the volumes (and sometimes classifications) of vehicular movements at an intersection.

What input is required?

For the purpose of traffic data collection, a “roadway segment” is defined as a length of roadway on which similar vehicular volumes and classifications are presumed to exist. A “traffic data station” is any location within a roadway segment from which traffic data is collected.

KYTC’s Division of Planning, Traffic and Equipment Management Branch, divides the state’s entire roadway network into segments to ensure adequate geographic coverage for all roads under KYTC’s jurisdiction. Each roadway segment is defined by a beginning and an ending mile point, and a data collection station is assigned to each segment. Stations are strategically located to adequately represent the traffic in a given segment of roadway.

KYTC’s Traffic and Equipment Management Branch relies on FHWA’s *Traffic Monitoring Guide* when reviewing roadway segments and determining the addition, deletion, or combination of data collection stations. Stations deemed redundant may be eliminated to reduce the efforts of collecting, processing, and analyzing data without significant loss of information. Guidelines for adding, eliminating, or merging stations shall be included in the KYTC TMS Handbook.

KYTC’s Division of Planning, Traffic and Equipment Management Branch, as well as district planning staff, are all involved in collecting traffic data at various intervals and for varying lengths of time depending upon the desired data. Typical data collection types include:

**PL-504.2 KYTC TRAFFIC DATABASE (cont.)**

- Short duration data collection stations
- Special data collection stations
- Permanent data collection stations

Short duration data collection consists of a comprehensive plan of periodic, minimum 48-hour samples that ensures complete system coverage over a specified time period. At least every three years, traffic data is collected on each roadway segment, including fully controlled access ramps, interstates, parkways, and rest areas. Local road and bridge data have not been collected in recent years; however, the Kentucky Transportation Center (KTC) is developing a “local road ADT estimator” for that purpose. “Coverage Stations” are located on roadway segments for which traffic data is desired, but not included, in the types of collection routinely accommodated.

Special data collection stations are used in addition to short duration data collection stations when additional data is desired to meet other, more specific needs. This data typically supplements KYTC and other governmental agencies’ planning, pavement, highway design, and bridge design efforts. This may include traffic forecasting, environmental analysis, pavement rehabilitation, construction, maintenance, construction staging, and traffic management.

Various sources may request special data collection throughout the year, the durations of which vary depending on the specific request. Formal requests for special data collection originating outside the district may be submitted by letter or email to the Traffic and Equipment Management Branch Manager.

Requests shall include:

- Count location map showing where the counts are to be made
- Traffic Request Form that defines:
  - ◆ Requestor
  - ◆ Date request is made
  - ◆ Reason for the request
  - ◆ Type of count needed
  - ◆ County, route, mile point data
  - ◆ Project number
  - ◆ Funding strip
  - ◆ Additional comments and instructions, as needed

A formal traffic count request, including the location map and traffic request form, is shown in [Exhibit 9005](#).

**PL-504.2 KYTC TRAFFIC DATABASE (cont.)**

The Traffic and Equipment Management Branch Manager shall make assignments for special data collection to the appropriate personnel (KYTC district planning supervisor, KYTC Division of Planning staff, or a consultant) within one week of receipt of the request.

**Note:** Special data collection shall not be conducted or funded by KYTC at the request of a public entity.

KYTC's Division of Planning, Traffic and Equipment Management Branch, also conducts counts associated with pavement warranty projects or turning movement data classification. It is also common for other KYTC divisions to collect traffic data. Additionally, local jurisdictions (cities, counties, townships) may perform some level of traffic monitoring on roads they control. The Traffic and Equipment Management Branch may coordinate with these agencies to conduct traffic monitoring efforts and share resultant data. Truck weight data from permanent scale weigh stations may also be obtained to supplement the KYTC Weigh-in-Motion program.

KYTC's Division of Traffic Operations has traffic signals located throughout the state, most of which include vehicle detection devices. The Traffic and Equipment Management Branch may coordinate with Traffic Operations to use some of these detectors for data collection purposes.

An intelligent transportation system (ITS) employs electronics, communications, and information processing to improve the efficiency of surface transportation operations and provide real-time information about travel options. These systems are typically located in metropolitan areas and may include vehicle detection devices. The Traffic and Equipment Management Branch may coordinate with the Division of Traffic Operations to use some of these detectors for data collection purposes.

*What forms are used?*

Though data collection forms abound in the traffic data collection and analysis process, only one official TC 59 planning form, [TC 59-4, Ferry Traffic Count](#), is used to support the KYTC Traffic Database.

TC 59-4 is used to identify the number of:

- Hours of daily ferryboat operation
- Vehicles using the ferry (including type)
- Trailers
- Foot passengers
- Bicycle passengers

**PL-504.2 KYTC TRAFFIC DATABASE (cont.)***What are the steps in the traffic counting process?*

The traffic counting process begins with the data gathered on TC 59-4, as described above. Once the raw counts are completed, they are subjected to a quality control check performed by KYTC's Division of Planning, Data Management Branch.

The Data Management Branch applies adjustment factors to reflect annual average conditions, such as:

- Day-of-week
- Season
- Axle adjustment
- Design hour (K Factors)
- Growth
- Directional distribution (D Factors)

The resulting count information is used to derive the Annual Average Daily Traffic (AADT) for each count location, produce annual Vehicle Miles Traveled (VMT), as well as traffic trends or other information used to support HPMS and other KYTC data reporting activities. The traffic counting process culminates in a data storage and retention process led by the Division of Planning's Data Management Branch. All final traffic count data is stored and retained for a minimum of one cycle for the given data type and should be retained for a minimum of ten years.

*When is the process complete?*

The traffic counting process is complete when the raw count data has been collected and checked for quality, the final count data has been computed and used, and the final count data has been stored and retained appropriately.

*What is the approval chain for updating the traffic count database?*

The Traffic and Equipment Management Branch Manager makes decisions about permanent station location, inventory, use, special count assignments, and execution of the annual traffic count program. The Data Management Branch leads traffic count quality control, data analysis, data storage, and retentions efforts, with the direct involvement of the Traffic and Equipment Management Branch.

Where trained personnel are available, KYTC district planning staff, under the supervision of the Project Development Branch Manager, are heavily involved in the traffic data collection effort. Final approvals for KYTC's annual traffic count program rest with the Division of Planning Director through the annual Planning Work Program.

**PL-504.3 INTERACTIVE TRAFFIC COUNT MAPS**

KYTC maintains online links to both DataMart and the Division of Planning, each containing publicly accessible interactive traffic count data. Users are able to search the data by KYTC district, county, city, address, route, and mile point ranges, and generate the most recently processed traffic count data available for that location. The data is GIS-based and includes roadway visuals through KYTC's "photolog" capabilities.

*How are interactive traffic count maps initiated?*

Interactive traffic count maps are generated through the blending of GIS datasets (the metadata) that supports the Division of Planning's Highway Information System (HIS). As previously described in [PL-504.2](#), traffic count information (traffic count station locations and AADT for each location) is a readily accessible "geospatial data layer" that can be used to inform highway project development decisions, economic development initiatives, or a multitude of other potential uses for traffic count data.

*What input is required?*

To use the interactive traffic count maps, users input data ranges such as city, county, highway district, address, route, and mile point. GIS outputs are generated from available information.

*What Forms are used?*

There are no official TC 59 planning forms used to support the interactive traffic count mapping process.

*What are the steps in the interactive traffic count map production process?*

Location information for the desired county, roadway, or other item, is entered into the electronic menu. The resulting traffic count data (count station number, AADT, year of the count) is presented in a navigable, scalable map form.

*When is the process complete?*

When the interactive traffic count map user has obtained the desired traffic count information, the interactive session is ended by exiting the menu.

*What is the approval chain for developing interactive traffic count maps?*

The data used to produce the interactive traffic count map is a collaborative effort between KYTC's Division of Planning, Traffic and Equipment Management Branch, and Data Management Branch, under the purview of the Division of Planning Director.

**PL-504.4 PERMANENT DATA COLLECTION STATIONS**

Permanent data collection stations are used as required by [23 CFR 500.204\(c\)](#), which states:

“There shall be sufficient continuous counters of traffic volumes, vehicle classification, and vehicle weight to provide estimates of changes in highway travel patterns and to provide for the development of day-of-week, seasonal, axle correction, growth factors, or other comparable factors approved by the FHWA that support the development of traffic estimates to meet the statistical precision requirements of the data uses identified in §500.203(a) of this subpart. As appropriate, sufficient continuous counts of vehicle classification and vehicle weight should be available to address traffic data program needs.”

Permanent data collection is provided through Automatic Traffic Recorder (ATR) Stations and Weigh-in-Motion (WIM) Stations located throughout the state.

*How is Permanent Data Collection Station work initiated?*

ATR stations are comprised of permanently installed detection devices (typically inductive loop detectors or piezoelectric sensors) and an Automatic Data Recorder (ADR) that continuously records the passage of vehicles on a given segment of roadway. ATR station locations are selected in accordance with the *Traffic Monitoring Guide* and are located on segments of functionally classified highways that fall into the following FHWA groupings:

- Rural Interstate
- Urban Interstate
- Rural General
- Urban General
- Rural Recreation

ATR stations may be located at historically monitored locations to measure specific trends, or as part of an effort to monitor general travel trends within specific categories of roads.

KYTC’s Division of Planning, Traffic and Equipment Management Branch, annually reviews ATR station locations. Methodologies for adding, deleting, and combining ATR locations are included in the *Traffic Monitoring Guide* and are employed during the annual review. Generally, ATR stations should be located using a combination of functional classifications and geographic locations of roadways, such that a sufficient number of sites are located within each factor group.

**PL-504.4 PERMANENT DATA COLLECTION STATIONS (cont.)**

The Traffic and Equipment Management Branch collects available ATR data (vehicle volume, classification, speed) from all ATR stations throughout the year.

Weigh-in-Motion (WIM) data may be useful in an array of applications including, but not limited to, legislation; regulation; administration; planning; and the design, monitoring, and research of pavement and bridges. WIM stations are designed to record vehicle axle and gross weights. Data (traffic volumes, vehicle classification, vehicle weights) is collected from WIM stations a minimum of one week per quarter. The weight data should provide a reliable estimate of the distribution of vehicle and axle loads per vehicle for truck classifications within defined roadway groups.

The Traffic and Equipment Management Branch annually reviews WIM station locations. Methodologies for adding, deleting, and combining WIM locations are included in the *Traffic Monitoring Guide* and are employed during the annual review. Generally, WIM stations should be located using a combination of truck classifications and geographic locations of roadways, such that sufficient numbers of sites are within a given group.

*What input is required?*

KYTC's Division of Planning, Traffic and Equipment Management Branch, identifies, equips, and supports each permanent data collection station. Changes in equipment or any other modification to a permanent station shall be in accordance with the Traffic and Equipment Branch's annual traffic count program. Routine maintenance or replacement of equipment and the regular collection of data are accomplished as prescribed and funded through the Division of Planning's annual Work Program.

*What forms are used?*

There are no official TC 59 planning forms used to support the Permanent Data Station collection process.

*What are the steps in implementing and using a Permanent Data Collection Station?*

The Traffic and Equipment Management Branch continuously assesses the coverage and performance of the permanent data collection stations across the state highway system and enhances or adjusts the permanent station program as necessary to meet federal law.

The steps in implementing permanent stations and evaluating their performance during a traffic count cycle are generally as follows:

**PL-504.4 PERMANENT DATA COLLECTION STATIONS (cont.)**

- The decision is made to place a permanent data collection station at a specific location.
- Raw traffic data is collected for a specified time period.
- The raw traffic data is reviewed for accuracy (quality control check).
- Correction factors are applied to generate AADT volumes, vehicle classification information, or vehicle weight data generated by the permanent station at that location.
- The resulting AADT, vehicle classification, or vehicle weight information is used to support KYTC project or program activity, track highway usage trends, and generate traffic-based reports for KYTC and FHWA, most notably in support of the annual submittal of HPMS data to FHWA.
- Permanent data collection station highway system coverage is continuously assessed, expanded, or adjusted as needed to improve the next cycle of data collection.

**When is the Permanent Data Collection Station process complete?**

The use of permanent data collection devices to generate highway system traffic information is an ongoing, cyclical process. Since highway system usage depends upon multiple factors, ranging from the physical characteristics of the roadway to the price of a gallon of gasoline, traffic volumes and associated data is ever-changing. Accordingly, the data collection process is never complete.

**What is the approval chain for implementing and using a Permanent Data Collection Station?**

The implementation and use of permanent data collection stations is funded through the annual Planning Work Program, which is ultimately approved by FHWA. Decisions about the location of permanent data collection stations are made in concert with the Data Management Branch and FHWA, with the day-to-day approvals made by the Traffic and Equipment Management Branch Manager in consultation with the Division of Planning Director.

**PL-504.5 TRAFFIC DATA COLLECTION EQUIPMENT PROCUREMENT & MAINTENANCE**

The annual traffic count program requires extensive attention to the equipment used to acquire basic information from which traffic monitoring, data collection, and reporting requirements are met. This equipment shall be procured within specific state and federal guidelines and properly maintained to ensure it is achieving its intended purpose. KYTC's Division of Planning has a warehouse devoted to the storage of data acquisition materials and equipment, including traffic data recorders, inductive loop detectors, piezoelectric sensors, pneumatic road tubes, and single load cell scales.

**PL-504.5 TRAFFIC DATA COLLECTION EQUIPMENT PROCUREMENT  
& MAINTENANCE (cont.)**

The Traffic and Equipment Management Branch's Equipment Team designs and maintains traffic count equipment and routinely investigates new data collection technologies to keep collection methodologies current. The Equipment Team also ensures that traffic data recorder equipment is certified annually and that KYTC District Traffic Data Technicians are included in that certification process.

An integral part of the successful implementation of the annual traffic count program is the safety of the employees involved in the installation, inspection, and maintenance of the traffic data equipment. Safety measures with regard to procedures, equipment, and apparel as detailed in the *Standard Specifications for Road and Bridge Construction*, the *Employee Safety and Health Manual*, and the *General Administration and Personnel Guidance Manual* shall be observed when doing any type of field work. Personal protective equipment (PPE) shall be worn whenever performing field activities.

On high-volume roads, an additional person should assist the Traffic Data Technician in expediting the work and watching for hazards. Safety and Work Zone training should be viewed as essential to the success of the traffic data collection program's personnel, and efforts should be made to accommodate a level of staff training that will maintain professional career development and improvement of technological skills.

*How is traffic data collection equipment procurement and maintenance initiated?*

Traffic data collection equipment procurement is the responsibility of KYTC's Division of Planning, Traffic and Equipment Management Branch, as assisted by KYTC's Division of Purchases. All procurement transactions shall comply with commodity procurement requirements of the Kentucky Model Procurement Code, [KRS Chapter 45](#) and [45A](#), as further implemented by [200 KAR 5](#) (Purchasing).

Traffic data equipment maintenance activities are initiated by the Equipment Team in response to specific quality control, technical maintenance, equipment replacement, or upgrade needs identified by KYTC's Division of Planning staff, district planning staff, or the Kentucky Transportation Center research staff.

*What input is required?*

Users and beneficiaries of the data generated by data collection equipment must provide regular, operational feedback to the Traffic and Equipment Management Branch Manager to guide procurement and maintenance of traffic data equipment. Poorly performing or non-performing equipment must be identified and repaired or replaced expeditiously.

**PL-504.5 TRAFFIC DATA COLLECTION EQUIPMENT PROCUREMENT  
& MAINTENANCE (cont.)**

New equipment or innovative technologies must be safely installed with appropriate training and understanding of the purpose and desired outcomes for that equipment. All decisions relative to traffic data collection equipment procurement and maintenance are under the direct purview of the Traffic and Equipment Management Branch Manager.

*What forms are used?*

There are no official TC 59 planning forms used to support the traffic data equipment procurement and maintenance process.

*What are the steps in the traffic data collection equipment procurement process?*

When the Traffic and Equipment Management Branch's Equipment Team determines that a new equipment purchase is required and the cost can be accommodated within the annual Planning Work Program budget, the Branch Manager either uses the Division of Planning's small purchase authority or coordinates with KYTC's Division of Purchases to acquire the equipment.

Each KYTC division has small purchase authority of up to \$10,000 provided the division procurement staff undergoes the procurement training required by the Kentucky Finance and Administration Cabinet. Small purchase authority may be used for a single price quote up to \$5,000, but at least three price quotes are required for purchases between \$5,000 and \$10,000.

If the equipment is expected to cost more than \$10,000, the Traffic and Equipment Management Branch Manager provides equipment specifications to the Division of Purchases Procurement Branch. The Division of Purchases Procurement Branch then ensures compliance with the Kentucky Model Procurement Code and, with the Branch Manager's approval of the low bid and total equipment price, makes the equipment purchase on behalf of the Division of Planning, Traffic and Equipment Management Branch. The new equipment is then delivered to the Traffic and Equipment Management Branch for its implementation and use.

*When is the traffic data collection equipment procurement process complete?*

The equipment procurement process is complete when the Division of Purchases has delivered the new equipment, and the Traffic and Equipment Management Branch Manager and Equipment Team have accepted it.

*What is the approval chain for procuring traffic data collection equipment?*

To procure needed equipment, the Traffic and Equipment Management Branch Manager initiates the procurement request internally, or to the Division of Purchases.

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**PL-504.5      TRAFFIC DATA COLLECTION EQUIPMENT PROCUREMENT  
& MAINTENANCE (cont.)**

For procurements exceeding \$10,000, the procurement process approvals are provided by the Division of Purchases Procurement Branch. Final approval of the delivered equipment rests with the Traffic and Equipment Management Branch Manager.



	<p><i>Chapter</i></p> <p>HIGHWAY INFORMATION &amp; MONITORING SYSTEMS</p>
	<p><i>Subject</i></p> <p>Highway Performance Monitoring System (HPMS) Reporting</p>

### PL-505.1 OVERVIEW

The [Highway Performance Monitoring System \(HPMS\)](#) is a national highway information system mandated by 23 USC 502(h) that includes data on the extent, condition, performance, use, and operating characteristics of the nation's highways. The HPMS contains administrative and extent of system information on all public roads, while information on other characteristics is represented in HPMS as a mix of universal and sample data for arterial and collector functional systems. Limited information on travel and paved miles is summarized for the lowest functional systems.

HPMS was developed by FHWA in 1978 as an annual highway system monitoring tool, replacing the special biennial condition studies conducted since 1965. HPMS has been modified several times since its inception to reflect changes in highway systems, legislation, and national priorities, as well as to reflect innovative technology and streamline reporting and performance requirements.

### PL-505.2 PURPOSE & USE

The major purpose of HPMS is to support a data driven decision process within FHWA, state departments of transportation, and Congress. HPMS data are used extensively in the analysis of highway system conditions, performance, and investment needs that make up the biennial condition and performance reports to Congress. Congress uses these reports when establishing authorization for and appropriation to legislation. Both activities ultimately determine the scope and size of the Federal-aid Highway Program and determine the level of federal highway taxation.

HPMS is also used for assessing changes in highway system performance brought about by implementation of funded highway system improvement programs under the *Government Performance and Results Act*, and for apportioning Federal-aid Highway Funds to individual states. HPMS is a source of highway system and performance information for those in the transportation community for highway and transportation planning, as well as other purposes, published annually in "Highway Statistics" and other media.

**PL-505.2 PURPOSE & USE (cont.)***How is HPMS work initiated?*

States submit the completed HPMS report to FHWA on or before June 15 of each year. Submission deadlines begin with interstate pavement and other related data items on April 15 (HPMS Submission 1), followed by the certified mileage on June 1. Non-interstate pavement, non-pavement, sample, and summary data are due on June 15 (HPMS Submission 2).

The [HPMS Field Manual](#) provides a comprehensive overview of the HPMS program and describes in detail HPMS data collection and reporting requirements. The requirements outlined in the Field Manual are authorized under [23 USC 315](#), which places the authority on the U.S. Secretary of Transportation for national management decisions affecting transportation. In addition, The United States Code of Federal Regulations (CFR) title 23, Section 1.5, provides the Federal Highway Administrator with authority to request such information deemed necessary to administer the Federal-aid Highway Program. Also, [23 CFR 420.105\(b\)](#) requires the states to provide data that support FHWA's responsibilities to Congress and the public. The HPMS Field Manual is a valuable resource that guides the states as they address their HPMS data collection and reporting responsibilities. This manual includes detailed information on technical procedures, a glossary of terms, and various tables to be used as reference by those collecting and reporting HPMS data. Information related to the use of the HPMS software web application is contained in a stand-alone document.

Linear Referencing System (LRS) data provides a spatial reference for the Full Extent and Sample Panel data on selected highway functional systems. This spatial data coupling (representing roadway attribute data in a spatial format) enables the analysis of HPMS data in a GIS environment. Within the HPMS software, the state-provided LRS represents all roadways in a given state's road network for a designated set of functional classifications. HPMS compliance drives how KYTC collects, stores, and processes roadway data for HIS. HIS data then supports the HPMS reporting requirement and provides LRS information for a variety of KYTC planning products.

Table 1.1 of the HPMS Field Manual details the minimum data reporting requirements for rural and urban roadways. KYTC's Division of Planning, Data Management Branch, begins preparing the next update of HPMS reports almost as soon as the current year submittal is complete. The "[Planning Highway Information \(HIS Database\)](#)" contains the most recent HPMS reports for Certified Public Road Mileage, Extent and Travel Report (Urban-Rural Summary), Extent and Travel on the Interstates, Extent and Travel on the NHS, and Governmental Ownership Length. Each of these reports feeds directly into the [FHWA Highway Statistics Series](#).

**PL-505.2 PURPOSE & USE (cont.)**

What input is required for HPMS Reporting?

HPMS reporting utilizes HIS metadata to generate the necessary annual updates for FHWA. Spatially referenced inventory, condition, and roadway characteristic data is collected from KYTC district offices, MPOs, and local governments, as well as KYTC’s Divisions of Maintenance, Traffic Operations, and Planning. This data is used to produce reports on Certified Public Road Mileage, interstate pavement and related data, and non-interstate pavement and non-pavement related data. KYTC’s Division of Planning, Data Management Branch, continuously monitors incoming data and ensures the accuracy of data used for HPMS reporting.

What forms are used?

There are no official TC 59 planning forms used to support the HPMS reporting process.

What are the steps in the HPMS Reporting process?

To prepare the annual HPMS reports, KYTC’s Division of Planning, Data Management Branch, uses the process outlined in Figure 10.

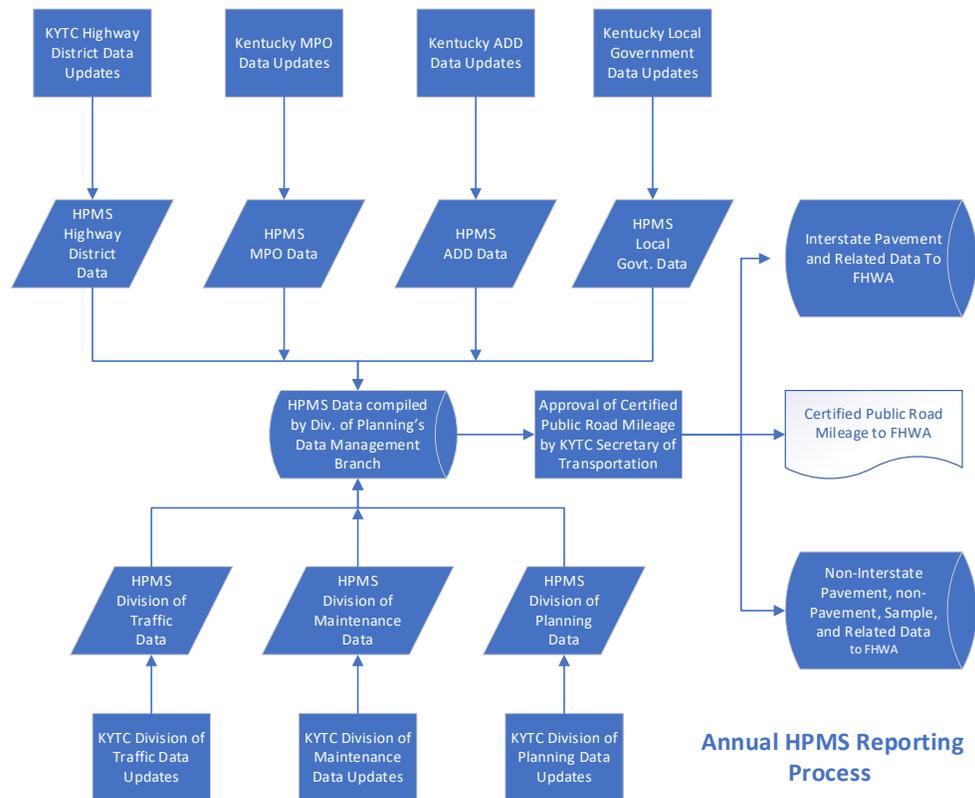


Figure 10. Annual HPMS Reporting Process

**PL-505.2 PURPOSE & USE (cont.)***When is the HPMS Reporting process complete?*

Annual HPMS reporting begins in the fall of each year and culminates in the required reports being forwarded to FHWA on or before June 15 of the following year. While each reporting period has a finite duration, the HPMS update process is never complete.

*What is the approval chain for HPMS Report submittal?*

KYTC's Division of Planning, Data Management Branch, prepares the annual HPMS reports, and the Division of Planning Director submits them to the Secretary of Transportation for approval (Certification of Public Road Mileage). Once approved, the Secretary of Transportation forwards this certification and other HPMS reports to the FHWA Kentucky Division Administrator who reviews, approves, and sends the HPMS materials to FHWA Headquarters for inclusion in the National Highway Database. The national data is used to generate the annual Highway Statistics Report and the annual Conditions and Performance Report as presented to Congress.



	<i>Chapter</i> OFFICIAL ORDERS & SYSTEM CHANGES
	<i>Subject</i> Statutory Authority

Per [603 KAR 3:030](#), as authorized by [KRS 177.020](#) and [23 CFR 470](#), the Kentucky Transportation Cabinet (KYTC), Department of Highways, may establish, construct, reconstruct, and maintain public roads as part of the State Primary Road System (SPRS). The Department of Highways shall issue an official order when adopting roadways into, reclassifying roadways within, re-designating, eliminating, or transferring roadways from the SPRS. Official orders shall be approved and signed by the Secretary of Transportation (or an authorized representative) and KYTC's Office of Legal Services.



 <p>Division of <b>PLANNING</b> Kentucky Transportation Cabinet</p>	<i>Chapter</i> OFFICIAL ORDERS & SYSTEM CHANGES
	<i>Subject</i> Acceptance Into State Primary Road System (SPRS)

KYTC's policy for the acceptance of mainline roadways, frontage roads, crossover roads, county roads, or city streets into the State Primary Road System (SPRS), including the relocation of roads within SPRS, is as follows:

- Only those facilities that are germane to the total state roadway system shall become part of one system network (interstate, parkway, state primary, state secondary, or rural secondary).
- The maintenance responsibility for facilities that do not logically belong in the SPRS shall be vested in the appropriate authority. This authority may be county or city governments, business corporations, or private interests.
- Facilities classified as supplemental roads shall be eliminated from state maintenance whenever possible.
- Designation of maintenance responsibilities by KYTC shall be made by official order upon completion of a highway improvement project.

This policy determines when system modifications are needed to keep the SPRS up-to-date and serves to guide decisions involving the official order process.

	<b>Chapter</b> OFFICIAL ORDERS & SYSTEM CHANGES
	<b>Subject</b> Types of Official Orders

### PL-603.1 OVERVIEW

KYTC's Division of Planning, Transportation Systems Branch, is responsible for preparing SPRS-related official orders in coordination with the KYTC district planning supervisor. The district planning supervisor also serves as the KYTC highway district office liaison to local governments and other responsible parties, and prepares all SPRS correspondence for signature by the Chief District Engineer. KYTC's Division of Planning, Transportation Systems Branch, prepares official orders; routes them for signature; and adopts them into the Highway Information System (HIS).

Five types of system modifications are addressed through the official order process:

- The *Official Order of Acceptance* documents the acceptance and responsibility of new construction, roadway repairs, and existing local roads and streets into the SPRS. ([Exhibit 9006](#))
- The *Official Order of Reclassification* documents the reclassification of a facility within the SPRS. ([Exhibit 9007](#))
- The *Official Order of Redefinition* documents adjustments in the route length (mileage) or description of a SPRS roadway segment. ([Exhibit 9008](#))

**Note:** Changes resulting from new distance measurements or field reviews and updates, may be made via a for-the-record document prepared by KYTC's Division of Planning, Transportation Systems Branch, and provided electronically to data users.

- The *Official Order of Transfer* documents an interagency agreement or other document transferring maintenance and ownership to a local governing entity or adjacent property owner. This ensures the Cabinet is no longer liable or responsible for the facility. ([Exhibit 9009](#))

**PL-603.1 OVERVIEW (cont.)**

- The *Official Order of Closure/Abandonment* documents the abandonment and closing of a facility to public travel. (**Exhibit 9010** illustrates an example Official Order of Closure that directs the facility to be closed to public use. **Exhibit 9011** illustrates an example Official Order of Closure/Abandonment that transfers the facility to an adjacent property owner.)

An official order may address multiple actions simultaneously. If a public entity is unwilling to accept property transferred by official order, KYTC's policy is to seek to exchange publicly-owned property with another public entity. Transferring or selling state-owned property to a private interest is less desirable.

Official orders are often the result of roadway changes that occur during highway construction projects. These roadway changes may take various forms, including:

- Acceptance of a new roadbed into the SPRS
- Reclassification or redefinition of old roadbeds
- Transfer of old roadbeds to another jurisdictional entity
- Closure or abandonment of an old roadbed deemed no longer germane to the SPRS nor the local road network.

**PL-603.2 BASE HIGHWAY SYSTEM MODIFICATIONS***How is work initiated?*

Each KYTC district planning supervisor is assigned a KYTC Division of Planning, Transportation Systems Branch liaison, for development of background information for the proposed system modification. The background information varies according to the type of official order and includes both the presentation of current SPRS data for the affected roadway segments and detailed recommended changes. State-owned right-of-way transfers are not required for official orders involving acceptance, reclassification, and redefinition of the SPRS.

Once the change has been properly identified and scoped, work may be initiated by either KYTC's district planning supervisor or KYTC's Division of Planning, Transportation Systems Branch liaison.

*What input is required?*

The KYTC district planning supervisor and KYTC's Division of Planning, Transportation Systems Branch liaison, develop the proposed change and KYTC's Division of Planning, Transportation Systems Branch prepares the draft official order and recommends it to KYTC's Office of Legal Services and the Secretary of Transportation for approval.

**PL-603.2 BASE HIGHWAY SYSTEM MODIFICATIONS (cont.)**

When the official order has been signed by the Office of Legal Services and the Secretary of Transportation, KYTC's Division of Planning, Transportation Systems Branch, provides a signed copy to the KYTC district planning supervisor who, in turn, provides copies to appropriate local entities.

*What forms are used?*

There are standard formats for presenting information in this process; however, there are no official TC 59 planning forms. [Exhibit 9012](#), a sample transfers and abandonments sheet developed by KYTC district planning staff, is one means of tracking systems modification activities within the KYTC district.

*What are the steps in the SPRS Highway System Modification process?*

The steps are outlined in numbered statements below, as well as graphically depicted in Figure 11.

1. The KYTC district planning supervisor and KYTC's Division of Planning, Transportation Systems Branch liaison, recognize the need; prepare current SPRS data for the affected roadway segments; and detail recommended changes.
2. Changes approved by the KYTC Division of Planning, Transportation Systems Branch Manager, are coordinated with KYTC's Division of Planning, Data Management Branch, to ensure the official order is ready to be drafted.
3. KYTC's Division of Planning, Transportation Systems Branch, develops the draft official order and recommends it for approval to KYTC's Office of Legal Services and the Secretary of Transportation.
4. Both KYTC's Office of Legal Services and the Secretary of Transportation sign the official order and return the executed official order to KYTC's Division of Planning.
5. KYTC's Division of Planning incorporates the approved changes into HIS by memorandum. The Transportation Systems Branch, through KYTC's Division of Planning Director, forwards a copy of the executed official order (with background material) to KYTC's district planning supervisor.
6. KYTC's Division of Planning, Transportation Systems Branch, sends notice of modification to the appropriate local entities and posts the signed official order on KYTC's Division of Planning Intranet site.

PL-603.2 BASE HIGHWAY SYSTEM MODIFICATIONS (cont.)

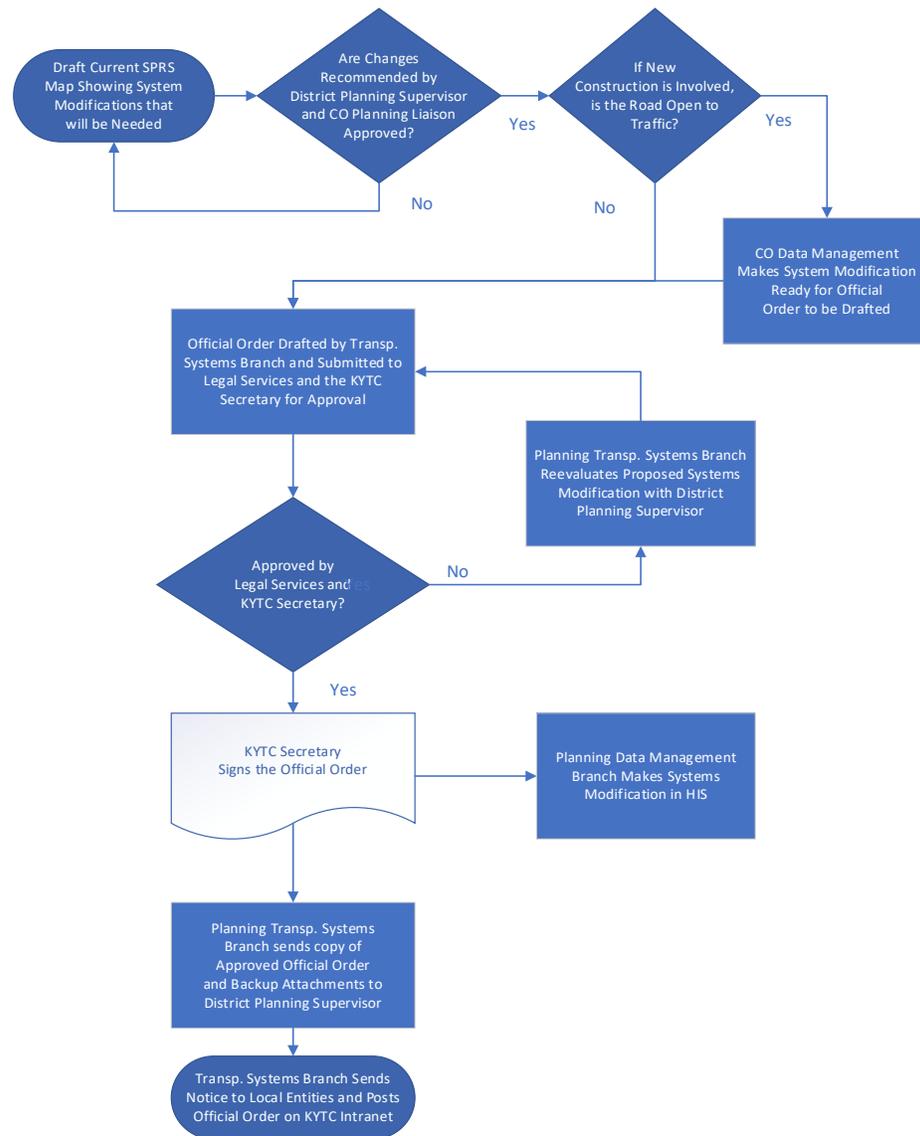


Figure 11. KYTC Official Order Process for Highway System Modification

What is the approval chain for a Highway System Modification official order?

1. Recommended by the KYTC District Planning Supervisor and the KYTC Division of Planning, Transportation Systems Branch liaison, and requested by the Chief District Engineer.
2. KYTC Division of Planning, Transportation Systems Branch Manager, approves recommended changes and prepares official order.
3. Official order endorsed and recommended by the Director of the KYTC Division of Planning.
4. Official order approved as to legality and form by the KYTC Office of Legal Services.
5. Official order approved and signed by the Secretary of Transportation.

**PL-603.3 ROADWAY SEGMENT TRANSFERS***How is work initiated?*

When a section of roadway is deemed no longer germane to the State Primary Road System (SPRS), KYTC's Division of Planning, Transportation Systems Branch, prepares an official order of transfer to remove that roadway from the SPRS. Active road construction projects often produce changes to the SPRS that require reconciliation within HIS. The KYTC District Planning Supervisor works closely with the KYTC district project team and the KYTC Division of Planning, Transportation Systems Branch liaison, to ensure reconciliation is completed for each roadway project as it opens to traffic.

The KYTC District Planning Supervisor originates, and the Chief District Engineer requests, any transfer of state-owned roadway from the SPRS. These requests primarily involve changes arising from highway construction or improvement projects.

For these projects, the KYTC District Planning Supervisor is expected to:

- Stay in communication with the KYTC Division of Planning, Transportation Systems Branch liaison, regarding transfer developments
- Serve on each KYTC district project team (or assign a planning section designee)
- Represent the KYTC Division of Planning in any discussions about, or actions needed, regarding SPRS modifications

If an active highway project is expected to require an official order of transfer, the KYTC district planning section should be involved as follows:

- At the end of Phase I Design, a copy of the preferred alternative shall be provided to KYTC's Division of Planning, Transportation Systems Branch liaison and Data Management Branch, for their review.
- During the joint inspection and final inspection, and prior to the completion of right-of-way plans, the KYTC district project team, under the guidance of the District Planning Supervisor, shall identify and recommend ownership and maintenance responsibility of all roadway segments created as part of the project.

**Note:** For projects that result in the relinquishment of right-of-way that was originally bought or constructed with federal funds, the provisions of [23 CFR 620.203](#) apply and the documentation and approvals required by the Federal Highway Administration (FHWA) shall be carried out as stipulated therein. ([Exhibit 9013](#) and [Exhibit 9014](#))

**PL-603.3 ROADWAY SEGMENT TRANSFERS (cont.)**

Examples of roadway segment changes may include, but are not limited to:

- New roadways assigned a state or federal route number
- Sections of old roadways bypassed or remaining as approach roads or frontage roads
- Entrances to private properties or cemeteries
- Other roadway segments no longer germane to the state-maintained system

All SPRS-related comments and recommendations shall be recorded in the minutes of the joint inspection and final inspection, with the KYTC Division of Planning Director included as a recipient of the minutes, if deemed necessary by the project team.

Prior to the authorization of right-of-way plans, the KYTC district planning supervisor (acting as the designee for the Chief District Engineer) shall notify in writing the appropriate local governing body of its intention to remove identified roadway segments from the state-maintained system upon completion of the construction phase of the project.

To assist the local government, the district planning supervisor will provide:

- A map of the affected rights-of-way
- A draft resolution expressing local support for the recommended transfer of ownership and maintenance responsibility for those segments. An example KYTC district correspondence letter from the Chief District Engineer to the local government ([Exhibit 9015](#)) and an example resolution ([Exhibit 9016](#)) are presented for reference.

The design phase resolution shall provide that, upon completion of the proposed highway project, the local entity shall accept title and maintenance responsibilities to bypassed or realigned roadways and associated rights-of-way. Should the local entity choose not to accept responsibility for those rights-of-way, the Chief District Engineer and the Secretary of Transportation will determine if the project should continue. This notification satisfies [KRS 177.020 Sections 4 and 5](#).

The Final Right-of-Way Plans shall include the appropriate Right-of-Way information such as station and offsets, bearings, distances, and coordinates when appropriate back-source deeds are available. The KYTC District Project Team will develop a deed description for the transfer of property. In situations where a back-source deed is not available, a text document describing the property (suitable for a deed of transfer) shall be developed.

**PL-603.3 ROADWAY SEGMENT TRANSFERS (cont.)**

When right-of-way plans are submitted to KYTC's Division of Right-of-Way and Utilities for funding authorization, the KYTC district planning supervisor shall provide a set of plans to KYTC's Division of Planning, Transportation Systems Branch liaison, along with an estimated date for construction completion. KYTC's Division of Planning, Transportation Systems Branch, shall review the plan and deed information based on the proposed ownership and may request further information from the district for the draft of an official order of transfer.

Not less than 60 days prior to traffic being allowed on the newly constructed roadway, the KYTC District Planning Supervisor should submit (on behalf of the Chief District Engineer) a request for system modification through an official order. The necessary supporting material as outlined in the appendices to KYTC's ["Policy Guidelines for Kentucky State Primary Road System \(SPRS\) Jurisdictional Transfers"](#) should be provided by the KYTC district planning supervisor and include, but not be limited to:

- Electronic plans showing the roadway centerline and ownership upon completion of the project (stored in ProjectWise)
- Descriptions and drawings suitable for a deed of transfer for all roadways for which ownership will be transferred
- Documentation that the rights-of-way associated with bypassed roadways, frontage roads, connectors, or roadways no longer germane to the SPRS have been offered to the appropriate local government
- The signed resolution from the local government accepting ownership and maintenance responsibilities for roadway segments
- Existing and proposed SPRS classification termini and mile points
- Existing and proposed functional classification termini and mile points
- Maps reflecting the existing and proposed SPRS classification and the existing and proposed functional classification

KYTC's Division of Planning, Transportation Systems Branch, is responsible for notifying the district planning supervisor and local entities when the official order of transfer has been signed, and for posting the signed official order on the KYTC Division of Planning Intranet site.

When an official order of transfer involves an active construction project, KYTC's Division of Planning, Transportation Systems Branch liaison shall:

- Use Project Tracker (a KYTC Division of Planning internal database that lists all construction projects as they approach letting) to stay abreast of the impending project and its schedule

**PL-603.3 ROADWAY SEGMENT TRANSFERS (cont.)**

- Routinely review the online “Tentative 4 Month Letting Schedule” to identify projects being let in the Districts under their jurisdiction.
- Add project lettings with potential SPRS changes to Project Tracker
- Review KYTC project authorizations weekly as an independent check to verify the information obtained from the KYTC Construction Procurement website
- Share a regular quarterly update of Project Tracker with each KYTC district planning supervisor.

**Note:** For each construction project, the liaison shall determine an anticipated open-to-traffic date. This date is significant in that it sets the date by which the official order process must be complete and the beginning of the “60 days prior” notification process originating from the District.

- Communicate regularly with the KYTC district planning supervisor and determine the appropriate time to initiate the official order process to complete all SPRS-related property transfers by the open-to-traffic date.

In processing the Chief District Engineer’s request and prior to the new roadway opening to traffic KYTC’s Division of Planning, Data Management Branch, shall update HIS with the new alignment, classification, roadway characteristics, and ownership information provided by the Chief District Engineer.

Action to transfer the title for a roadway from KYTC to another entity requires that KYTC’s Division of Planning, Transportation Systems Branch, prepare an official order and a recommendation for the acceptance of the system changes proposed by the Chief District Engineer. The recommendation shall include pertinent supporting materials, including maps showing proposed changes and plan sheets shaded to indicate rights-of-way or easements to be transferred or retained.

KYTC’s Division of Planning, Transportation Systems Branch, shall route the official order recommendation with its supporting property description documentation (resolutions, back-source deeds when applicable, and maps) through KYTC’s Division of Right-of-Way and Utilities for preparation of the necessary deed of conveyance.

KYTC’s Division of Right-of-Way and Utilities shall route the official order to KYTC’s Office of Legal Services and the Secretary of Transportation for approval. Once the Secretary of Transportation has signed the official order, all supporting documentation and any explanatory materials shall be submitted to the Secretary of the Kentucky Finance and Administration Cabinet for approval to convey the property. ([Exhibit 9017](#))

**PL-603.3 ROADWAY SEGMENT TRANSFERS (cont.)**

After the Kentucky Finance and Administration Cabinet Secretary has approved the property transfer documents, KYTC's Division of Right of Way and Utilities shall administer the deed transfer process and forward a memorandum to KYTC's Division of Planning advising completion of the process.

KYTC's Division of Planning, Transportation Systems Branch Manager, shall:

- Send a memorandum to the KYTC district planning supervisor advising that the property transfer is complete
- Send a notice of the systems modification to local entities as appropriate
- Post a copy of the signed official order to the KYTC Division of Planning Intranet site.

*What input is required?*

The KYTC district planning supervisor, in close concert with KYTC's district project team, the local government, and the Chief District Engineer, provides the existing SPRS condition data and required property transfer information to the KYTC Division of Planning, Transportation Systems Branch, for preparation of the draft official order. KYTC's Division of Right of Way and Utilities prepares the deeds for conveyance and obtains the Official Order approvals from the KYTC Office of Legal Services, the KYTC Secretary, and the Secretary of the Kentucky Finance and Administration Cabinet.

*What forms are used?*

There are no official TC 59 planning forms for this process; however, [Exhibit 9012](#) is a sample form that may be used to identify and track SPRS property transfers.

*What are the steps for a SPRS property transfer?*

The steps are outlined in the following numbered statements:

1. KYTC District Planning Supervisor:
  - a. Identifies the need for a SPRS segment transfer
  - b. Collects field data
  - c. Prepares background information
  - d. Coordinates with the affected local government to obtain a resolution accepting the roadway segments into the local road system
2. KYTC Division of Planning, Transportation Data Management Branch liaison, enters project into the Project Tracker database and tracks progress of project toward letting.
3. KYTC district planning supervisor and KYTC Division of Planning, Data Management Branch liaison, determine anticipated open-to-traffic date.

**PL-603.3 ROADWAY SEGMENT TRANSFERS (cont.)**

4. KYTC Chief District Engineer requests an official order to effect the property transfer.
5. KYTC Division of Planning, Transportation Systems Branch liaison, develops the draft official order and sends it to KYTC's Division of Right of Way and Utilities for coordination of property transfer.
6. KYTC Division of Planning, Data Management Branch, initiates the system modification in HIS to keep HIS data current.
7. KYTC Division of Right of Way and Utilities coordinates the signing of the official order package with KYTC's Office of Legal Services and the Secretary of Transportation, then with the Secretary of the Kentucky Finance and Administration Cabinet to authorize the deeds for transfer.
8. KYTC Division of Right of Way and Utilities effects the deed transfer and sends memorandum (with signed official order attached) to KYTC's Division of Planning advising that the property transfer process is complete.
9. KYTC Division of Planning, Transportation Systems Branch:
  - a. Sends memorandum (with signed official order attached) to KYTC's district planning supervisor advising that property transfer process is complete
  - b. Advises local entities of the systems modification
  - c. Posts the signed official order to KYTC's Intranet

**When is the SPRS property transfer complete?**

The SPRS process is complete when the KYTC Division of Right of Way and Utilities completes the transfer of deeds to the local entity, and notifies the Division of Planning by memorandum that the property transfer has been effected. KYTC's Division of Planning, Transportation Systems Branch, then notifies the KYTC district planning supervisor and local entities of the systems modification, and posts the signed official order on the KYTC Division of Planning Intranet.

**What is the approval chain for a SPRS property transfer?**

1. Initially recommended by the KYTC district planning supervisor on behalf of the Project Team
2. Requested by the Chief District Engineer
3. Draft official order prepared and recommended by KYTC's Division of Planning, Transportation Systems Branch liaison
4. Draft official order recommended to KYTC's Division of Right of Way and Utilities by the Director of KYTC's Division of Planning

**PL-603.3 ROADWAY SEGMENT TRANSFERS (cont.)**

5. Deeds prepared to accompany draft official order as recommended by Director of KYTC's Division of Right of Way and Utilities
6. Deeds and official order approved as to legality and form by KYTC's Office of Legal Services
7. Official order approved by the Commissioner of Highways.
8. Transfer of state-owned property approved by the Secretary of the Kentucky Finance and Administration Cabinet

**PL-603.4 ROADWAY CLOSURE/ABANDONMENT***How is work initiated?*

The KYTC district planning supervisor, Chief District Engineer, and KYTC's Division of Planning, Transportation Systems Branch liaison, jointly determine the need for KYTC to abandon a SPRS segment.

*What input is required?*

The KYTC district planning supervisor works with the local government to determine possibilities for the to-be-abandoned roadway segment to be taken into its local system for maintenance. Preferably, the local government would adopt the old roadway into its highway system; however, if the local government is not receptive, it is necessary to attempt transfer of to-be-abandoned properties to adjoining property owners.

In either event, coordination is required to ensure that any remaining affected public roadway access or private driveways are owned and maintained by the appropriate local entity.

**Note:** For projects that result in the relinquishment of right-of-way that was originally bought with federal funds or the project was constructed with federal funds, the provisions of [23 CFR 620.203](#) apply and the documentation and approvals required by the Federal Highway Administration (FHWA) shall be carried out as stipulated therein. See [Exhibit 9013](#) and [Exhibit 9014](#) for sample coordination letters with FHWA in this regard.

*What forms are used?*

There are no official TC 59 planning forms for the SPRS Roadway Closure/Abandonment process; but [Exhibit 9012](#) is an example of a form that may be used to identify and track SPRS roadway closures and abandonments.

**PL-603.4 ROADWAY CLOSURE/ABANDONMENT (cont.)***What are the steps in the SPRS Roadway Closure/Abandonment process?*

The steps are outlined in the numbered statements below and graphically depicted in Figure 12.

1. KYTC district planning supervisor and KYTC Division of Planning, Transportation Systems Branch liaison, decide to close or abandon a roadway.
2. KYTC district planning supervisor works with the local government to determine the most appropriate ownership and maintenance responsibility for the roadway segment to be closed or abandoned.
3. KYTC Chief District Engineer advises KYTC's Division of Planning, Transportation Systems Branch liaison, of the local ownership determination and recommends appropriate transfer action.
4. With local government acceptance of the to-be-closed or abandoned roadway, KYTC's Division of Planning, Transportation Systems Branch, initiates the official order process to formally transfer the roadway to the local government.
5. If the local government chooses not to accept the segment into its roadway system, the KYTC district planning supervisor and district right-of-way supervisor evaluate the options for disposing of the right of way in another manner.
6. Depending on the situation, the roadway segment may either be sold, deeded to adjacent property owners, or left open as a private road if adjacent property owners successfully petition for such.
7. If the road is to be left open as a private roadway, the KYTC Division of Planning, Transportation Systems Branch liaison, processes an official order to abandon the segment and declare it a "discontinued state facility for private maintenance."
8. Action to transfer the title for a roadway from KYTC to another entity requires that the KYTC Division of Planning, Transportation Systems Branch liaison, prepare an official order and a recommendation for the acceptance of the system changes proposed by the Chief District Engineer. The recommendation shall include pertinent supporting materials including deed descriptions, maps showing proposed changes to the existing system, and paper plan sheets shaded to indicate rights-of-way or easements to be transferred.

**PL-603.4 ROADWAY CLOSURE/ABANDONMENT (cont.)**

9. KYTC Division of Planning, Data Management Branch, initiates the system modification in HIS to keep HIS data current.
10. KYTC Division of Planning, Transportation Systems Branch liaison, sends the official order to KYTC’s Division of Right-of-Way and Utilities for the preparation of deeds to be transferred.
11. KYTC Division of Right-of-Way and Utilities coordinates with the Office of Legal Services, the Secretary of Transportation, and the Secretary of the Kentucky Finance and Administration Cabinet to obtain the signed official order to authorize the deed for transfer.
12. KYTC Division of Right-of-Way and Utilities effects the deed transfer and sends a memorandum (with signed official order attached) to the KYTC Division of Planning, Transportation Systems Branch, advising that the roadway closure/abandonment transfer process is complete.
13. KYTC Division of Planning, Transportation Systems Branch:
  - a. Sends memorandum (with signed official order attached) advising the KYTC district planning supervisor that the roadway closure/abandonment transfer process is complete
  - b. Sends notice to local entities that the systems modification has been made
  - c. Posts signed official order to the KYTC Intranet

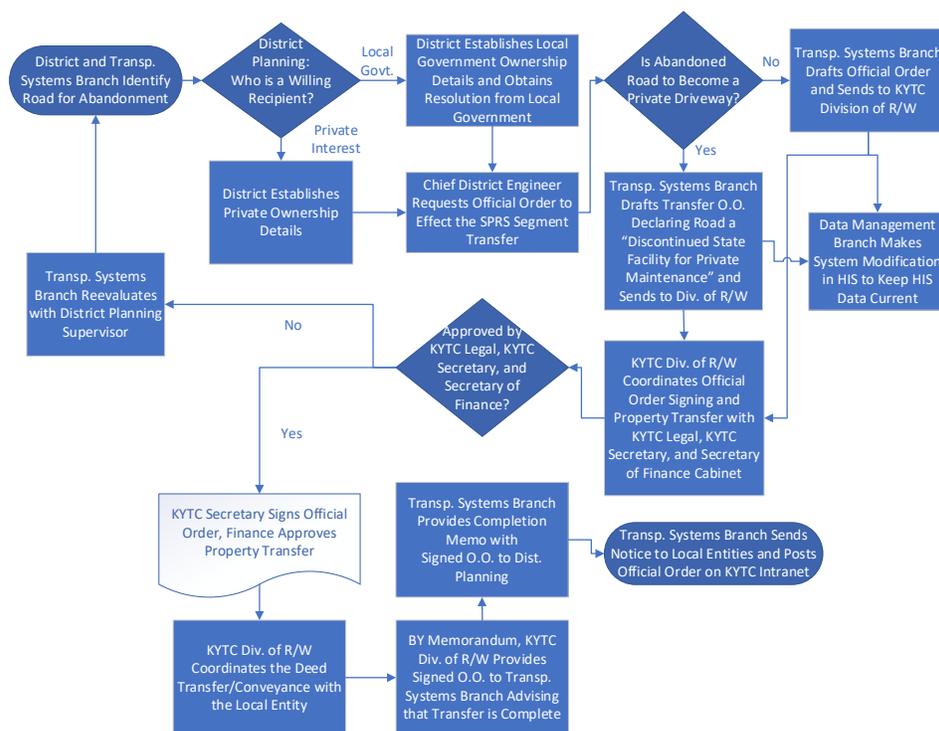


Figure 12. KYTC Official Order Process for SPRS Roadway Closure/Abandonment

**PL-603.4 ROADWAY CLOSURE/ABANDONMENT (cont.)***What is the approval chain for a SPRS roadway closure or abandonment?*

1. The KYTC district planning supervisor and Chief District Engineer recommend appropriate local ownership.
2. The KYTC Division of Planning, Transportation Systems Branch liaison, prepares the draft official order of transfer.
3. The KYTC Division of Planning Director recommends the draft official order of transfer to KYTC's Division of Right-of-Way and Utilities.
4. KYTC's Division of Right-of-Way and Utilities prepares the affected deeds and coordinates the approval process.
5. KYTC's Office of Legal Services approves the official order as to legality and form, and the deeds for disposition.
6. The Secretary of Transportation approves the official order.
7. The Secretary of the Kentucky Finance and Administration Cabinet authorizes the transfer or sale of state-owned property to the local recipient.



	<p><i>Chapter</i></p> <p>PROJECT DEVELOPMENT</p>
	<p><i>Subject</i></p> <p>Public Involvement</p>

**PL-701.1 OVERVIEW**

In 2016, The Kentucky Transportation Cabinet (KYTC) developed “[The Kentucky Transportation Cabinet Public Involvement Process for Statewide Transportation Planning and Project Delivery: Interested Parties, Public Involvement and Consultation Process](#),” procedures for involving the public in development of the Long-Range Statewide Transportation Plan (LRSTP), the Statewide Transportation Improvement Program (STIP), and other planning activities undertaken by KYTC’s Division of Planning. These procedures ensure public review and comment at key decision points as mandated by Congressional Acts federal-aid transportation programs.

A knowledge-driven process based upon valid, broad-based input is essential to address the maintenance and improvement of Kentucky’s transportation system. This broad-based input comes from technical, political, and public sources. Technical input arises from the analysis of the existing transportation system’s form and function, as well as from the impacts of anticipated improvements. Political input includes guidance and financial support from state and national political leadership. Public input is critical information generated from the users of the system, including those citizens in communities directly affected by proposed improvements.

Since “KYTC’s Public Involvement Process” guide was developed in 2016, KYTC’s Division of Planning has developed and implemented a new project prioritization methodology called the Strategic Highway Investment Formula for Tomorrow (SHIFT). SHIFT prioritization uses a considerable amount of technical information to assess relative project need. It also features strong public involvement through the existing Area Development District (ADD) and Metropolitan Planning Organization (MPO) transportation committees, as well as a SHIFT Advisory Committee made up of representatives from the Kentucky Senate, Kentucky House of Representatives, Kentucky League of Cities, Kentucky Association of Counties, and Kentucky County Judge/Executive Association. Interactions among the ADD, MPO, and SHIFT Advisory Committee ensure a public voice in SHIFT prioritization decisions and lead to the development of a better-informed Six-Year Highway Plan.

**PL-701.2 PUBLIC INVOLVEMENT PROCESS***How is the public involvement process initiated?*

The KYTC public involvement process is initiated whenever public input is sought to assist or enhance the development of KYTC plans, programs, and projects. The goal of KYTC's public involvement process is to provide Kentuckians the opportunity to participate in the identification of, and planning for, transportation system needs and priorities, as well as be engaged in the development and delivery of transportation projects. To achieve this goal, KYTC uses the following approach to obtain public involvement for any plan, program, or project where public input is required or desirable:

- *Identify* the affected population, particularly in the traditionally underserved communities, with consideration for their strengths and challenges.
- *Invite* those identified citizens to participate in the planning process.
- *Inform* the public of the planning and project development process for transportation needs.
- *Involve* the affected community during the planning, project development, and delivery processes so they may express concerns and needs, and KYTC may address them.
- *Improve* the participation process by measuring the success of public participation and incorporate those "lessons learned" into future efforts.

*What input is required?*

The KYTC public involvement process is rooted in the requirements of [23 CFR 450.210\(a\)](#). Additionally, [23 CFR 450.316](#) and [23 CFR 450.324](#) require development and documentation of a public involvement process at key decision points throughout the statewide, metropolitan, and rural transportation planning processes. More specifically, opportunities for public input must be provided in developing the LRSTP, the STIP, and MPO Long-Range Plans [also known as Metropolitan Transportation Plans (MTPs) and MPO Transportation Improvement Programs (TIPs)].

The public involvement process is designed to provide two-way communication: First, the KYTC, MPO, or ADD must make information about plans, programs, or projects readily available to all interested parties and actively seek public input. Second, and most importantly, the public must take advantage of public involvement opportunities to express views, sentiments, and preferences regarding proposed transportation initiatives. A successful public involvement process emphasizes both aggressive public outreach and active public participation.

*What forms are used in the public involvement process?*

There are no official TC 59 planning forms for this process.

**PL-701.2 PUBLIC INVOLVEMENT PROCESS (cont.)***What are the steps in the public involvement process?*

The KYTC public involvement process begins with a determination that public input is necessary for the successful implementation of a plan, program, or project. In some instances, public involvement is required by law. In other instances, public input may be sought at the discretion of the agency. As noted under “*What input is required?*” the LRSTP, STIP, MTPs, and Metropolitan TIPs all have public involvement processes prescribed by federal law. However, individual planning projects (feasibility studies, programming studies, data needs analysis studies, alternatives studies, interchange justification studies, small area studies), may vary the degree of public involvement based on the project’s scope, intent, or funding status.

Typically, initial public involvement activities occur early in the study process to present existing data and obtain input about concerns and issues in the project area. Throughout the life of a plan, program, or project, public input may be gained through a number of methods including advisory groups, focus groups, surveys, information booths at fairs, web pages, presentations to groups or organizations, media releases, flyers, and many other activities. Information for the public should be provided in a non-technical manner and, when possible, in graphical form with a minimum amount of jargon. Public interaction should be routinely facilitated and documented through any or all of the following means:

- Letters of notification
- Newspaper announcements of public meetings
- Related newspaper articles
- Public meeting citizen sign-in sheets
- Public meeting KYTC, consultant, and ADD personnel sign-in sheets
- Public meeting handouts
- Presentation slides/exhibits (print copies)
- Public survey/questionnaire and responses
- Documentation of oral comments by citizens
- Response letters from public officials, agencies, and citizens

At the conclusion of each public meeting or event, comments are summarized in writing and attached to copies of shared project information and public comments received as a result of the meeting. Copies of this documentation will be shared with project team members and others, as deemed appropriate.

*When is the public involvement process complete?*

Public involvement in the development of the LRSTP, STIP, and Metropolitan TIPs and MTPs is complete when the planning process has produced a final, approved planning document. For individual projects, the public involvement process is complete when the project or study has culminated in a formal report, or the study scope has been satisfied.

**PL-701.2 PUBLIC INVOLVEMENT PROCESS (cont.)***What is the approval chain for the public involvement process?*

Ultimately, each plan, program, or project has its own approval chain. The LRSTP and STIP are developed by KYTC's Division of Planning and Division of Program Management staff, respectively; approved by KYTC's Division Directors and Secretary of Transportation; and, formally approved by the Kentucky Division of FHWA.

Metropolitan Planning Organization (MPO) MTPs and TIPs are developed by MPO planning staff, approved by MPO policy committees, and concurred in by the Secretary of Transportation and the Kentucky Division of FHWA.

Individual studies are completed by KYTC's Division of Planning staff or consultants and approved by KYTC's Division of Planning Director. In each instance, the approval process requires an assessment of the extent to which the public was afforded adequate opportunity for review and comment. Therefore, the public involvement process is integral to project planning and approval.



	<p><i>Chapter</i></p> <p>PROJECT DEVELOPMENT</p>
	<p><i>Subject</i></p> <p>Purpose &amp; Need Statement</p>

### PL-702.1 OVERVIEW

KYTC's Division of Planning is responsible for ensuring a sound transportation planning process and delivering the state's Long-Range Statewide Transportation Plan (LRSTP), a document that establishes the goals and objectives for Kentucky's future transportation system. The LRSTP establishes the context for subsequent KYTC efforts to define regional transportation needs, decide which needs to address, and determine the timeframe for addressing those needs.

The LRSTP addresses challenges facing Kentucky's transportation system through the establishment of project goals and process goals.

*Project goals* are used to measure the effectiveness of proposed system improvements. These goals, for both people and freight, include:

- Provide a safe and secure system
- Maintain and improve existing infrastructure
- Ensure dependable, effective, and efficient facilities
- Improve local, regional, and global connectivity and access
- Include all appropriate modes of transportation within a fully integrated system

*Process goals* set performance standards for methods and practices used to deliver improvements and to maintain the system. These process goals include:

- Provide dependable access to markets, jobs, and resources
- Consider human and natural resources
- Strive for the efficient and flexible use of available resources
- Ensure transparent decision-making processes

Together these goals provide the framework of the decision-making process for transportation project identification, prioritization, development, delivery, and maintenance.

**PL-702.1 OVERVIEW (cont.)**

As potential projects are identified, a draft Purpose and Need Statement is developed alongside the initial project concept. This is critical since a project's Purpose and Need Statement is used to determine the "what" and "why" of a proposed transportation system improvement. As the Purpose and Need Statement is refined throughout the project development process, it builds the foundation for the project's scope (range of alternatives) as well as provides required environmental documentation.

A draft Purpose and Need Statement developed early in the project planning process will prove vital to meeting the project's environmental requirements. It also provides an explanation to the public and decision-makers of why the expenditure of funds is necessary and worthwhile, and that the priority of the project is warranted when compared to other needed projects.

**PL-702.2 PURPOSE & NEED PROCESS***How is a project's purpose and need initiated?*

According to Chapter 07 of the August 2016 AASHTO Practitioner's Handbook, the early documentation of project need serves as the "factual foundation for the statement of project purpose." Therefore, purpose and need go hand-in-hand, and the documentation of the formal Purpose and Need Statement for a project should be initiated as a first order of business after a potential project is identified. This documentation of purpose and need folds neatly into the Data Needs Analysis (DNA) study for the project. The project's purpose directly informs the scope of the project that, in turn, directly informs the level of effort, cost, and anticipated schedule for the project. Each of these factors contribute to the project's ultimate weighting in KYTC's Strategic Highway Investment Formula for Tomorrow (SHIFT) prioritization process, and directly impacts KYTC's ability to fund the project and move it forward to construction.

In a larger context, the purpose and need generated during each project's transportation planning process helps shape the Purpose and Need Statement for the National Environmental Policy Act (NEPA)/environmental process. The early definition of the project's purpose and need can prove critical to compliance with NEPA requirements and helps streamline federal environmental reviews as the project moves from planning into its preliminary engineering and environmental phase. The logical evolution of a Purpose and Need Statement focuses the project on a specific purpose and saves KYTC time and money through a more proactive development approach for that project.

**PL-702.2 PURPOSE & NEED PROCESS (cont.)***What input is required?*

The Purpose and Need Statement for each project is dependent upon an understanding of the transportation context within which the need has been identified and the specific purpose that the proposed project is targeted to address. Preferably, the project is identified as a product of a transportation plan or study that assesses problems and recommends appropriate, practical solutions. The Purpose and Need Statement guides the development of alternatives.

The following items may be described in the purpose and need statement for a proposed action. These are by no means all-inclusive or applicable in every situation, but merely a guide.

- **Project Status:** Briefly describe the action's history, including measures taken to date, other agencies and governmental units involved, action spending, and schedules.
- **Capacity:** Discuss the capacity of the present facility and its ability to meet present and projected traffic demands. Discuss what capacity and levels of service for existing and proposed facilities are needed.
- **System Linkage:** Discuss if the proposed action is a "connecting link" and how it fits into the transportation system.
- **Transportation Demand:** Discuss the action's relationship to any statewide plan or adopted urban transportation plan. Additionally, explain any related traffic forecasts substantially different from estimates calculated as a result of the [23 U.S.C. 134 \(Section 134\)](#) planning process.
- **Legislation:** Explain if there is a federal, state, or local government mandate for the action.
- **Social Demands or Economic Development:** Describe how the action will foster new employment and benefit schools, land use plans, and recreation facilities. Additionally, describe projected economic development and land use changes requiring improvements or additions to the highway capacity.
- **Modal Interrelationships:** Explain how the proposed action will interface with airports, rail and port facilities, and mass transit services.
- **Safety:** Explain if the proposed action is necessary to correct an existing or potential safety hazard. Additionally, explain if the existing crash rate is excessively high and why, and how the proposed action will improve safety.
- **Roadway Deficiencies:** Explain if and how the proposed action is necessary to correct existing roadway deficiencies (substandard geometrics, load limits on structures, inadequate cross-section, high maintenance costs). Additionally, explain how the proposed action will correct these deficiencies.

*What forms are used?*

KYTC planners should identify apparent needs in the Continuous Highway Analysis Framework (CHAF) database as a starting point for the draft Purpose and Need Statement.

**PL-702.2 PURPOSE & NEED PROCESS (cont.)**

While there are no official TC 59 planning forms for defining purpose and need, KYTC has developed a training course entitled, “Writing Data-Driven Purpose and Need Statements,” that provides guidance materials for this effort. Additional guidance may be found in Section 202.6.1 of the *KYTC Highway Design Guidance Manual*.

*What are the steps in identifying a project’s purpose and need?*

A project’s draft Purpose and Need Statement should be developed when the project need has been identified and a conceptual solution is first deemed worthy of prioritization. The draft Purpose and Need Statement is used to establish an initial project scope and description, as well as a preliminary cost estimate for consideration in the SHIFT process and potential inclusion in KYTC’s Six-Year Highway Plan. As the project receives funding and moves through the KYTC project development pipeline, the project team seeks to refine the purpose and need to the evolving project development context. Generally, the purpose and need for a project is firmly established when the project’s NEPA document is approved and guides project decisions throughout the remaining stages. As the project’s purpose and need is refined, any significant deviation from the initial purpose and need should be subject to a formal reconsideration process that reevaluates the relative KYTC Six-Year Highway Plan priority given the new scope and cost parameters.

*When is the project purpose and need complete?*

The definition of a project’s purpose and need is complete when the NEPA document has been approved for the project. This federally approved Purpose and Need Statement guides project decisions throughout construction and all mitigation phases associated with the project. The evolution of the project’s purpose and need is a continual refinement of the initial vision necessary to achieve the prescribed outcome.

*What is the approval chain for the project purpose and need?*

Ultimately, the draft Purpose and Need Statement for each project is recommended by the district and KYTC’s Division of Planning during approval of a DNA or other planning study. The draft Purpose and Need Statement drives supporting project scope and description, as well as cost considerations as the project is developed through the preliminary engineering and environmental, right-of-way, utility, and final design phases. As the project evolves, the Purpose and Need Statement is refined and included in the NEPA document submitted to FHWA for approval. Throughout the life of the project, the Purpose and Need Statement serves as a benchmark of goal attainment.



	<p><i>Chapter</i></p> <p>PROJECT DEVELOPMENT</p>
	<p><i>Subject</i></p> <p>Planning Support</p>

**PL-703.1 OVERVIEW**

The KYTC Division of Planning serves to support and coordinate with the transportation planning activities of Kentucky’s Metropolitan Planning Organizations (MPOs) and Area Development Districts (ADDs). For highway planning and project prioritization purposes, the KYTC Division of Planning works to support the statewide planning process by assimilating the identified highway system needs into a Continuous Highway Analysis Framework (CHAF) database. Support for the Strategic Highway Investment Formula for Tomorrow (SHIFT) is also provided through the calculation of safety and congestion scores that factor directly into the SHIFT prioritization metric. The Division of Planning’s Modal Programs Branch is KYTC’s hub for traffic forecasting and travel modeling activities, providing support for those tasks.

**PL-703.2 METROPOLITAN PLANNING ORGANIZATION (MPO) PLANNING**

[23 USC 134](#) requires that an MPO be designated to carry out the metropolitan transportation planning process for each urbanized area with a population of at least 50,000. Each urbanized area with a population of 200,000 or greater is designated as a Transportation Management Area (TMA) and is subject to additional transportation planning requirements. The Division of Planning supports and coordinates transportation planning activities with the nine MPOs across the state. Five of these MPOs are designated as TMAs: Cincinnati-Northern Kentucky (OKI), Evansville-Henderson (EMPO), Huntington-Ashland (KYOVA), Lexington (the Lexington Area MPO), and Louisville (KIPDA). The non-TMA MPOs are Bowling Green, Clarksville-Oak Grove, Elizabethtown-Radcliff, and Owensboro. The MPO planning boundaries are identified online at KYTC Division of Planning, [Metropolitan Planning](#).

*How is MPO planning support initiated?*

KYTC’s Division of Planning, Strategic Planning Branch, has an MPO Team that provides technical assistance to and coordination with the MPOs for developing and maintaining a continuing, cooperative, and comprehensive (3C) transportation planning process in each of the urbanized areas.

**PL-703.2 METROPOLITAN PLANNING ORGANIZATION (MPO) PLANNING (cont.)**

This process ensures that state and local transportation projects remain eligible to receive federal funding. Specific planning activities conducted in each MPO area are outlined in the MPOs' Unified Planning Work Programs (UPWPs), an effort comparable to KYTC's Planning Work Program.

In many ways, MPO activities mirror KYTC's statewide planning activities. In accordance with [23 CFR 450 Subpart C](#), each MPO develops its own long-range Metropolitan Transportation Plan (MTP) and its short-range companion, the Transportation Improvement Program (TIP). The MTP shall encompass a twenty-year planning horizon and be updated at least every four years in the air quality non-attainment and maintenance areas, and at least every five years in the air quality attainment areas. The MPO TIP contains the priority investments from the MTP and is required to cover a period of no less than four years, be updated at least every four years, and be approved by both the MPO and the Governor. Projects contained in the TIP must be compatible with the federally required Statewide Transportation Improvement Program (STIP) development and approval process. The STIP is prepared by KYTC's Division of Program Management and incorporates by reference each MPO TIP, thereby conjoining the state and MPO planning processes and making them mutually dependent on each other.

There are multiple interactions between the state and MPO transportation programs outlined in 23 CFR 450. These include:

- MPO designations and re-designation
- MPO planning process agreements
- Metropolitan planning area boundaries and U.S. Census analyses
- MPO funding (contracting, invoicing, cost allocation plans, subrecipient monitoring, auditing)
- MPO Unified Planning Work Programs (UPWPs)
- MPO public involvement processes
- MPO air quality concerns
- MPO major metropolitan investments
- MPO relation to management systems and performance targets
- MPO transportation plans, including fiscally constrained financial plans, involving both highways and transit (FHWA and FTA joint approvals)
- MPO travel demand modeling
- MPO project selection for implementation
- MPO planning process certification

**PL-703.2 METROPOLITAN PLANNING ORGANIZATION (MPO) PLANNING (cont.)**

The Electronic Code of Federal Regulations ([e-CFR](#)) compiled by the federal National Archives and Records Administration and the Government Publishing Office is an excellent resource for more in-depth discussion of the above topics and the interrelationships between state and MPO transportation planning. Users may view the federal requirements governing these relationships, including the most recent Congressional amendments, by searching e-CFR for “Title 23-Highways.”

*What input is required from KYTC in support of MPO planning?*

To maintain federal expectations for the MPO planning process, KYTC provides regular input through on-going, day-to-day programmatic coordination, as well as serving with other metropolitan area transportation stakeholders on the MPO Technical Committee and the MPO Policy Committee. By serving in these roles, KYTC has direct participation in the MPO transportation planning process and establishes a conduit for the MPO’s direct involvement in KYTC transportation planning efforts, especially with regard to long-range plans and TIP/STIP correlation activities. The personal relationships forged through committee interaction create dynamic linkages between the MPO and KYTC planning processes that ensure mutual understanding and cooperation between these processes.

*What forms are used in the MPO planning process?*

There are no official TC 59 planning forms involved in this process.

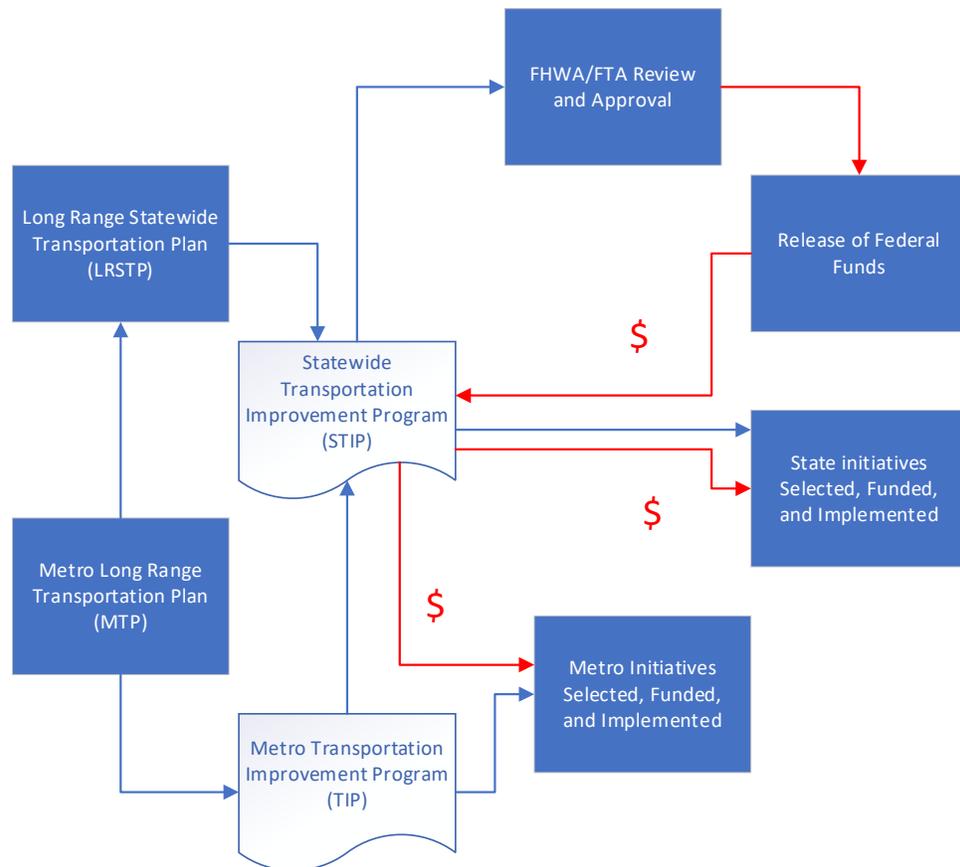
*What are the steps in supporting the MPO planning process?*

KYTC’s Division of Planning, MPO Team, is supported by District Planning staff and is actively engaged in all transportation planning activities undertaken by the nine MPOs with jurisdictional authority in Kentucky. From reviewing MPO agreements and UPWPs, to project priority discussions and MPO planning process certification reviews, the KYTC’s coordination effort is significant.

Each MPO has its own process to achieve regional planning goals, which may include recommendations by the Technical Committee and formal approvals by the Policy Committee. The MPO UPWP identifies the annual budget and intent for each year’s planning effort and establishes the programmatic goals for that year. At the end of each Fiscal Year, each MPO develops a Performance and Expenditure Report that is submitted to KYTC for review prior to KYTC submitting the report to FHWA for review and approval.

Figure 13 is a simple overview of the interaction between the statewide and MPO transportation planning processes as developed by FHWA, FTA, and the Volpe Transportation Systems Center for a joint FHWA/FTA Transportation Planning Capacity Building Program.

## PL-703.2 METROPOLITAN PLANNING ORGANIZATION (MPO) PLANNING (cont.)



**Figure 13. Statewide Planning Process**

Figure 13 illustrates how the MTP feeds both KYTC's Long Range Transportation Plan (LRSTP) and its own TIP, which in turn, informs KYTC's recommended Six-Year Highway Plan (SYP) and STIP. During the prioritization process used to develop the recommended SYP, each MPO provides input as to which projects are considered to be of the highest metropolitan priority; ideally these priorities will be reflected in the MTP.

The SYP and the MPO TIPs are the basis for the STIP, from which federal approvals are obtained for both statewide and MPO initiatives. All MPO transportation planning requirements culminate in the ability of the state and MPO to implement transportation system improvements. This process assures a coordinated planning effort. This process uniquely positions the MPO to have potential veto authority over the use of federal transportation funds, as well as implementation of regionally significant transportation projects within its boundary that the MPO opposes. Accordingly, KYTC and the MPOs must work together to successfully address priority metropolitan transportation needs across Kentucky.

**PL-703.2 METROPOLITAN PLANNING ORGANIZATION (MPO) PLANNING (cont.)***When is the effort to support MPO planning complete?*

The MPO transportation planning process is ongoing and ever changing as it embraces the latest process requirements and innovations. As metropolitan area transportation needs evolve, KYTC's Division of Planning MPO Team continues to support, advise, and collaborate with MPO staff to seamlessly transition new directives and innovative concepts into appropriate ideas for meeting those needs. While individual transportation planning requirements may have beginning and ending dates, the overall MPO transportation planning process is cyclical and continues from year to year.

*What is the approval chain for supporting MPO planning?*

The MPO UPWP is initiated by the MPO and approved by the Policy Committee. The UPWP is collaboratively developed in consultation with stakeholders, including KYTC and FHWA staff. The MTP, TIP, public involvement process, and other MPO transportation planning requirements are developed by the MPO in consultation with KYTC. The TIP is approved by the Governor through an official letter. KYTC's STIP is then amended to include the revised TIP by reference, and the STIP amendment is then approved by FHWA/FTA. The MTP goes into effect upon adoption by the policy committee if the area is not subject to air quality conformity. If air quality conformity is an issue for a metropolitan area, both the U.S. Department of Transportation (USDOT) and U.S. Environmental Protection Agency (EPA) must issue a conformity finding before the long-range transportation plan can go into effect.

Additionally, each MPO transportation planning process is required to be certified by the state and the MPO at least every four years when the TIP is submitted for joint FHWA/FTA approval. This certification by the state and the MPO, and approval by FHWA/FTA, ensures that the metropolitan transportation planning process is carried out in accordance with the following:

- 23 USC 134
- 49 USC 5303
- Title VI of the Civil Rights Act of 1964, as amended
- 49 USC 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age
- Section 1101(b) of the FAST Act, regarding the involvement of Disadvantaged Business Enterprises
- 23 CFR 230, regarding equal employment opportunity
- Americans with Disabilities Act (42 USC 12101 and 49CFR 27, 37, and 38)
- Clean Air Act, Sections 174 and 176, as amended
- Older Americans Act, as amended
- 23 USC 324, prohibiting gender discrimination
- Section 504 of the Rehabilitation Act of 1973, prohibiting discrimination against individuals with disabilities

**PL-703.3 AREA DEVELOPMENT DISTRICT (ADD) REGIONAL TRANSPORTATION PLANNING**

The need for enhanced rural transportation planning was recognized following implementation of the federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. To obtain quality information for areas of the state with a population under 50,000, KYTC turned to its long-standing relationship with Kentucky's 15 Area Development Districts (ADDs) to form regional transportation committees to facilitate local input and priorities into statewide transportation planning. Established in 1994, this new rural transportation planning relationship between KYTC and the ADDs was recognized by the National Association of Development Organizations (NADO) as a national best practice.

Subsequent federal reauthorization acts have strengthened rural transportation planning requirements, while ADDs have become more heavily involved in KYTC's transportation planning processes. Through regular regional transportation committee meetings, ADDs contribute directly to the statewide planning conversation and are actively engaged in KYTC's Strategic Highway Investment Formula for Tomorrow (SHIFT) prioritization process. ADD planning boundaries are identified online at KYTC Division of Planning, [Regional Planning](#).

*How is ADD planning support initiated?*

KYTC's Statewide Transportation Team, along with each ADD Coordinator, provides technical assistance to and coordination with ADDs for developing and maintaining a continuing, cooperative, and comprehensive (3C) transportation planning process in non-urbanized areas.

Each ADD outlines anticipated planning activities in their Annual Work Program (AWP) contract (an effort comparable to KYTC's Planning Work Program). A new contract is written for each state fiscal year, which begins July 1 and ends July 30. The contract outlines the agreement, policies, procedures, and annual work program elements. Each work element to be undertaken during the fiscal year is listed in the AWP. The program is funded on a 90 percent state/10 percent local matching basis for each fiscal year through agreements between KYTC and each individual ADD. All funding provided by KYTC is subject to contract agreement approval and AWP. Funds provided to each ADD are issued in accordance with, and subject to, the requirements of federal legislation governing rural transportation planning.

Each ADD maintains a Regional Transportation Committee (RTC) comprised of representatives of local government, transportation interests, other special interests, and the general public. These committees play an active role in identifying and documenting goals and objectives, as well as prioritizing transportation needs in their respective regions based on those goals and objectives ([23 CFR 450.210](#)).

**PL-703.3 AREA DEVELOPMENT DISTRICT (ADD) REGIONAL TRANSPORTATION PLANNING (cont.)**

The RTCs are heavily involved in KYTC's SHIFT project prioritization process and are given the ability to boost SHIFT scores for projects deemed high regional priorities. This information is then used in KYTC's Six-Year Highway Plan and STIP development.

The input received from the RTCs in KYTC's statewide planning effort is invaluable not only from the perspective of SHIFT, but also statewide multimodal planning and freight. In many ways, the activities of the ADDs mirror KYTC's Division of Planning statewide activities. In accordance with [23 CFR 450, Subpart B](#), each ADD develops an informed approach to the following statewide planning factors:

- Support economic vitality, especially by enabling global competitiveness, productivity, and efficiency
- Increase the safety of the transportation system for motorized and non-motorized users
- Increase the security of the transportation system for motorized and non-motorized users
- Increase accessibility and mobility of people and freight
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns
- Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight
- Promote efficient system management and operation
- Emphasize the preservation of the existing transportation system
- Improve the resiliency and reliability of the transportation system, and reduce or mitigate stormwater impacts of surface transportation
- Enhance travel and tourism

**PL-703.3 AREA DEVELOPMENT DISTRICT (ADD) REGIONAL TRANSPORTATION PLANNING (cont.)**

KYTC's Division of Planning, Statewide Transportation Team, ensures each ADD is responsibly addressing these factors through the AWP and other opportunities for the ADD to provide input directly into the statewide transportation planning process.

*What input is required from KYTC in support of ADD Planning?*

To maintain federal expectations for the ADD planning process, KYTC provides regular input through on-going programmatic coordination, as well as serving with other regional transportation stakeholders on the ADD's RTC. KYTC District Planning technical staff serve as a resource for the RTC.

This allows for KYTC's direct participation in the ADD transportation planning process and establishment of a conduit for the ADD's involvement in KYTC transportation planning efforts (especially with regard to KYTC's Long-Range Statewide Transportation Plan and STIP activities). The personal relationships forged through committee interaction ensure mutual understanding and cooperation between ADD and KYTC planning processes.

*What forms are used?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in supporting the ADD planning process?*

KYTC's Division of Planning, Statewide Transportation Team, in concert with district planning staff, actively engages in the regional transportation planning activities undertaken by the 15 ADDs. KYTC coordination includes:

- Preparation of ADD contracts and AWPs
- Discussing regional project priorities
- Reviewing regional planning process effectiveness

Each of the transportation planning topics undertaken by an ADD is steered by its RTC, and each topic has its own set of steps necessary to achieve regional planning goals. The ADD AWP identifies the annual budget and intent for each year's planning effort and establishes the programmatic goals for that year. The AWP takes effect on July 1 and expires on June 30 of the succeeding year.

Figure 14 is a simple overview of the ADD's AWP and annual contract development process.

### PL-703.3 AREA DEVELOPMENT DISTRICT (ADD) REGIONAL TRANSPORTATION PLANNING (cont.)

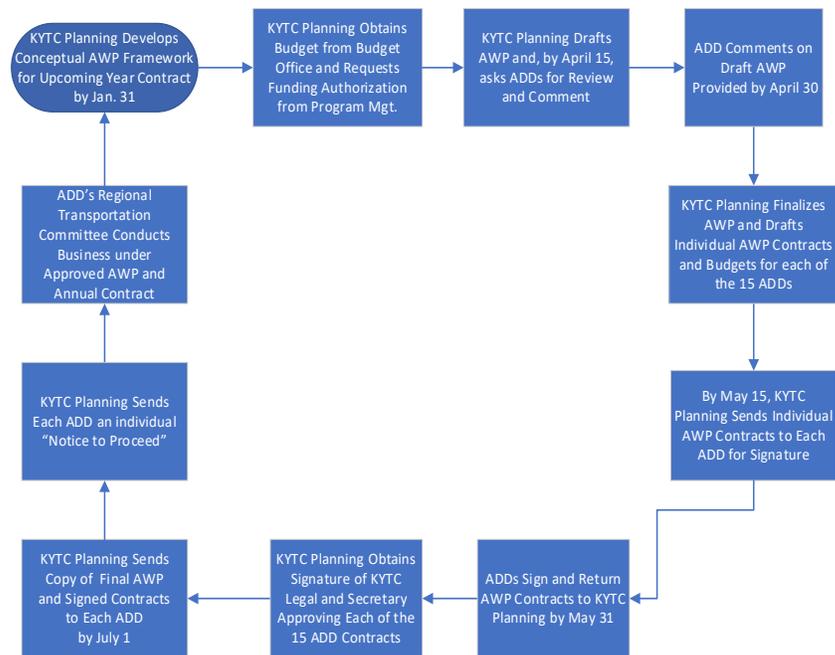


Figure 14. ADD AWP Approval Process

As illustrated, the ADD transportation annual planning process involves KYTC's Division of Planning and each ADD collaboratively determining an appropriate transportation planning focus for each year and contractually working within that focus. Many of the planning activities are similar from year-to-year; however, each ADD may influence the AWP to highlight concerns unique to their area. Similarly, KYTC may insert any particular statewide focal concern (such as SHIFT project prioritization in odd-numbered years) into each ADD AWP. This interaction between KYTC and ADDs assures the coordination of regional transportation planning across Kentucky.

*When is the effort to support ADD planning complete?*

The ADD regional transportation planning process is ongoing and ever changing as it embraces the latest process requirements and innovations. As regional transportation needs evolve, KYTC's Division of Planning, Statewide Transportation Team, and district planning staff continue to support, advise, and collaborate with ADD staff to seamlessly transform new directives and innovative concepts into appropriate ideas for meeting those needs. The overall ADD transportation planning process is cyclical and continues year to year.

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**PL-703.3 AREA DEVELOPMENT DISTRICT (ADD) REGIONAL TRANSPORTATION PLANNING (cont.)***What is the approval chain for supporting ADD planning?*

The ADD AWP and annual contracts are initiated by KYTC's Division of Planning, Strategic Planning Branch, Statewide Transportation Team, and approved by each of the 15 ADDs and KYTC's Secretary. The AWP is collaboratively developed in consultation with the ADDs. KYTC staff is available to assist with any questions about federal process requirements. Each ADD's annual contract with KYTC is developed around the AWP, with dollars budgeted for each AWP activity. Regular invoices for ADD regional transportation planning activities are submitted to, reviewed, and paid by KYTC's Division of Planning.

Additionally, each ADD is included in the "Rural Consultation Report" required by [23 CFR 450.219\(b\)\(1\)](#) and submitted to FHWA every five years. This report evaluates the effectiveness of Kentucky's rural transportation planning process and includes input from Kentucky's 120 county judge/executives, as well as mayors over populations between 5,000 and 50,000. Each of the county judges and mayors is asked to respond to a KYTC survey, with results shared with FHWA and the public. To date, survey results indicate the ADD regional transportation planning process is producing the desired involvement from rural areas in Kentucky's statewide transportation planning program.

**PL-703.4 CONTINUOUS HIGHWAY ANALYSIS FRAMEWORK (CHAF) DATABASE**

The Continuous Highways Analysis Framework (CHAF) Database enables users to collect, track, and analyze identified transportation needs. CHAF also provides a means to sponsor, score, and rank projects as part of the Strategic Highway Investment Formula for Tomorrow (SHIFT).

The CHAF Database evolved from a progression of data management changes in conjunction with development of the SHIFT project prioritization process. For years, the Division of Planning kept track of unfunded project costs and location data through an Excel database called the "Unscheduled Needs List (UNL)." With the advent of SHIFT in 2017, greater data utility was required to link planning data with the dynamic SHIFT project prioritization platform. The CHAF Database is the result of a data management effort geared towards eliminating duplicate data entry, providing seamless integration of available highway project information, and yielding more efficient and accurate project reporting and scoring.

**PL-703.4 CONTINUOUS HIGHWAY ANALYSIS FRAMEWORK (CHAF) DATABASE (cont.)***How is the CHAF database initiated and used?*

KYTC's Division of Planning, Strategic Planning Branch, provides a CHAF User Guide to KYTC personnel through their "ky.gov" login credentials. MPOs and ADDs can also access the CHAF User Guide by obtaining proper login credentials from Kentucky Business One Stop (KYBOS). All users must be authorized to use CHAF by the Strategic Planning Branch's CHAF Program Manager. The user's organization name, type, and any special authority they may need is recorded during the authorization process.

Once logged into the CHAF database, the CHAF dashboard is the principle work area for CHAF users. The dashboard is customized to the user and their permission level within the CHAF system. Some functionality, such as support for the SHIFT cycle, only appears during certain time periods. These time sensitive elements are controlled by the Strategic Planning Branch's CHAF Program Manager in order to maintain the veracity of the data. All CHAF projects must be continuously updated and edited throughout the life of the project to keep the project data current and accurate.

The CHAF User Guide details the step-by-step process for the following actions:

- Requesting a project be added to CHAF
- Editing or modifying existing CHAF projects
- Entering or updating a CHAF project's purpose and need
- Producing project maps within CHAF
- Generating a CHAF project report
- Accommodating the SHIFT cycle

Each action within CHAF requires contributing data sources be properly identified for future reference. CHAF data includes county, route, mile points, project status, project location, bridge details, cost estimates, project characteristics, and – for the SHIFT cycle – project sponsorship, scoring data (administered by the Division of Planning), and local scoring input. The CHAF database is an interactive tool; therefore, it requires considerable effort from various sources to maintain the integrity of CHAF data.

*What input is required from others?*

To maintain the functionality of an interactive database like CHAF, input is required from both internal and external sources. Within KYTC's Division of Planning, Strategic Planning Branch, a CHAF Program Manager controls user privileges, provides routine database operational maintenance, and coordinates any overall database refinements that may be required. Initial project data and subsequent updates may be entered by KYTC's Division of Planning and district personnel, as well as MPO and ADD planning staff. Keeping CHAF data current requires the close attention of every CHAF user.

**PL-703.4 CONTINUOUS HIGHWAY ANALYSIS FRAMEWORK (CHAF) DATABASE (cont.)**

The KYTC CHAF database is the cornerstone of the SHIFT project prioritization process. For a project to be assessed through the SHIFT process, it must first be entered in the CHAF database. Sponsorship is the process by which ADDs, MPOs, and KYTC select projects for evaluation through the SHIFT process. The sponsorship process has a specific timeframe, after which the CHAF database is locked and projects can no longer be sponsored. Through SHIFT, projects that have been sponsored by MPOs, ADDs, and KYTC are evaluated using measurable data to assess the need for and benefits of those projects.

The next step in the SHIFT cycle is the validation of the data and the determination of a project score. The scoring data validation process has a specific timeframe set by the Division of Planning at the beginning of each SHIFT cycle, after which the validation process is closed. Once the data validation process has been completed and the preliminary score is determined, sponsors are given the opportunity to use CHAF to add extra points to local project priorities.

The utility of the CHAF database and its reliance on the interactive input of multiple users is clearly demonstrated by its use in the SHIFT cycle.

*What forms are used to facilitate CHAF?*

While there are numerous input screens within the CHAF database, there are no official TC 59 planning forms involved in this process.

*What are the steps in using the CHAF database?*

Users may access the Continuous Highway Analysis Framework (CHAF) User Guide online after logging into the CHAF system. The user guide details system navigation, describes the data required, and explains CHAF outputs. It also provides an overview of the CHAF database's interaction with the SHIFT process, complete with SHIFT-related timelines.

**Note:** The CHAF User Guide is required reading for successfully navigating and using the CHAF database.

*When is the CHAF database effort complete?*

The CHAF database is a continuous highway analysis framework. Accordingly, the effort to add new projects, update existing projects, and remove projects once they are built or declared inactive, must be continuous. All actions involving access to CHAF are under the direct purview of the Strategic Planning Branch's CHAF Program Manager.

**PL-703.4 CONTINUOUS HIGHWAY ANALYSIS FRAMEWORK (CHAF) DATABASE (cont.)***What is the approval chain for the CHAF database?*

The CHAF database is closely monitored by the CHAF Program Manager who makes day-to-day decisions about access privileges, data and report troubleshooting, and maintenance needs. The Strategic Planning Branch Manager works with the Division of Planning Director to address any concerns that may require a budgetary or management solution. This could include CHAF database upgrades, modifications, or user complaints. The reconciliation of any CHAF issue is generally achieved within the management structure of KYTC's Division of Planning.

**PL-703.5 NETWORK SCREENING: EXCESS EXPECTED CRASHES (EEC) AND VEHICLE HOURS OF DELAY (VHD)**

Transportation network screening is a data analysis tool used by KYTC to evaluate and manage systemwide highway performance. As KYTC's Division of Planning developed the SHIFT highway project prioritization process, two performance measurement tools were included within the SHIFT formula components to assess each potential project's highway system safety and congestion management benefits. With regard to highway system safety, SHIFT seeks to "evaluate the project's 5-year Excess Expected Crashes (EEC)" and to "evaluate the roadway characteristics of the project area." To score congestion management, SHIFT seeks to "evaluate capacity issues in the project area" using Vehicle Hours of Delay (VHD). Since each of these metrics is assessed for every SHIFT project, comparative safety and congestion scores are calculated for each project.

The EEC tool (used to measure the safety component of the highway network) is used to forecast potential crash reduction if roadway improvements are made. Such forecasts are based on the following research:

- Roadway section length
- Average annual daily traffic (AADT)
- Number of crashes (sorted by severity and type) occurring on a particular section of roadway

This data-driven safety analysis uses KYTC's Crash Database and Highway Information System (HIS) data to calculate the EEC and predict the safety impacts of an individual highway project, contributing directly to the SHIFT scoring algorithm.

The SHIFT scoring for the congestion management component is measured in vehicle hours of delay (VHD), assessing total vehicle hours of delay along the project length on weekdays between 6:00 am and 8:00 pm. Across Kentucky's highway network, traffic data is collected and used to compute vehicle hours of travel (VHT) for individual roadway segments.

**PL-703.5 NETWORK SCREENING: EXCESS EXPECTED CRASHES (EEC) AND VEHICLE HOURS OF DELAY (VHD) (cont.)**

At each location, roadway characteristics and traffic demand work together to constrain traffic flow during peak hour periods. The VHD for any roadway segment is the difference between the theoretical VHT for that segment minus the actual VHT for that segment. By summing the vehicle hours traveled for an average weekday between 6:00 am and 8:00 pm, peak hour traffic volumes and associated speed reductions are incorporated into the analysis. The resulting location-specific VHD data can be compared with systemwide data to arrive at a SHIFT “Congestion” score for that roadway segment.

*How is the network screening process initiated?*

SHIFT’s Safety-Crash History criteria was evaluated in a research study conducted by the Kentucky Transportation Center (KTC). The Safety-Crash History Team developed the initial SHIFT safety components and actively continues to assess better ways to use available data to drive SHIFT safety evaluations. The American Association of State Highway and Transportation Officials (AASHTO) *Highway Safety Manual* (HSM) serves as the guide for this work, and HSM concepts support the use of EEC as the appropriate SHIFT Safety-Crash History component. The network screening process for EEC is initiated by the Safety-Crash History Team during the SHIFT evaluation process in advance of KYTC’s biennial Recommended Six-Year Highway Plan.

The congestion management criteria for SHIFT was also evaluated in a research study conducted by KTC. The study used HERE Technologies’ speed data to evaluate congestion and determined that vehicle hours of delay (VHD) was the appropriate SHIFT congestion measurement. The VHD calculation for each project is initiated by the SHIFT workgroup during the SHIFT evaluation process in advance of KYTC’s biennial Recommended Six-Year Highway Plan.

*What input is required from others?*

The network screening process for both EEC and VHD is supported by KTC research. Metric evaluations are part of a continual dialogue among the Safety-Crash History Team members and the SHIFT workgroup. Credible background research and HSM-consistent data interpretations are critical to the SHIFT safety and congestion scoring process.

*What forms are used to facilitate network screening?*

There are no official TC 59 planning forms involved in the EEC and VHD network screening processes.

**PL-703.5 NETWORK SCREENING: EXCESS EXPECTED CRASHES (EEC) AND VEHICLE HOURS OF DELAY (VHD) (cont.)***What are the steps in using network screening for EEC and VHD?*

Network screening process steps for EEC are derived from the use of safety performance functions (SPFs) to model crash frequency based on traffic volume and length of homogenous roadway segments. The estimated number of crashes calculated by SPF represents the number of crashes reasonably expected for an average length of road with a given traffic volume. If a road segment does not identically match the base conditions of the homogenous roadway segments used to calibrate the SPF, adjustment factors are applied to account for the differences. After the SPF crash frequency prediction and the historical crash data for that roadway segment are balanced using the empirical Bayes (EB) method, the difference between the EB-expected crashes and the SPF-predicted crashes is the “excess expected crashes,” or EEC. The EEC is a statistically rigorous metric based on the Safety-Crash History Team’s update of SPFs for the various roadway types, and is used to determine the SHIFT Safety score for each project.

The network screening process for congestion defines “delay” as the extra time spent traversing a roadway segment beyond the reference travel time. Hourly delays for a specific roadway section are calculated as a function of segment length, average speed, and reference speed. Hourly delays are then summed from 6:00 am to 8:00 pm on a typical workday to obtain the total vehicles-hours of delay (VHD) within the project length.

The calculated VHD for each project is then adjusted to reflect the relative priority of different highway types by applying a Functional Classification Adjustment Factor (the higher the factor, the higher the functional classification of the roadway) to produce the traffic congestion score for the proposed project.

*When is the network screening effort for EEC and VHD complete?*

The network screening process for both EEC and VHD is complete when the calculated and adjusted scores for each project are finalized and incorporated into the SHIFT scoring and ranking process in advance of KYTC’s biennial Recommended Six-Year Highway Plan. Immediately after the Kentucky General Assembly enacts a new Six-Year Highway Plan, the SHIFT process is reviewed, updates are made, and the EEC and VHD assessments are performed for those projects vying for inclusion in the next Six-Year Highway Plan.

*What is the approval chain for network screening for EEC and VHD?*

The approval chain for the network screening process for EEC and VHD begins with the Safety-Crash History Team and the SHIFT workgroup who initially determine the adequacy of the EEC and VHD measurement tools for use in the SHIFT process. KYTC’s Division of Planning, SHIFT leadership team, approves any use of these tools within SHIFT.

**PL-703.6 TRAVEL DEMAND MODELING/TRAFFIC FORECASTING**

KYTC's Division of Planning is responsible for coordinating travel demand modeling and traffic forecasting for regional and project planning in Kentucky. This effort is detailed online at Division of Planning, [Traffic Forecasting and Modeling](#), and includes the development and updating of the following:

- Local and countywide travel models
- Regional travel models
- Kentucky Statewide Travel Model

These models are used to forecast highway travel patterns for current and future scenarios for regional and project planning.

[23 USC 109](#) requires that each state adopt geometric standards for its highway system and that these standards be applied to new highway construction such that the anticipated types and volumes of traffic may be accommodated for a 20-year period after construction. KYTC adopted the American Association of State Highway and Transportation Officials (AASHTO) *Policy on Geometric Design of Highways and Streets*, which, under general design considerations, states that roads should be designed for specific traffic volumes 20 years in the future. To adequately forecast these future traffic volumes and estimate the impact of a proposed project on the traffic network, travel demand models were created.

Using existing traffic count data to validate a base year model approximating existing traffic conditions. Historic traffic growth patterns, future development, and land use projections are used to construct a future year model from which future traffic estimates can be obtained or traffic impacts from new system linkages can be evaluated. Travel models have been used in Kentucky for decades, and KYTC has developed considerable experience in the calibration and use of these models. Specific applications include:

- **Local and countywide travel models** are developed for selected Small Urban Areas (areas with a population greater than 5,000 but less than 50,000) and used to generate estimated future traffic volumes for Small Urban Area Studies. Travel models for small urban areas allow the testing of alternative roadway improvements or additions and help these areas develop solutions for expected future traffic concerns. These models can also be used to assess air quality issues and facilitate determinations of air quality conformity.
- **Regional travel models** are typically developed as part of the Metropolitan Planning Organization (MPO) transportation planning process. The MPO uses the output from the model to identify transportation deficiencies, as well as predict and analyze travel patterns for future transportation projects. Transportation Management Areas (TMAs) are usually sufficiently staffed to develop, use, and maintain their own travel models.

**PL-703.6 TRAVEL DEMAND MODELING/TRAFFIC FORECASTING (cont.)**

KYTC's Division of Planning, Strategic Planning Branch, MPO Team, is responsible for reviewing the assumptions, inputs, and results of the model when used for development of the MPO's Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP). MPOs absent sufficient staff to develop, use, and maintain their models may elect to hire a consultant or work with KYTC's Division of Planning, Modal Programs Branch, Forecasting and Modeling Team.

- ***The Kentucky Statewide Travel Model*** is the responsibility of KYTC's Division of Planning, Modal Programs Branch. The Modal Programs Branch periodically updates information in the model and may utilize consultant assistance where appropriate. The Kentucky Statewide Traffic Model is designed for use in conjunction with major statewide highway projects or planning studies. The Statewide Travel Model is particularly useful for corridor studies, project alternatives analyses, or for new highway connections. For corridor studies, the model can produce measures of effectiveness, such as vehicle miles traveled and vehicle hours traveled, that can be used to perform economic analyses.

The model can also be used to:

- ◆ Estimate routes used when traffic is diverted as a result of a road closure
- ◆ Estimate the average daily traffic that will use a proposed new road
- ◆ Analyze route choices as a result of time delay for a particular network segment or route
- ◆ Evaluate the effects of anticipated housing starts or changing employment

During model calibration, the accuracy of the highway and land use systems must be inspected carefully to ensure production of reasonable. In general, most model-generated traffic assignments must be adjusted before being used in actual traffic forecasting. These adjustments are based on the accuracy of the overall highway network, current link volumes, speeds, and household employment.

New data from KYTC's Division of Planning, Data Management Branch or Traffic and Equipment Management Branch; Office of Employment and Training; Kentucky State Data Center; and local planning organizations; or, field-derived data, can be used to recalibrate a travel model. Occasionally, a travel model with a refined highway network and land use structure can be used to evaluate a designated subarea of the model, resulting in a more meaningful assessment of a specific project's localized impacts.

**PL-703.6 TRAVEL DEMAND MODELING/TRAFFIC FORECASTING (cont.)**

The Model Users Group (MUG) was established to promote the sharing of traffic forecasting and modeling of state-of-the-art practices and technology. The group includes representatives from KYTC, MPOs, consulting industry, academia, and other state DOTs. MUG meets up to two times per year to address current travel modeling issues.

In addition to the traffic forecasting generated by travel demand models, KYTC's Division of Planning, Modal Programs Branch, Forecasting and Modeling Team, serves as the clearinghouse for KYTC's traffic forecasts used for design, planning, and environmental analysis. As illustrated in the *Traffic Forecasting FAQ* on the Division of Planning's Traffic Forecasting website, traffic forecast data improves the accuracy of highway project planning and design in KYTC's Six Year Highway Plan. Traffic forecasting data may also be used for the following: analysis of air quality for an area; Data Needs Analysis (DNA) studies; CHAF projects; or development of road user costs during an incident or construction activity. This data helps to define the following for a project:

- Purpose and Need
- Scope
- Number of lanes
- Length or number of turning lanes
- Depth of pavement
- Road user cost

State pavement designers are provided with a traffic forecast usable in a web-based pavement design application in order to generate compliance with [23 CFR 626](#), requiring that "Pavements shall be designed to accommodate current and predicted traffic needs in a safe, durable, and cost-effective manner." As mentioned previously, KYTC has adopted AASHTO's *Policy on Geometric Design of Highways and Streets* which recommends that roads be designed for specific traffic volumes 20 years in the future. This requirement is defined for local, collector, and arterial roadways, as well as freeways.

*How is the travel demand modeling/traffic forecasting process initiated?*

KYTC personnel may request traffic forecasts using forms available on the [Traffic Forecasting](#) website. Requests are sent to either the Forecasting and Modeling Team Leader or the Modal Programs Branch Manager, who then assigns the forecast to the appropriate staff member or statewide forecasting consultant. Forecasts may also be performed by MPOs or as a task identified in design contract bulletins issued by the Division of Professional Services.

**PL-703.6 TRAVEL DEMAND MODELING/TRAFFIC FORECASTING (cont.)***What input is required from others?*

Traffic forecasting exists to support KYTC internal activities; therefore, the general public does not have the ability to request traffic forecasts. The KYTC Division of Planning, Modal Branch Forecasting and Modeling Team, works closely with other KYTC divisions and districts, as well as [MUG](#), Kentucky Transportation Center, and KYTC's [Mobility Team](#) to coordinate requests and prepare appropriate responses.

The Division of Planning may conduct forecasting under existing statewide contracts, as necessary. Highway projects should include a sufficient budget to capture in-scope consultant fees. If more than one consultant is on the Statewide Traffic Forecasting contract list, work shall be rotated among the consultants through a predetermined sequence.

The contract scope of work must include:

- Methodology (submitted early in the forecasting process)
- Traffic counts assigned
- Results documentation (draft and final report)
- Methodology or technical report (draft and final product, but not sent to customers)
- Appendix (data used to develop forecasts)

Additional information on consultant usage by the Division of Planning is contained in [PL-206](#).

*What forms are used to facilitate travel demand modeling/traffic forecasting?*

There are no official TC 59 planning forms involved in the travel demand modeling/traffic forecasting process; however, KYTC's internal "[Traffic Forecast Request](#)" form is required to initiate project traffic requests.

*What are the steps involved in travel demand modeling/traffic forecasting?*

When a traffic forecasting request is received, it is carefully analyzed to determine the most appropriate forecasting method to be used.

One or more of the following methods may be used to develop a traffic forecast:

- Travel demand model (local, regional, or statewide)
- Trend line analysis
- Gravity flow model
- Area analysis of population and development
- Input from district personnel
- Input from local officials and planning organizations

**PL-703.6 TRAVEL DEMAND MODELING/TRAFFIC FORECASTING (cont.)**

The Forecasting and Modeling Team reviews all forecasts to ensure process consistency and accuracy. The original requestor drafts reports and cover memos which are reviewed by the Forecasting and Modeling Team and forwarded to the Modal Programs Branch Manager for response. Copies of all forecasts shall be provided to the respective Chief District Engineer, as needed to the Division of Highway Design Location Engineer, Pavement Branch Manager, Roadway Rehabilitation Branch Manager, and MPO Coordinator.

The content of the final report is determined by the Forecasting and Modeling Team Leader or as directed by the Modal Programs Branch Manager and is based on the need identified in the initial request. The future year should be at least 20 years after the proposed construction date.

The final report may include, but is not limited to, the following:

- Current and future average daily traffic (ADT)
- Current and future design hour volumes (DHV)
- Equivalent single axle loads (ESALs)
- Peak hour turning movements
- Lane distribution
- Truck percentages
- System parameters such as vehicle miles traveled (VMT)
- Signal warrant analysis
- Time delay and queue analysis
- Residual average daily traffic

The Forecasting and Modeling Team Leader, or staff person designated by the Modal Programs Branch Manager, is responsible for maintaining an electronic database of forecasts developed by the Branch. Paper copies of traffic forecast documentation are kept in project files maintained by the Modal Programs Branch.

*When is the travel demand modeling/traffic forecasting effort complete?*

Traffic forecasting is assessed for completion on a case-by-case basis, typically after the traffic data is transmitted back to the requestor and any questions are resolved. The travel modeling effort, however, is a perpetual process built upon the continuous improvement of both the data inputs and the technical methodology used to simulate the base travel network.

*What is the approval chain for travel demand modeling/traffic forecasting?*

The Modal Programs Branch, Forecasting and Modeling Team, oversees the development of forecasting and modeling methods and procedures, and ensures process consistency and conformity in KYTC traffic forecasting.

**PL-703.6 TRAVEL DEMAND MODELING/TRAFFIC FORECASTING (cont.)**

The Modal Programs Branch Manager grants approvals of forecasts or routine activities involving statewide, MPO, and other urban travel models. Budgetary approvals for the Division of Planning's forecasting and modeling activities are accomplished through the Planning Work Program approved each year by FHWA.

**PL-703.7 U.S. ARMY CORPS OF ENGINEERS PUBLIC NOTICE COORDINATION**

The U.S. Army Corps of Engineers (USACE) Regulatory Program requires permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The purpose of the permitting process is to protect the Nation's aquatic resources, while allowing reasonable development. During the permit process, USACE publishes public notices of permit applications for review and comment by other federal, state and local agencies; interest groups; and the public. KYTC's Division of Planning, Strategic Planning Branch, coordinates these public notices for official KYTC comment on planned USACE activities.

*How is the USACE public notice coordination effort initiated?*

USACE sends an email notification to the designated KYTC/USACE Planning Liaison upon publication of a public notice for review. The designated KYTC/USACE Planning Liaison is a member of KYTC's Division of Planning, Strategic Planning Branch, who understands the importance of properly advising KYTC project development personnel of an impending USACE action.

Located in both the [USACE Great Lakes and Ohio River Division](#) and the [Mississippi Valley Division](#), KYTC is expected to review and comment on any USACE public notice that could adversely affect KYTC current or future activities.

When a USACE public notice is received, the KYTC/USACE Planning Liaison:

- Reviews the public notice to determine potential effects to KYTC
- Immediately shares the public notice with KYTC highway district staff
- Collects comments
- Prepares any necessary response to USACE

*What input is required from others?*

KYTC's Division of Environmental Analysis, the appropriate KYTC District Project Development Branch Manager, and the appropriate Environmental Coordinator must comment on USACE public notices quickly in order for KYTC to respond in a timely manner to USACE.

*What forms are used?*

There are no official TC 59 planning forms involved in this process.

**PL-703.7 U.S. ARMY CORPS OF ENGINEERS PUBLIC NOTICE COORDINATION (cont.)***What are the steps in the USACE public notice coordination process?*

The procedure for processing USACE public notices is as follows:

1. The designated KYTC/USACE Planning Liaison will receive an email notification from the USACE (**Exhibit 9018**).
2. Once the liaison receives notification from USACE, the liaison will review the proposed project/permit application to determine if the development activity listed in the public notice is located in either Kentucky or in a state bordering Kentucky.
3. If the proposed project/permit application is not located in Kentucky nor an adjacent county in an adjacent state, then no further action is required.
4. If the project/permit site is in Kentucky or an adjacent county in an adjacent state, the USACE notification will be forwarded to the affected KYTC District Project Development Branch Manager and Environmental Coordinator within two to three days of receipt of the USACE public notice. KYTC's Division of Planning, Strategic Planning Branch Manager, and the Director of the Division of Environmental Analysis, will be copied on the coordination email (**Exhibit 9019**).
5. The KYTC/USACE Liaison will request comments back from the District two weeks before the identified USACE public notice expiration date.
6. If there are no comments received from KYTC district personnel or from the Division of Environmental Analysis, no response to USACE is required.
7. If either KYTC district personnel or the Division of Environmental Analysis does provide comments, those comments will be forwarded to USACE by the KYTC/USACE Liaison via the original email chain provider with copies to KYTC's Division of Planning, Strategic Planning Branch Manager, and to the Director of KYTC's Division of Environmental Analysis (**Exhibit 9020**).

*When is the USACE public notice coordination effort complete?*

The public notice coordination effort with USACE is complete when either the USACE identified comment period expires or when the KYTC/USACE Planning Liaison provides comments to USACE via the original USACE public notice email.

*What is the approval chain for USACE public notice coordination?*

The KYTC/USACE Liaison has authority to forward comments directly to the USACE public notice originator. By copying KYTC's Division of Planning Strategic Planning Branch Manager and the Director of KYTC's Division of Environmental Analysis on the internal and final email exchanges, the KYTC/USACE Planning Liaison is keeping appropriate KYTC management involved in the USACE public notice coordination process.



	<i>Chapter</i> PROJECT DEVELOPMENT
	<i>Subject</i> Planning Studies

## PL-704.1 OVERVIEW

KYTC's Division of Planning routinely undertakes technical transportation studies to determine conceptual scoping parameters. These studies include:

- Existing corridor evaluations
- New route conceptualization
- Small Urban Area (SUA) studies
- Data Needs Analysis (DNA) studies
- Interchange Justification/Modification studies/reports
- Special studies

Funding is provided from a variety of sources including:

- SPR funds through the KYTC Planning Work Program
- Federal Metropolitan Planning (PL) funds
- State Road Fund or Federal Surface Transportation (STP) funds through the KYTC Six-Year Highway Plan
- Competitive federal transportation grant funding (TIGER, BUILD, FASTLANE, INFRA) included in recent federal transportation acts

KYTC's Strategic Corridor Planning aligns with [23 CFR 450.212](#), as well as [23 CFR 450.206](#), which addresses transportation planning studies and project development.

The Six-Year Highway Plan and the Federal Grant application processes generate projects through well-defined state and federal-aid criteria. The Six-Year Highway Plan projects are supported by [KYTC's Strategic Highway Investment for Tomorrow \(SHIFT\)](#) project prioritization, while the Federal Grant applications must be developed in accordance with their respective annual USDOT Notices of Funding Opportunity. Projects funded with SPR Funds through the [KYTC Planning Work Program](#), however, are generated through a biannual process in which project nominations are solicited through KYTC's Division of Planning, Strategic Planning Branch, and KYTC districts.

**PL-704.1 OVERVIEW (cont.)**

Nominated projects are rated as high, medium, or low priority by the nominating entity, must exist in the Continuous Highway Analysis Framework (CHAF) database, and must have a scope that can be accomplished for less than \$250,000 (limit for projects assigned by letter agreement to a statewide planning consultant). Traditionally, these studies have also been scored against each other using SHIFT metrics.

Regardless of fund source, the goal of each planning study is to develop the necessary background information and conceptualize an appropriate improvement concept to a prescribed level of detail. For federal-aid project scoping, activities can include:

- Drafting a purpose and need statement
- Identifying major environmental issues, including environmental justice concerns
- Initiating consultation with local officials
- Initiating agency coordination
- Conducting appropriate levels of public involvement

Studies involve a degree of improvement concept identification and evaluation, the generation of cost estimates, and the recommendation of phasing priorities, as appropriate. Generally, KYTC's Division of Planning and relevant highway district co-manage these studies. KYTC works with Area Development Districts (ADDs) and affected Metropolitan Planning Organizations (MPOs) to deliver these studies.

Studies undertaken by KYTC's Division of Planning, Strategic Planning Branch, are a result of the Six-Year Highway Plan, the Statewide Transportation Planning process, or special federal or state initiatives. Although all types of planning studies are similar in content and type of analyses, each has a distinct function and use. The process for performing technical highway project studies largely depends upon the type of study to be undertaken. The types of studies are outlined in PL-704.2 through PL-704.6.

**PL-704.2 SMALL URBAN AREA (SUA) STUDIES**

Small Urban Area (SUA) studies evaluate and provide recommendations for transportation networks in small urban areas, which the [United States Census Bureau data](#) defines as an incorporated area with a population between 5,000 and 50,000 persons. SUA studies focus on developing low-cost, short-term and higher cost, long-term alternatives that address an area's transportation system's safety and congestion. Local improvements may also be included. Some SUA studies include the development of a traffic simulation model to determine transportation needs in the area.

**PL-704.2 SMALL URBAN AREA (SUA) STUDIES (cont.)***How is work on a Small Urban Area (SUA) study initiated?*

SUAs are initiated by KYTC's Division of Planning, Strategic Planning Branch, Strategic Corridor Team, in response to a request from a local district or another KYTC division. Requests typically evaluate a specific problem area within the SUA, or determine the impact of a proposed new link in the SUA traffic network. Over the past 40 years, travel models have been developed for many of Kentucky's SUAs, but not all models have been regularly maintained as use of the statewide travel demand model has increased.

Regardless of how SUA traffic forecasting is done, SUA studies remain a valuable tool for identifying local road network safety and congestion issues, evaluating community impacts for improvement concepts, and recommending SUA projects for addition to Continuing Highway Analysis Framework (CHAF) and prioritization through Strategic Highway Investment Formula for Tomorrow (SHIFT).

**Note:** [SUA studies](#) are considered current if they have been completed within the past 10 years. It is assumed that after 10 years, traffic patterns and safety trends may have changed and the original SUA Study conclusions may need updating.

*What input is required?*

To perform or update an SUA study, the Strategic Corridor Team may elect to use a statewide planning consultant to collect data, analyze travel network problems, recommend potential solutions, and develop the SUA study report.

Typically, Division of Planning roadway network and traffic data is heavily utilized, and KYTC district and Area Development District (ADD) planning support is used to assist in the interaction with local officials and public stakeholders.

*What forms are used for Small Urban Area (SUA) studies?*

There are no official planning forms involved in this process, but examples of SUA study reports are available online at Division of Planning, [Small Urban Planning](#).

*What are the steps in the Small Urban Area (SUA) study development process?*

The steps in generating an SUA study are provided in Figure 15.

## PL-704.2 SMALL URBAN AREA (SUA) STUDIES (cont.)

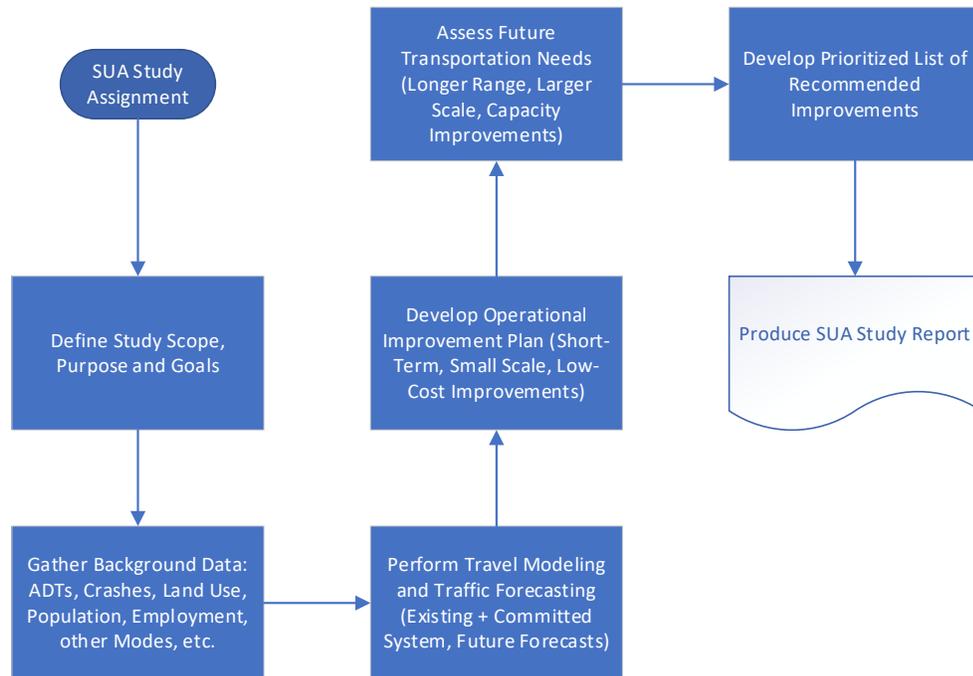


Figure 15. Small Urban Area (SUA) Study Process

When is the Small Urban Area (SUA) study process complete?

The SUA study process is complete when the SUA study report has been finalized and accepted by KYTC. The Strategic Corridor Team communicates the prioritized recommended projects in the SUA study to the Strategic Planning Branch's Regional Transportation Team, as well as district, ADD, and MPO planning staff, for possible inclusion in the CHAF database. If recommended SUA projects are added to CHAF, they are then eligible to be scored through the SHIFT process for relative priority and potential addition to KYTC's Six-Year Highway Plan, if sponsored.

What is the approval chain for a Small Urban Area (SUA) study?

The approval chain for SUA studies rests within KYTC's Division of Planning. The process generates transportation planning assessments of problems and improvement options for small urban traffic networks, while also using the resulting information to prioritize and implement recommended improvements. The Division of Planning Director approves the SUA studies and makes print and electronic versions accessible.

**PL-704.3 CORRIDOR STUDIES**

Corridor studies include the following:

- Evaluation of proposed roadway segments
- Evaluation of existing roadway improvements (generally of regional or statewide significance)
- Identification and prioritization of projects for future Six-Year Highway Plan funding

These studies typically involve the development of corridor improvement options and performance criteria which, with public input, are refined to yield a set of corridor recommendations. The “No-Build” option is always included as a comparison against which the “Build” option is measured.

When a corridor study results in the recommendation of a lengthy project, priority construction sections should be established to enable funding on a section-by-section basis. Examples of corridor study reports are available online at Division of Planning, [Planning Studies and Reports](#).

*How is work on a corridor study initiated?*

Many corridor studies undertaken by the Strategic Corridor Team are directed by KYTC’s Six-Year Highway Plan. Other corridor studies may be initiated as part of the statewide transportation planning process, or by special federal or state initiatives. To begin studies funded through KYTC’s Six-Year Highway Plan, the Division of Planning requests the Division of Program Management authorize funding for the planning phase of the project. The authorization of funds is communicated through the distribution of a signed TC 10-1 form. Once the funding for the corridor study has been established, the project is ready to move forward.

Statewide Planning and Research (SPR) funds through the Strategic Corridor Planning Chapter of the Division’s Work Program may be used to fund studies not funded through KYTC’s Six-Year Highway Plan.

*What input is required?*

The Strategic Corridor Team may elect to oversee the use of a statewide planning consultant to perform the study. Typically, Division of Planning roadway network and traffic data is heavily utilized, as well as KYTC district, MPO, and ADD planning support, to assist in the interaction with local officials and the public. The Strategic Corridor Team establishes the scope and parameters for corridor studies at the outset.

*What forms are used for corridor studies?*

There are no official planning forms involved in this process.

## PL-704.3 CORRIDOR STUDIES (cont.)

What are the steps in the corridor study development process?

The steps involved in generating a corridor study are outlined in Figure 16.

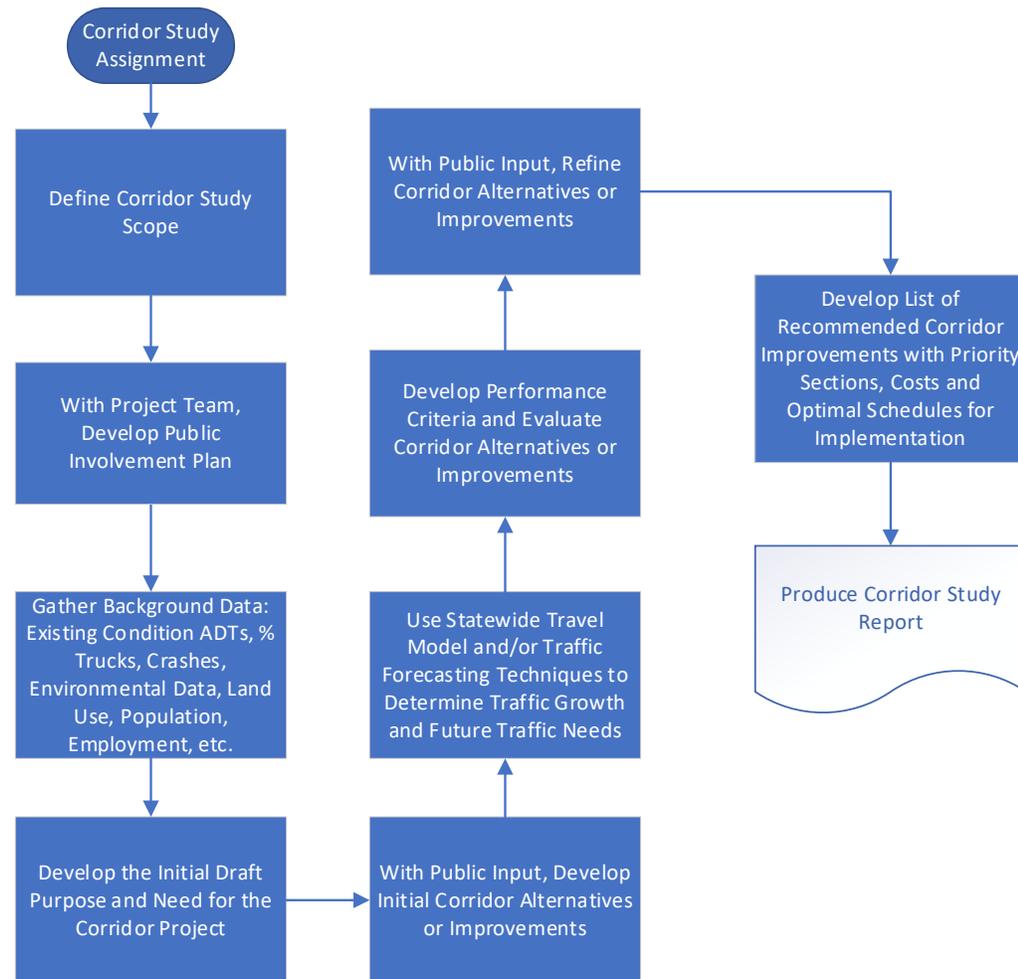


Figure 16. Corridor Study Process

When is the corridor study process complete?

The corridor study process is complete when the corridor study report has been finalized and accepted by KYTC. The Strategic Corridor Team communicates the corridor study findings to the Strategic Planning Branch's Regional Transportation Team, as well as district, ADD, and MPO planning staff, for possible inclusion in the CHAF database. If recommended corridor projects are added to CHAF, they are eligible for scoring through the SHIFT process for relative priority and potential addition to KYTC's Six-Year Highway Plan, if sponsored.

**PL-704.3 CORRIDOR STUDIES (cont.)***What is the approval chain for a corridor study?*

The approval chain for corridor studies rests within KYTC's Division of Planning. This process generates transportation planning assessments of problems and potential solutions to improve corridor performance. Recommended projects are considered for prioritization and implementation. The Division of Planning Director approves the corridor studies and makes print and electronic versions accessible.

**PL-704.4 DATA NEEDS ANALYSIS (DNA) STUDIES**

DNA form-based studies are typically completed prior to the advertisement of any Enacted Six-Year Highway Plan capital design project without previous planning work associated with it. Frequently, these are projects the legislature adds to the Enacted Six-Year Highway Plan, which were not included in KYTC's recommended plan.

The purpose of a DNA study is to:

- Define the project scope
- Review existing data
- Identify potential environmental concerns
- Draft a Purpose and Need Statement
- Develop preliminary improvement options and cost estimates
- Determine the amount of funds to be considered for allocation in the Six-Year Highway Plan

DNA studies are prepared by the district planning office in consultation with the District Project Development Manager and the Strategic Corridor Team. DNA studies also identify preliminary costs for a recommended alternative ([Exhibit 9021](#)). DNA studies are not completed for maintenance, landslide, pavement, or simple bridge in-place projects.

*How is work on a DNA study initiated?*

After the publication of the Enacted Six-Year Highway Plan, the Strategic Corridor Team will review the document and note new capital design starts that may not have been previously analyzed in planning. After coordination with the district planning and design staff, the DNA study is assigned to district personnel for completion in advance of design. Periodically, the Professional Services' website should be consulted to ensure no DNA studies are needed for upcoming design advertisements.

**PL-704.4 DATA NEEDS ANALYSIS (DNA) STUDIES (cont.)***What input is required?*

For the successful performance of a DNA study, district planning staff must be able to illustrate the following:

- Need for the project
- Purpose of the project
- Potential environmental and permitting issues
- Traffic and crash history
- Highway capacity concerns

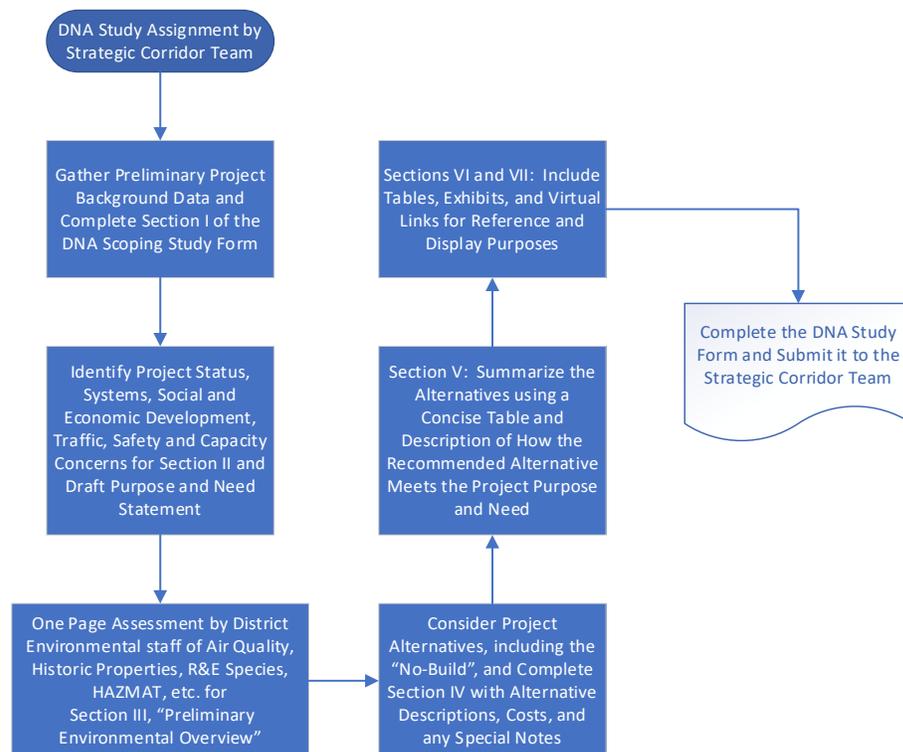
All of this information must translate into a proposed improvement concept complete with accompanying costs that meet the project's draft Purpose and Need. To accomplish this task, input from other disciplines in the district is required. Additionally, Strategic Corridor Team's support in gathering applicable project data is critical.

*What forms are used for DNA studies?*

While there are no official TC 59 planning forms required for DNA studies, the DNA Scoping Study form (**Exhibit 9021**) provides the required study format.

*What are the steps in the DNA study development process?*

The steps in generating a DNA study are outlined in Figure 17.



**Figure 17. Data Needs Analysis (DNA) Study Process**

**PL-704.4 DATA NEEDS ANALYSIS (DNA) STUDIES (cont.)***When is the DNA study process complete?*

The DNA study process is complete when the DNA study has been finalized and accepted by KYTC's district planning staff and the Director of Planning. The DNA study is posted electronically on the Division of Planning website and linked in any applicable advertisements. Examples of DNA studies are included online at Division of Planning, [Data Needs Analysis Studies](#).

*What is the approval chain for a DNA study?*

The approvals for a DNA study rest with KYTC's district planning and project development staff who formulate the initial approach to each capital project without previous planning work that is contained in KYTC's Six-Year Highway Plan. From that point forward, the scope and cost information are used in the SHIFT prioritization process, and by the KYTC Project Team as the project moves through the funding pipeline toward implementation.

**PL-704.5 INTERCHANGE JUSTIFICATION/MODIFICATION STUDIES**

An Interchange Justification Study (IJS) evaluates traffic, geometrics, and land-use associated with adding a new interchange or modifying an existing interchange on the Interstate Highway System. Less detailed reports, sometimes referred to as Interchange Modification Reports (IMRs), are often required for modifications to existing interchanges. [FHWA's Policy on Access to the Interstate System](#) details justification and documentation requirements for substantiation of proposed access changes to the Interstate System. This policy also facilitates decision-making when access changes to the Interstate System are proposed. Options must consider and be consistent with the vision, goals, and long-range transportation plans of a metropolitan area, region, and state. All new or modified points of access must be approved by FHWA and developed in accordance with federal laws and regulations as specified in [23 USC 109](#) and [111](#), [23 CFR 625.4](#), and [49 CFR 1.48\(b\)\(1\)](#).

According to FHWA:

“It is in the national interest to preserve and enhance the Interstate System to meet the needs of the 21st Century by assuring that it provides the highest level of service in terms of safety and mobility. Full control of access along the Interstate mainline and ramps, along with control of access on the crossroad at interchanges, is critical to providing such service. Therefore, the Federal Highway Administration's (FHWA) decision to approve new or revised access points to the Interstate System under Title 23, United States Code (U.S.C.), Section 111, must be supported by substantiated information justifying and documenting that decision.”

**PL-704.5 INTERCHANGE JUSTIFICATION/MODIFICATION STUDIES (cont.)**

The study's project team shall determine if the NEPA process is completed in conjunction with the IJS or as a separate process. Costs and benefits may be evaluated and are usually included in the IJS, but they are not a requirement. Examples of IJS activities are included in the project listings online at KYTC Division of Planning, [Planning Studies and Reports](#).

*How is work on an Interchange Justification/Modification Study initiated?*

An IJS or an IMR is required whenever new interchanges are added to the Interstate Highway System, or an existing Interstate interchange is significantly modified. KYTC's Division of Planning is sometimes directed to conduct an IJS or an IMR for an active design project or to evaluate the feasibility of a new Interstate interchange as a system addition to enhance regional mobility or improve regional accessibility. Funding for this work is generally derived from a Six-Year Highway Plan project unless specifically funded as an SPR activity through the Planning Work Program.

*What input is required?*

To prepare an IJS or IMR, a conceptual project design is needed to demonstrate the type of improvement proposed at the specific location along the Interstate Highway System. Traffic, land use, environmental effects, and cost must also be evaluated along with the conceptual design.

FHWA requires consideration of the following for any proposed new Interstate interchange or substantial modification to an existing Interstate interchange:

- An operational and safety analysis concludes that the proposed access change does not have a significant adverse impact on the safety and operation of the Interstate facility (including mainline lanes, existing, new, or modified ramps, and ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis should, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access [[23 CFR 625.2\(a\)](#), [655.603\(d\)](#), and [771.111\(f\)](#)].

The crossroads and the local street network to at least the first major intersection on either side of the proposed change in access, should be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts the proposed access and other transportation improvements may have on the local street network [[23 CFR 625.2\(a\)](#) and [655.603\(d\)](#)].

**PL-704.5 INTERCHANGE JUSTIFICATION/MODIFICATION STUDIES (cont.)**

Requests for a proposed access change should include a description and assessment of the impacts, as well as the ability of the proposed changes to safely and efficiently collect, distribute, and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network [23 CFR 625.2(a) and 655.603(d)]. Each request should also include a conceptual plan of the type and location of the signs proposed to support each design alternative [23 U.S.C. 109(d) and 23 CFR 655.603(d)].

- The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access, such as managed lanes (for example, transit or high occupancy vehicle and high occupancy toll lanes) or park-and-ride lots. The proposed access will be designed to meet or exceed current standards [23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)].

In rare instances where all basic movements are not provided by the proposed design, the report shall include a full-interchange option, including a comparison of the operational and safety analyses to the partial-interchange option. The report shall also include mitigation of missing movements, including wayfinding signage, impacts on local intersections, driver expectation leading to wrong-way movements on ramps, etc. The report should describe whether future provision of a full interchange is precluded by the proposed design.

As these policy questions are answered, the viability of the proposed interchange and its environmental and transportation system impacts will provide the background detail needed for FHWA to approve or reject the IJS or IMR.

*What forms are used for an Interchange Justification/Modification Study?*

While there are no official TC 59 planning forms involved in this process, examples of Interchange Justification Studies and Interstate Modification Reports may be found online at Division of Planning, [Planning Studies and Reports](#).

*What are the steps in the Interchange Justification/Modification Study process?*

The steps for performing an Interchange Justification/Modification Study are described in Figure 18.

## PL-704.5 INTERCHANGE JUSTIFICATION/MODIFICATION STUDIES (cont.)

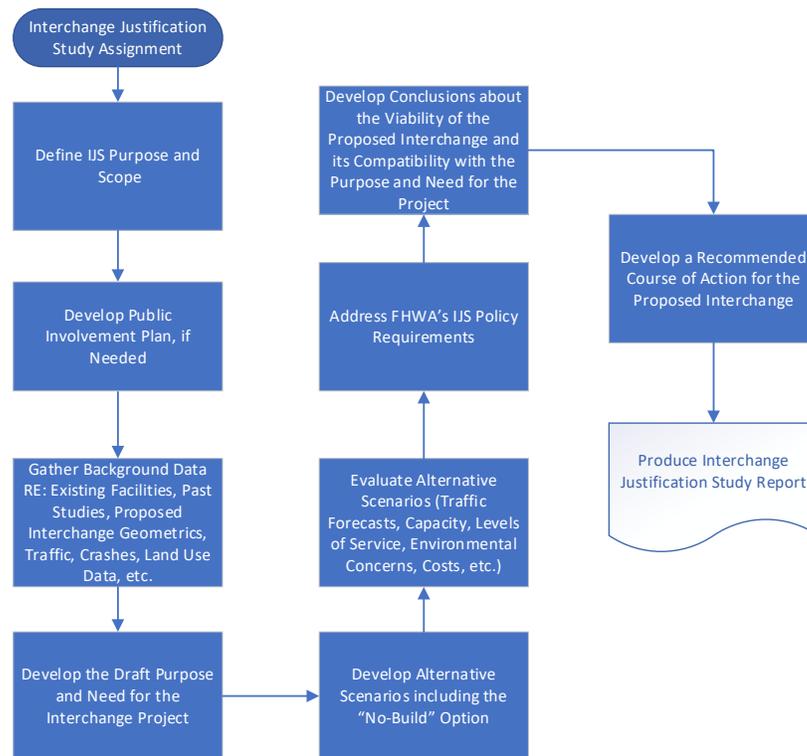


Figure 18. Interchange Justification Study (IJS) Process

*When is the Interchange Justification/Modification process complete?*

An Interchange Justification/Modification Study is complete following coordination with and approval by FHWA of the new Interstate interchange or proposed modification to an existing Interstate interchange.

*What is the approval chain for an Interchange Justification/Modification Study?*

Approvals for an IJS or IMR begin with the Project Team responsible for the Six-Year Highway Plan project of which the IJS or IMR is an element. When the Project Team is satisfied that the document is ready for submittal to FHWA, the KYTC District Project Development Branch Manager coordinates the review and approval of the IJS or IMR with FHWA's Kentucky Division. The ultimate approval of the IJS or IMR is granted by FHWA's Kentucky Division.

## PL-704.6 SPECIAL STUDIES

Special studies are studies that do not fit one of the typical transportation planning study categories. Examples include access management studies, truck-parking studies, Interstate rest area studies, and Parkway interchange needs studies. The scope of a special study varies in intent and utility, requiring that a unique approach be developed on a project-by-project basis.

**PL-704.6 SPECIAL STUDIES (cont.)***How is work on a special study initiated?*

Special studies may be initiated through a Six-Year Highway Plan project that is funded to assess a particular interest of KYTC or the state legislature. In those instances, the scope may be broadly defined (such as, “evaluate various Interstate routes”) or specifically defined (“evaluate the curve” at a certain location). Regardless, KYTC’s Division of Planning, Strategic Planning Branch, Strategic Corridor Team, identifies the appropriate project scope and determines how best to accomplish the study using the resources available.

*What input is required?*

For a special study to achieve the desired result, it is critical that the Strategic Corridor Team understand the project’s intent. From the outset, project sponsor input must be considered to ensure the initial study scope is properly defined. It is imperative that the project sponsor continue to be involved throughout the study to add perspective to study findings and to help formulate the study outcomes.

*What forms are used for special studies?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in the special studies development process?*

Each special study will have its own unique approach. The process steps for a special study will generally follow the steps used for other planning studies, seeking to accomplish the following:

- Define the study purpose and scope
- Determine the level of public and interagency involvement required
- Develop an appropriate engagement plan
- Gather background data and information
- Fully assess the problem and develop an appropriate range of potential solutions
- Evaluate potential solutions against the “No-Build” option
- Develop study recommendations
- Prepare and share the study report

A focused project team is necessary to ensure the process steps listed above receive the expected level of attention for each specific special study assignment.

**PL-704.6 SPECIAL STUDIES (cont.)***When is the process complete?*

The special study process is complete when the Special Study Report has been finalized and accepted by KYTC. If the recommended improvements resulting from the Special Study require Six-Year Highway Plan consideration, the Strategic Corridor Team shall communicate those recommendations to the Strategic Planning Branch's Regional Transportation Team for possible inclusion in the CHAF database; or, the Team shall communicate recommendations to the SHIFT Coordinator for study results affecting current Six-Year Highway Plan projects. If recommended projects are added to CHAF, they are then scored through the SHIFT process for relative priority and potential addition to KYTC's Six-Year Highway Plan.

*What is the approval chain for a special study?*

The approval chain for special studies rests with KYTC's Division of Planning, which generally works with the sponsor since this process generates transportation planning assessments of specifically identified concerns. Recommended projects are considered for prioritization and implementation through SHIFT or other KYTC programs. The Division of Planning Director approves special studies and makes them available to others via the Division of Planning's website.



	<b>Chapter</b> PROJECT DEVELOPMENT
	<b>Subject</b> Multimodal Planning

## PL-705.1 OVERVIEW

Multimodal planning can be defined as transportation and land use planning that considers diverse transportation options such as walking, cycling, public transit and automobile, as well as land use factors that affect accessibility. The FHWA [Transportation and Livability](#) website describes the relationships between multimodal planning and economic revitalization; community connectivity and cohesion; enhanced access to jobs, schools, and other services; and safer communities. Multimodal planning presents a holistic view of community, where transportation is seamlessly integrated within the community's lifestyle choices in alignment with [KYTC's Complete Streets, Roads, and Highways Policy](#).

KYTC's Division of Planning, Modal Programs Branch, coordinates multimodal planning activities in Kentucky and promotes transportation investments that support the following FHWA goals:

- Enhance integration of multimodal transportation infrastructure and facilities
- Expand opportunities for economic development and revitalization
- Provide safe and adequate accommodations for all users
- Increase community connectivity and cohesion
- Capitalize on the value of existing (context sensitive) community amenities
- Enhance access to jobs, schools, and other services
- Integrate mobility services and automation to help improve overall quality of life
- Decrease overall cost of moving people, goods, and services
- Capture more short trips by walking and biking and improve health

Kentucky has studied the possibility of light rail and passenger rail facilities in the Louisville area, but has not found feasible investment in those projects. The Commonwealth does, however, have access to four Amtrak stops located in Fulton, Maysville, South Portsmouth, and Ashland. Throughout the state, much has been done to encourage the integration of bus systems, bicycle facilities, and pedestrian accessibility into our transportation infrastructure. KYTC's Office of Transportation Delivery focuses on large-scale people movement (bus, taxis, and carpools) in Kentucky's urban areas, as well as rural transit initiatives to get people to jobs, schools, doctor's offices, and hospitals in Kentucky's rural communities.

**PL-705.1 OVERVIEW (cont.)**

The Office of Transportation Delivery's efforts are complemented by the Division of Planning's focus on bicycle, pedestrian, and other Complete Streets-related planning as well as (where such facilities are essential) ferry boat planning to enhance multimodal access across the state. PL-705.2 through PL-705.6 outline the Division of Planning's efforts.

**PL-705.2 BICYCLE PLANNING**

Bicycle transportation was first recognized as an important multimodal contributor to community livability in the ISTEA of 1991. Federal funding eligibility has been continually enhanced through the enactment of subsequent [federal transportation legislation](#), including the NHS Designation Act of 1995, SAFETEA-LU in 2005, MAP 21 in 2012, FAST Act of 2015, and the Bipartisan Infrastructure Law in 2021. Multiple community-focused federal initiatives, as well as practitioner's guides and best practice applications, have arisen across the country from this legislation. Similarly, the Kentucky legislature enacted a statewide bicycle and bikeways program ([KRS 174.120](#)), and created the Kentucky Bicycle and Bikeways Commission ([KRS 174.125](#)) in 1992. In 2006, bicycle safety regulations and standards ([KRS 189.287](#)) were enacted by the state legislature. Each of these laws strengthened the federal/state relationship with bicycle transportation and created the coordination and funding relationships that exist today. Federal legislation and funding relating to bicycle planning includes:

- TEA21 – <https://www.fhwa.dot.gov/tea21/index.htm>
- SAFETEA-LU – <https://www.fhwa.dot.gov/safetealu/>
- MAP-21 – <https://www.fhwa.dot.gov/map21/>
- FAST – <https://www.fhwa.dot.gov/fastact/>
- IIA – <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/>

The Division of Planning, Modal Programs Branch, Bicycle and Pedestrian Program Coordinator leads the bicycle planning effort for KYTC. This includes the [2022 KYTC Statewide Bicycle and Pedestrian Master Plan](#) ("Master Plan"). The Master Plan includes formulas for calculating comfort indices for bicyclists for specific locations. The Bicycle Comfort Index (BCI) is a method that has been developed by KYTC to determine how compatible a roadway is for bicycles. The index tells the bicyclist what to expect on a specific roadway based on existing traffic operations and geometric conditions. The data that is collected and used to provide the BCI is based on factors such as Average Daily Traffic (ADT), posted speed limits, type of facility, percent of heavy vehicles, Level of Service for Safety (LOSS), and amount of buffer space. The BCI can be determined for each state-maintained highway, and is just one way to determine comfort levels. KYTC's Division of Planning Bike/Walk Kentucky website hosts the [Master Plan](#) and the [Complete Streets, Roads, and Highways webpage](#), which includes the Manual, associated policy, and a list of local Complete Streets policies and ordinances in Kentucky.

**PL-705.2 BICYCLE PLANNING (cont.)**

In addition, as shown on KYTC's Division of Planning [Bike/Walk Kentucky](#) website, active transportation is promoted and encouraged through a variety of opportunities, including upcoming Kentucky Bicycle and Bikeways Commission (KBBC) meetings, bicycle facilities maps, travel planning assistance, safety information, road cycling events, and touring route information. The website also features instructions on applying for a "Paula Nye Memorial Education Grant," a funding opportunity supported by proceeds from the Share the Road specialty license plate. These grants are for educational materials or projects that relate to bicycle safety or benefits arising from bicycling and walking.

*How is bicycle planning initiated?*

The State Bicycle and Pedestrian Program promotes and facilitates increased use of non-motorized modes of transportation. This includes planning facilities for pedestrians and bicyclists while developing public education, promotion, and safety programs for using such facilities. The program promotes pedestrian and bicycling issues in coordination with the Tourism, Arts and Heritage Cabinet; Cabinet for Health and Family Services (CHFS); Governor's Office of Local Development (GOLD); Kentucky Recreational Trail Authority (KRTA); and other groups and agencies. The program incorporates the Five E's of bicycle and pedestrian activities: engineering, evaluation, education, encouragement, and enforcement. The Five E's are considered in all transportation projects to accommodate pedestrian and bicycling travel as appropriate.

*What input is required?*

The State Bicycle and Pedestrian Program partners with FHWA and other agencies to provide regional and statewide training led by KYTC's Bicycle and Pedestrian Program Coordinator. Training classes include Americans with Disabilities Act (ADA) planning, design, and specialty workshops. The program also promotes pedestrian and bicycling safety workshops and projects in coordination with the Tourism, Arts and Heritage Cabinet; Cabinet for Health and Family Services (CHFS); Governor's Office of Local Development (GOLD); Kentucky Recreational Trail Authority (KRTA); and other groups and agencies. The program also encourages bicycling and walking as viable forms of transportation in coordination with KYTC's Office of Local Programs, as well as assisting with identification of community cycling/pedestrian projects grant eligibility.

*What forms are used for bicycle planning?*

There is one official TC 59 planning form used for bicycle planning. [TC 59-101, Bicycle/Share the Road Warning Sign Request](#), is available for use by any individual or group wishing to request installation of a sign warning motorists to watch for bicyclists traveling along the roadway. However, since excessive use of signs tends to diminish their effectiveness, it is recommended that sign requests be submitted by a municipality or other responsible party (such as, a recognized bicycle advisory board or committee).

**PL-705.2 BICYCLE PLANNING (cont.)**

For more information, see [TO-402.11](#). The Design Executive Summary (DES) and the Complete Streets Review Checklist are also used in the bicycle planning process to evaluate adherence to the [KYTC Complete Streets, Roads, and Highways Policy](#).

*What are the steps in the bicycle planning process?*

Bicycle planning involves interaction with various transportation partners, each having its own bicycle accommodation or support needs. Interactions may include:

- Provision of statewide training on design, planning, ADA compliance, and bicycling safety awareness
- Development and distribution of cycling educational materials
- Promotion of statewide programs that support commuting by cycling (including connections to transit)
- Recommendation of bicycle appropriate accommodations in planning studies and projects
- Provision of technical assistance within the Kentucky Transportation Cabinet and local communities concerning bicycle facility planning, design, construction, and maintenance
- Provision of information on best practices for non-motorized transportation
- Recommendation of bicycle route signage and markings based on formal requests, and as guided by standards in FHWA's *Manual on Uniform Traffic Control Devices (MUTCD)*

*When is the bicycle planning process complete?*

Bicycle planning is an ongoing activity within the Division of Planning's Modal Programs Branch. Administering the Five E's, serving as the meeting secretary of the KBBC, and championing bicycle consideration in all active KYTC projects are regular responsibilities of the Bicycle and Pedestrian Program Coordinator.

*What is the approval chain for bicycle planning?*

The approval chain for bicycle planning rests within KYTC's Division of Planning since this effort serves to promote safe and effectual integration of bicycling as an active transportation mode throughout Kentucky. Activities are typically funded under the KYTC Division of Planning's Annual Work Program.

**PL-705.3 PEDESTRIAN PLANNING**

Since 2004, FHWA's Safety Office has been working to aggressively reduce pedestrian deaths by focusing extra resources on the cities and states with the highest pedestrian fatalities and fatality rates. This led to the production of the USDOT Pedestrian Safety Action Plan in November 2020 which sought to increase pedestrian and bicycle safety and mobility by improving conditions for pedestrians, reducing pedestrian fatalities and injuries, and providing national leadership on the issue of pedestrian safety. Part of this effort has included development of "[How to Develop a Pedestrian Safety Action Plan](#)," which helps state and local officials know where to begin when addressing pedestrian safety issues. Federal funding eligibility has been continually enhanced through the enactment of subsequent federal transportation legislation, including the NHS Designation Act of 1995, SAFETEA-LU in 2005, MAP 21 in 2012, the FAST Act of 2015, and the Bipartisan Infrastructure Law in 2021, and can be found at the following links:

- TEA21 – <https://www.fhwa.dot.gov/tea21/index.htm>
- SAFETEA-LU – <https://www.fhwa.dot.gov/safetealu/>
- MAP-21 – <https://www.fhwa.dot.gov/map21/>
- FAST – <https://www.fhwa.dot.gov/fastact/>
- IIA – <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/>

Kentucky's first pedestrian-specific law was enacted in 1942 and amended in 1978 ([KRS 189.570](#)). This law established the two following responsibilities of pedestrians:

1. Obey the instruction of official traffic devices specifically applicable to them, unless otherwise directed by a police officer.
2. Responsibly navigate roadway traffic.

**Note:** [KRS 189.575](#) was enacted in 2002, instructing vehicle operators to yield the right-of-way to blind pedestrians.

The Division of Planning Modal Programs Branch's Bicycle and Pedestrian Coordinator leads the pedestrian planning effort for KYTC. This includes the 2022 KYTC *Statewide Bicycle and Pedestrian Master Plan* ("Master Plan"). The Master Plan includes formulas for calculating comfort indices for pedestrians for specific locations. The Pedestrian Comfort Index (PCI) is a method that has been developed by KYTC to determine how compatible a roadway is for pedestrians. The index tells the pedestrian what to expect on a specific roadway based on existing traffic operations and geometric conditions. The data that is collected and used to provide the PCI is based on factors such as Average Daily Traffic (ADT), posted speed limits, type of facility, percent of heavy vehicles, Level of Service for Safety (LOSS), and amount of buffer space. The PCI can be determined for each state-maintained highway, and is just one way to determine comfort levels.

**PL-705.3 PEDESTRIAN PLANNING (cont.)**

KYTC's Division of Planning Bike/Walk Kentucky website hosts the [Master Plan](#) and the [Complete Streets, Roads, and Highways Webpage](#), which includes the Manual, associated policy, and a list of local Complete Streets policies and ordinances in Kentucky.

In addition, as shown on KYTC's Division of Planning [Bike/Walk Kentucky](#) website, active transportation is promoted and encouraged through a variety of opportunities including pedestrian facilities maps, travel planning assistance, safety information, and local [Bicycle-Pedestrian Plans and Clubs](#) information.

*How is pedestrian planning initiated?*

The State Bicycle and Pedestrian Program promotes and facilitates increased use of non-motorized modes of transportation. This includes planning facilities for pedestrians and bicyclists while developing public education, promotion, and safety programs for using such facilities. The program also provides training sessions on the [KYTC Complete Streets, Roads, and Highways Manual](#). The program promotes pedestrian and bicycling issues in coordination with the Tourism, Arts and Heritage Cabinet; Cabinet for Health and Family Services (CHFS); Governor's Office of Local Development (GOLD); Kentucky Recreational Trail Authority (KRTA); and other groups and agencies. The program incorporates the Five E's of bicycle and pedestrian activities: engineering, evaluation, education, encouragement, and enforcement. The Five E's are considered in all transportation projects to accommodate pedestrian and bicycling travel as appropriate.

*What input is required?*

The State Bicycle and Pedestrian Program partners with FHWA and other agencies to provide regional and statewide training led by KYTC's Bicycle and Pedestrian Program Coordinator Training classes include Americans with Disabilities Act (ADA) planning, design, and specialty workshops. The program also promotes pedestrian and bicycling safety workshops and projects in coordination with the Tourism, Arts and Heritage Cabinet; Cabinet for Health and Family Services (CHFS); Governor's Office of Local Development (GOLD); Kentucky Recreational Trail Authority (KRTA); and other groups and agencies. The program also encourages bicycling and walking as viable forms of transportation in coordination with KYTC's Office of Local Programs, as well as assisting with identification community cycling/pedestrian projects grant eligibility.

*What forms are used for pedestrian planning?*

There are no official TC 59 planning forms involved in this process. However, the Design Executive Summary (DES) and the Complete Streets Review Checklist are used in the pedestrian planning process to evaluate adherence to the [KYTC Complete Streets, Roads, and Highways Policy](#).

**PL-705.3 PEDESTRIAN PLANNING (cont.)***What are the steps in the pedestrian planning process?*

Pedestrian planning involves interaction with various transportation partners, each having its own needs with regard to pedestrian accommodation or support.

Interactions may include:

- Provision of statewide training on design, planning, ADA compliance, and pedestrian safety awareness
- Development and distribution of pedestrian educational materials
- Promotion of statewide programs that support commuting by walking (including connections to transit)
- Recommendation of pedestrian appropriate accommodations in planning studies and projects
- Provision of technical assistance within the Kentucky Transportation Cabinet and local communities concerning pedestrian facility planning, design, construction, and maintenance
- Provision of information on best practices for non-motorized transportation

*When is the pedestrian planning process complete?*

Pedestrian planning is an ongoing activity within the Division of Planning's Modal Programs Branch. Administering the Five E's and championing project consideration for pedestrian consideration in all active KYTC projects are regular responsibilities of the Bicycle and Pedestrian Program Coordinator.

*What is the approval chain for pedestrian planning?*

The approval chain for pedestrian planning rests within KYTC's Division of Planning since this effort serves to promote safe and effectual integration of walking as an active transportation mode throughout Kentucky. Activities are typically funded under the KYTC Division of Planning's Annual Work Program.

**PL-705.4 FERRY BOAT PLANNING**

Ferry boat planning is supported by federal law through [Title 23 USC 147](#), which sets forth federal requirements for the construction of ferry boats and ferry terminal facilities. This program establishes eligibility requirements, the federal share, and the allocation formula for such activities. The 2015 federal transportation reauthorization legislation (FAST Act) extended funding for the [Ferry Boat Program](#), providing an authorized funding level of \$80 million nationally for Ferry Boat Program (FBP) funding. State laws governing ferry operation are relatively few, with [KRS 180.260](#), [.270](#), [.276](#), and [.278](#) dealing primarily with the KYTC's right to acquire ferries for the protection of toll bridges, condemn competing ferries, acquire ferries near interstate bridges, and enter into agreements involving the acquisition of ferries.

**PL-705.4 FERRY BOAT PLANNING (cont.)**

Kentucky's history is rich with ferry boat operations, but there are only 10 such ferries still in operation today:

- Six are locally operated and receive state funding support
- One is fully state-funded and operated by state employees
- One is federally operated at Mammoth Cave National Park
- Two are privately owned and operated

The location and status of each of these ferries is shown online at KYTC Division of Planning, [Ferryboats](#).

Kentucky's only 24/7, state-owned and operated ferry connects two segments of KY 214 which lead to the scenic Turkey Neck Bend section of southeastern Monroe County. The KYTC Six-Year Highway Plan supports operations of this ferry, as well as Augusta Ferry across the Ohio River in Bracken County; Cave in Rock Ferry across the Ohio River in Crittenden County; Dorena-Hickman Ferry across the Mississippi River in Fulton County; Reeds and Rochester Ferries across the Green River in Butler County; and Valley View Ferry across the Kentucky River in southern Fayette County.

KYTC and the Illinois DOT jointly fund operation of the Cave in Rock Ferry. Likewise, the Dorena-Hickman Ferry is jointly funded by KYTC and the Missouri DOT. Kentucky also has one federally operated ferry—the Green River Ferry—located across the Green River in Edmonson County within the boundary of Mammoth Cave National Park. Additionally, two privately operated ferries are located in Boone County, Kentucky, across the Ohio River: the Anderson Ferry, which connects to Hamilton County, Ohio; and the Rising Star Ferry, which connects to Ohio County, Indiana. More detail on each of these ferry boat operations can be found on their individual websites.

*How is ferry boat planning initiated?*

The Kentucky Ferry Boat Program is administered by KYTC's Division of Planning, Modal Programs Branch, Intermodal and Freight Team, which coordinates ferry boat planning activities for all active ferry boat operations in Kentucky. For those ferries receiving funding through KYTC's Six-Year Highway Plan, annual contracts are executed which detail the amount of annual state funding allocated and the expectations associated with that funding. The planning process for all ferry boat operations in the Commonwealth is carried out through the annual administration of available FBP funding, the coordination of programmatic assistance, and the routine site visits conducted by the Intermodal and Freight Team.

**PL-705.4 FERRY BOAT PLANNING (cont.)***What input is required?*

For successful ferry boat planning to occur, the Intermodal and Freight Team must have active participation of the ferry operators, KYTC district planning staff, and the assistance of KYTC's Division of Program Management. KYTC District 3 operates the state-owned Turkey Neck Bend Ferry, therefore their continuing budgetary support of this operation is critical. The Division of Program Management coordinates the flow of federal ferry boat planning and state Six-Year Highway Plan funding, which are also critical to the ferry boat program. Ferry operators are the nucleus of the program, and their positive interaction with the Intermodal and Freight Team drives the success of planning initiatives.

*What forms are used in ferry boat planning?*

Ferry boat planning requires the use of [TC 59-4, Ferry Traffic Count](#); [TC 59-103, Application for Certificate of Convenience and Necessity to Operate an Intrastate Toll Ferry or Bridge](#); [TC 59-106, Federal Ferry Boat Program \(FBP\) Application](#), [TC 59-108, Daily Adverse Weather Closure Certification](#), and [TC 59-109, Kentucky Ferryboat Annual Report](#).

The *Ferry Traffic Count* form is submitted with each monthly invoice and is used to determine usage data by the number and type of vehicles, or bicyclist and pedestrian traffic during prescribed time periods. The *Application to Operate an Intrastate Ferry* form is required to allow KYTC to properly evaluate and approve any proposed new ferry operation in Kentucky. The *Ferry Boat Program (FBP) Application* form is the method by which ferry operators can annually apply for federal FBP funding.

*What are the steps in the ferry boat planning process?*

Annual ferry activities of the Intermodal and Freight Team include:

- Coordinating annual contracts, reviewing monthly invoices, and compiling monthly and annual traffic counts for each ferry operation (see "[Ferryboats](#)" online)
- Sharing information about federal FBP funding allocations, working with ferry operators to develop fiscally constrained plans for using those funds, executing contracts, reviewing invoices, and administering the use of those FBP allocations
- Planning and hosting ferry boat operator's meetings as necessary
- Conducting on-site visits of Kentucky ferry boat operations
- Coordinating with the US Coast Guard, US Corps of Engineers, and USDOT's Maritime Administration (MARAD) regarding issues affecting ferries and participating in studies that may impact our ferries
- Coordinating and participating in any ferry operations funding studies
- Maintaining KYTC's [Ferryboats](#) website

**PL-705.4 FERRY BOAT PLANNING (cont.)***When is ferry boat planning complete?*

Ferry boat planning is an ongoing, annual process ensuring proper communication with and engagement of Kentucky's ferry boat operators. Annual funding contracts for those receiving Six-Year Highway Plan support must be completed before July 1 each year. Additionally, every federal Ferry Boat Program allocation received must be obligated during the federal fiscal year within which the funds are received. The coordination of these and other aspects of the Ferry Boat Program require a forward-looking, continually evolving program.

*What is the approval chain for ferry boat planning?*

Approvals for ferry boat planning rest within KYTC's Division of Planning as this effort serves to promote consistent and safe operation of Kentucky's ferries. Activities of the Intermodal and Freight Team are funded under KYTC's Division of Planning, Annual Work Program, while state and federal funding authorizations in support of the Ferry Boat Program are granted by the KYTC Secretary of Transportation and the FHWA Kentucky Division Administrator, respectively.

**PL-705.5 RAIL PLANNING**

As stated in the [2015 Kentucky Statewide Rail Plan](#), KYTC's goal for rail transportation is to support and work with private rail carriers to provide a safe, reliable, efficient, and effective rail transportation system for the movement of passengers and freight within the Commonwealth, as well as to connect Kentucky to domestic and international markets. KYTC recognizes that an effective rail system will help reduce highway congestion, contribute to economic development, improve public safety, improve energy efficiency, and reduce greenhouse gas emissions.

The following goals are established as part of the Kentucky Statewide Rail Plan:

- **Preservation:** Encourage the preservation of the largely privately owned and operated rail system within Kentucky.
- **Economic Development:** Support economic development by providing roadway connectivity to the state and national rail system and intermodal facilities.
- **Customer Relationships/Transportation Planning Process:** Strengthen customer relationships with the rail industry through communication, cooperation, and informal exchange in KYTC's planning process.
- **Safety and Security:** Enhance highway-railroad at-grade crossing safety and reliability to ensure mobility and access.

**PL-705.5 RAIL PLANNING (cont.)**

The Kentucky Railroad Commission was abolished in 2000, and [KRS 174.057](#) assigned KYTC the responsibility for carrying out the state statutes and regulations pertaining to the rail system, rail safety, and the Rails to Trails Program. KYTC then supported promulgation of [603 KAR 7:090](#) requiring all freight railroads to submit an annual report ([TC 59-102](#)), provide a map of all rail routes, provide a written notice of all railroad abandonments, and report all accidents resulting in a loss of life. With this information, KYTC assesses the strength and performance of individual railroad operations.

*How is rail planning work initiated?*

Responsibility for Kentucky's rail planning is vested in KYTC's Division of Planning. Railroads submit information to the Division's Modal Programs Branch, Intermodal and Freight Team, on or before March 31 of each year, as required by [603 KAR 7:090](#). KYTC uses this baseline information for needs assessment when federal and state funding assistance becomes available.

In the past, federal programs have provided funding for railroad initiatives. Sources have included the Transportation Investment Generating Economic Recovery (TIGER) grant program, the Section 130 Railway-Highway Crossing Program, the FRA Railroad Rehabilitation and Repair (Disaster Assistance) Program, the Congestion Mitigation and Air Quality (CMAQ) Program, and the Railroad Rehabilitation and Improvement (RRIF) Program.

While the Kentucky Constitution expressly mandates that Road Fund dollars shall not be used for projects other than roads, the 2011 Kentucky General Assembly set aside state funds for the establishment of a grant program to support short-line railroad infrastructure needs. These grants are administered by KYTC, require a dollar-for-dollar match by the short-line railroad, and are administered through the Kentucky Railroad Crossing Improvement (KRCI) Program. These funds are restricted to public safety improvements of at-grade crossings and railroad crossing safety equipment.

Information about Kentucky's rail planning is available online at Division of Planning, [Railroads](#).

*What input is required?*

To assure the proper communication and coordination of the rail planning process, it is critical for railroad companies to comply with [603 KAR 7:090](#). Periodic consultation with the railroad industry also informs KYTC's partnerships with other agencies to provide technical guidance, planning, and coordination of efforts with issues unique to the railroad industry.

**PL-705.5 RAIL PLANNING (cont.)***What forms are used for rail planning?*

There is one official TC 59 planning form involved in rail planning. TC [59-102](#), *Kentucky Railroad Annual Report*, guides railroad compliance with the reporting provisions of [603 KAR 7:090](#).

*What are the steps in the rail planning process?*

Typical Rail Planning activities undertaken each year include:

- Oversee Kentucky Rail Crossing Improvement (KRCI) Program, including guidance material updates, facilitate program applications, and develop contracts (KYTC's Division of Right of Way and Utilities administers KRCI grants.)
- Assist with development and maintenance of statewide railroad GIS mapping
- Update KYTC's Statewide Rail Plan, as needed
- Participate in various rail studies and research
- Collect annual railroad data, as required by [603 KAR 7:090](#)
- Participate in AASHTO Council on Rail, as well as other national and state rail meetings
- Monitor, track, and distribute information about railroad abandonments in Kentucky
- Respond to public inquiries about passenger and freight rail issues
- Plan and host rail industry stakeholder meetings, as necessary
- Maintain KYTC's Division of Planning "Railroads" website

*When is the rail planning process complete?*

The rail planning process is an ongoing effort, necessary for compliance with [KRS 174.057](#), provision of assistance with KRCI and other state and federal funding opportunities, and updating of the Statewide Rail Plan every four years. Rail planning activities constitute a continuous set of assignments for KYTC's Division of Planning, Intermodal and Freight Team.

*What is the approval chain for rail planning?*

Approvals for rail planning depend upon the type of work conducted. Routine compliance with [KRS 174.057](#) is under the statutory purview of KYTC's Division of Planning. Candidate KRCI Program projects are compiled by the Intermodal and Freight Team with Modal Branch recommendations made to the Division of Planning Director who provides the recommended list of projects to the KYTC Secretary of Transportation for approval. The Statewide Rail Plan is developed by the Intermodal and Freight Team and recommended for approval by the KYTC Secretary of Transportation in similar fashion. Federal grant assistance for railroad projects generally facilitates a railroad company application and does not require KYTC approval unless it is sponsored by KYTC. Activities of the Intermodal and Freight Team are funded under KYTC's Division of Planning, Annual Work Program.

**PL-705.6 PUBLIC RIVERPORTS**

Rivers are an integral component of Kentucky's transportation and economic system. Water shipments through Kentucky's riverports provide reliable, safe transport of commodities over long distances at a relatively low cost. This is an important location incentive to attract firms that ship or receive large volumes of freight by water, and is an alternative to highway and rail transport, thus reducing highway and rail construction needs and providing the potential for considerable infrastructure savings.

Kentucky has 11 riverports, nine of which are located along a 250-mile stretch of the Ohio River at Wickliffe, Paducah, Henderson, Owensboro, Brandenburg, Louisville, Northern Kentucky, Maysville, and Ashland. The Hickman Riverport is located on the Mississippi River in far southwestern Kentucky, and the Eddyville Riverport is located on the Cumberland River at Lake Barkley. Of the 11 riverports, nine are active ports actually moving freight, while three riverports (Maysville-Mason County, Northern Kentucky, and Wickliffe-Ballard County) are "developing" riverports not currently moving freight.

In accordance with [KRS 65.520](#), any riverport desiring to be recognized as a public riverport must create a riverport authority approved by the KYTC Secretary of Transportation. Each of Kentucky's public riverports offers service that caters to the needs of the local economy, and each provides water transportation opportunities via America's inland waterway system extending from Pittsburgh, Pennsylvania, to Minneapolis, Minnesota; New Orleans, Louisiana; and Mobile, Alabama. For products with flexible delivery schedules, the relatively low cost of river transport makes Kentucky's riverports viable economic engines for the areas they serve.

*How is work on public riverports initiated?*

KYTC's Division of Planning, Modal Programs Branch, conducts Kentucky's public riverport planning. The Intermodal and Freight Team coordinates riverport grant approvals with the Water Transportation Advisory Board, a group comprised of KYTC, the Kentucky Cabinet for Economic Development, and representatives from the riverports and other water transportation stakeholders. The KYTC Division of Planning's "[Water Transportation Advisory Board](#)" website details the makeup of the Advisory Board, establishing legislation (KRS 174.200 and KRS 174.205), meeting minutes and agendas, maps, legal information, and other pertinent resources.

KYTC's Division of Planning, Intermodal and Freight Team, performs the following duties in support of Kentucky's riverports:

- Advise the Transportation Cabinet, the Cabinet for Economic Development, the Governor's Office, and the General Assembly on matters relating to water transportation.

**PL-705.6 PUBLIC RIVERPORTS (cont.)**

- Recommend action to enable the Commonwealth to make best use of its waterways and riverports for future economic growth.
- Assist in defining the duties and functions of positions within state government responsible for water transportation.
- Recommend criteria for prioritizing funding of riverport marketing initiatives under the Riverport Marketing Assistance Trust Fund established in [KRS 154.80-140](#) (see “[Water Transportation Advisory Board](#)” online) and administered by the Cabinet for Economic Development.
- Evaluate grant applications submitted by riverports under the Riverport Marketing Assistance Trust Fund, and make recommendations to the granting authority on the disbursement of those funds.
- Recommend criteria for prioritizing funding of riverport improvements under the Riverport Financial Assistance Trust Fund established in [KRS 174.210](#) (see “[Water Transportation Advisory Board](#)” and “[Ky Riverport Improvement Grant Program](#)” online).
- Evaluate grant applications submitted by riverports under the Riverport Financial Assistance Trust Fund and make recommendations to the granting authority on the disbursement of those funds.

The Water Transportation Advisory Board serves to initiate and carry out riverport planning activities using KYTC’s Intermodal and Freight Team as administrative support staff.

*What input is required?*

For successful public riverport planning, the Water Transportation Advisory Board requires the full support and trust of its member riverports, water transportation stakeholders, KYTC, and the Kentucky Cabinet for Economic Development. Each organizational, administrative, and funding decision made by the Board must be collaborative and readily explainable to the riverport community and public. Quality information supplied by all parties is essential to the continued success of Kentucky’s riverport planning.

*What forms are used for public riverports?*

There is one official TC 59 planning form involved in this process. [TC 59-105, KY Riverport Improvement \(KRI\) Application](#), guides riverports when applying for funding from the riverport financial assistance trust fund as established by [KRS 174.210](#). TC 59-105 is accompanied by the *Kentucky Riverport Improvement (KRI) Guidance Document* available on the “[Ky Riverport Improvement Grant Program](#)” website.

**PL-705.6 PUBLIC RIVERPORTS (cont.)***What are the steps in the public riverport planning process?*

Typical public riverport planning activities undertaken each year include:

- Maintain Kentucky’s guidelines for KRI grant applications and review KRI grant applications.
- Write KRI contracts, administer KRI grants, review invoices, and inspect projects upon completion.
- Provide staff support for the Water Transportation Advisory Board.
- Interface with the public and private riverports in the state by responding to information requests and serving on the Kentucky Association of Riverports.
- Conduct annual on-site visits of active public riverports in the state.
- Actively participate on the AASHTO Council on Water Transportation.
- Maintain Kentucky’s application for establishing a public riverport authority and review applications as needed.
- Request and compile annual operations reports from riverports.
- Update and participate with public riverports in developing the “Waterways” component of the Statewide Long-Range Transportation Plan.
- Plan and host riverport meetings, as necessary.
- Coordinate with the US Coast Guard, US Corps of Engineers, and USDOT’s Maritime Administration (MARAD) regarding issues affecting riverports.
- Maintain KYTC’s “Riverports” website.

*When is the public riverport planning process complete?*

The public riverport planning process is an ongoing effort necessary for maintaining compliance with [KRS 65.510 to 65.650](#), [KRS 174.200](#), [KRS 174.205](#), [KRS 174.210](#), and [KRS 154.80-140](#). KYTC provides necessary assistance with KRI applications and other state and federal funding opportunities, and updates the “Waterways” component of Kentucky’s Long-Range Statewide Transportation Plan. Public riverport planning activities constitute a continuous set of assignments for KYTC’s Division of Planning, Intermodal and Freight Team.

*What is the approval chain for public riverport planning?*

Approvals for public riverport planning rest with the KYTC Division of Planning’s Intermodal and Freight Team as assisted by the Kentucky Water Transportation Advisory Board. Activities of the Division of Planning’s Intermodal and Freight Team are funded under the KYTC Division of Planning’s Annual Work Program, while KRI projects are approved by the Water Transportation Advisory Board as assisted by KYTC.



	<p><i>Chapter</i></p> <p>PROJECT DEVELOPMENT</p>
	<p><i>Subject</i></p> <p>Intermodal Planning &amp; Modal Connectors</p>

## PL-706.1 OVERVIEW

“Modal Connectors” are roadways that connect the state or local highway system to a major intermodal facility, thereby supporting the efficient operation of that facility.

Types of intermodal facilities served by modal connectors in Kentucky include the following:

- AMTRAK Passenger Rail Facilities
- Truck/Pipeline Terminals
- Riverport Terminals
- Airports
- Truck/Rail Facilities
- Intercity Bus Terminals

The Federal Highway Administration (FHWA) has focused on these modal connectors as important additions to the National Highway System (NHS) since they serve as critical components of our transportation system and important conduits for the timely and reliable delivery of goods and services. Accordingly, FHWA has stressed the importance of evaluating the condition and performance of intermodal connectors and their related investment needs.

Public roads leading to major intermodal terminals are designated as [NHS connectors](#) by FHWA in cooperation with state departments of transportation and metropolitan planning organizations (MPOs). Several criteria are considered, including the level of activity of an intermodal terminal and its importance to a state's economy. Although intermodal connectors account for less than 1 percent of total NHS mileage, they handle large volumes of trucks moving goods between terminals and the NHS or other modes. Intermodal connectors also support defense mobilization and national security. Because of the military's increasing reliance on commercial transportation to move supplies and personnel, intermodal linkages to ports and airports have become an integral part of national defense planning.

**PL-706.1 OVERVIEW (cont.)**

FHWA continually updates the list of intermodal connectors in each state at the request of state Departments of Transportation. Kentucky's identified NHS Intermodal Connectors can be viewed online at FHWA National Highway System, [Intermodal Connectors](#).

**PL-706.2 INTERMODAL PLANNING PROCESS***How is intermodal planning initiated?*

KYTC's Division of Planning, Modal Programs Branch, Intermodal and Freight Team, regularly works with MPOs and Kentucky's transport facilities to assess the need to update Kentucky's Intermodal Connectors list. The following criteria are used to determine when adjustments to this list are needed:

- **Commercial Aviation Airports**
  - ◆ For passengers, scheduled commercial service must exceed 250,000 annual enplanements
  - ◆ For cargo, 100 trucks per day in each direction on principal connecting route or 100,000 tons per year arriving or departing by highway mode
- **Ports**
  - ◆ Terminals that handle 50,000 TEUs (twenty-foot equivalent units) per year or other units that would convert to 100 trucks per day in each direction on the principal connecting route
  - ◆ Bulk commodity terminals that handle more than 500,000 tons per year by highway or 100 trucks per day in each direction on the principal connecting route
  - ◆ Passenger terminals that handle more than 250,000 passengers per year or 1,000 passengers per day for at least 90 days of the year
- **Truck/Rail**
  - ◆ 50,000 TEUs per year or 100 trucks per day, each direction, on the principal connecting route
- **Pipelines**
  - ◆ 100 trucks per day in each direction on the principal connecting route
- **AMTRAK**
  - ◆ 100,000 passengers per year (entrainments and detrainments)
- **Intercity Bus**
  - ◆ 100,000 passengers per year (boardings and deboardings)
- **Public Transit**
  - ◆ Park and Ride lots with more than 500 vehicle parking spaces or 5,000 daily bus or rail passengers

**PL-706.2 INTERMODAL PLANNING PROCESS (cont.)****➤ Ferries**

- ◆ Interstate ferries must have 1,000 passengers per day for at least 90 days during the year
- ◆ Local ferries must serve either 500 vehicle parking spaces or 5,000 daily passengers

**➤ Secondary Criteria**

- ◆ Intermodal terminals that handle more than 20% of passenger or freight volumes by mode within a state
- ◆ Intermodal terminals identified either in the Intermodal Management System or the MPO transportation plans as a major facility
- ◆ Significant investment in, or expansion of, an Intermodal terminal
- ◆ Connecting routes targeted by a state, MPO, or others for investment to address an existing or anticipated deficiency as a result of increased traffic

Modifications to intermodal connector route definition or systems change as a result of this analysis are made in accordance with the [National Highway System Modification Procedures](#) identified on FHWA's website, as well as procedures outlined in [PL-503.2](#).

**What input is required?**

Evaluation of intermodal connectors requires the Intermodal and Freight Team to coordinate with KYTC district planning staff, other state agencies, local officials, Area Development Districts (ADDs), Metropolitan Planning Organizations (MPOs), and others who may be aware of new or reduced development occurrences that may affect intermodal connector planning criteria. Any new development or change in existing development could result in an intermodal connector systems change to [Kentucky's list of Intermodal Connectors](#).

**What forms are used for intermodal planning?**

There are no official TC 59 planning forms involved in this process.

**What are the steps in the intermodal planning process?**

Intermodal planning involves an understanding of the operational characteristics of the various modes of transportation and the interactions essential to their dependencies on each other. Criteria have been established for the evaluation of roadways that connect to each modal center to determine the relationship between that port, rail, pipeline, aviation, or other facility and the local highway network. If passenger or freight volumes exceed the thresholds set forth in intermodal connector planning criteria, FHWA may officially designate the principal connecting route as an intermodal connector.

**PL-706.2 INTERMODAL PLANNING PROCESS (cont.)***When is the intermodal planning process complete?*

The intermodal planning process is an ongoing activity of the Intermodal and Freight Team who continuously work to keep Kentucky's list of intermodal connectors updated. Accordingly, this process is never actually complete.

*What is the approval chain for intermodal planning?*

The approval chain for intermodal planning begins with the Intermodal and Freight Team's continuous evaluation of existing and potential intermodal connectors. When a systems change is necessary, the Intermodal and Freight Team recommends the change to the Modal Branch Manager who coordinates with KYTC's Division of Planning, Transportation Systems Branch, to pursue a National Highway System change request with FHWA. This systems change will follow the Division of Planning's Official Order Process, obtaining approval from the KYTC Secretary of Transportation before gaining final approval from the FHWA Kentucky Division Administrator. Intermodal planning activities are typically funded under the KYTC Division of Planning's Annual Work Program.



	<p><i>Chapter</i></p> <p>PROJECT DEVELOPMENT</p>
	<p><i>Subject</i></p> <p>Freight Planning</p>

**PL-707.1 OVERVIEW**

An efficient, multimodal freight transportation network is essential to the economic well-being of Kentucky. All modes play a role when moving goods, and the choice between modes is frequently related to the location, type of commodity, price of shipment, and connections to other modes. The cargo carrying capacity of each mode differs, and each mode has a customer base that depends on the service provided by that mode. While modes may vary in terms of capacity, energy, safety, and environmental impacts, each is important to Kentucky’s freight delivery system. The modes must work together to create a connected and resilient freight network. Information about the Kentucky Freight Plan, freight facilities, maps, and other freight-specific information may be found online at KYTC Division of Planning, [Freight Planning](#).

As of 2019, KYTC owns and maintains 27,616 miles of Kentucky roadway directly connected to railroads, ports, airports, and pipelines within the Commonwealth. This connectivity plays an integral part in the supply chain; therefore, it is essential that KYTC invest in ongoing maintenance, operational improvements, and capacity by adding projects to move freight efficiently and safely. Although KYTC does not have jurisdiction over other modes, it acts as a partner and participant with public and private stakeholders to coordinate investment decisions.

The [2019 Freight Modes Booklet](#) details Kentucky’s freight movement capabilities and identifies modal resources available to move goods to, from, and within the state. Kentucky is located within 600 miles of over 60 percent of the nation’s population, personal income, and manufacturing. Its central location facilitates the distribution of freight to over 30 states by using the following modes:

- **Highway:** Kentucky is served by 12 interstates and eight state parkways, including more than 500 miles of the federally designated Primary Highway Freight System.
- **Rail:** Major freight rail networks including five Class I railroads, one Class II railroad, and 13 Class III railroads operate across Kentucky.

**PL-707.1 OVERVIEW (cont.)**

- **Water:** Kentucky is bordered on three sides by navigable rivers. The Ohio River forms the 660-mile northern border and is the longest of the three border rivers. The Mississippi River forms the western border, and the eastern side of Kentucky is bordered by the Big Sandy River and the Tug Fork of the Big Sandy River. There are over 1,980 miles of U.S. Army Corps of Engineers (USACE) designated navigable waterways in Kentucky.
- **Air:** Kentucky has five commercial airports, including two major shipping hubs that are home to UPS Worldport (Louisville) and DHL Express/Amazon Air (Covington). Kentucky also has 26 general aviation airports with runway lengths greater than 5,000 feet, making them capable of handling larger cargo planes.
- **Pipeline:** Kentucky's pipeline network is approximately 37,000 total miles. This network plays a critical role in moving oil, natural gas, and other commodities throughout the Commonwealth.

KYTC supports coordinated freight planning across modes, governmental agencies, and local and private freight authorities. Periodic planning studies are used to provide the baseline data from which action plans can be generated by state leaders to accelerate industrial growth, facilitate freight movement, and stimulate the warehousing of goods in Kentucky.

A more focused perspective of the necessary KYTC planning activities for each freight mode is described in PL-707.2 through PL-707.6.

**PL-707.2 TRUCK FREIGHT & TRUCK PARKING**

As outlined in the Kentucky Freight Plan, the federal *Fixing America's Surface Transportation (FAST) Act of 2015* tasked the Federal Highway Administration (FHWA) "to establish a National Highway Freight Network (NHFN) to strategically direct Federal resources and policies toward improved performance of highway portions of the U.S. freight transportation system."

In Kentucky, 776 miles of highways were initially designated by FHWA as a part of the NHFN. Within the 776-mile NHFN, Kentucky is limited to 75 miles of designated Critical Urban Freight Corridors and 150 miles of designated Critical Rural Freight Corridors. In response to the FAST Act, KYTC created the Kentucky Freight Advisory Committee for Transportation (KFACT) to obtain input and feedback from its external freight partners. Planning for the existing and future NHFN typically revolves around system adequacy for trucks, as well as safety concerns for both truck drivers and the motoring public.

**PL-707.2 TRUCK FREIGHT & TRUCK PARKING (cont.)**

For the purposes of the Kentucky Freight Plan, trucks are regarded as commercial vehicles. Trucking is the predominant mode of freight transportation in Kentucky as trucks serve most markets, from long-distance interstate commerce to the “last mile” of intermodal goods. The FHWA classification system recognizes nine types of trucks, ranging from medium-duty trucks that typically transport regional freight to heavy-duty tractor-trailer vehicles designed for long-haul service. Freight movements by truck in Kentucky rely heavily on the Interstate Highway System. Because trucks perform the initial pickup and delivery for most goods and commodities moved by air, rail, and water, the connector routes between the freight transportation modes are a critical link to facilitate the smooth movement of freight. Often these connectors or “last mile” segments are under local jurisdiction.

Public rest areas, weigh stations, and private facilities accommodating [truck parking](#) are also located along Kentucky’s highways. Current hours-of-service (HOS) federal regulations require a truck driver to take 10 consecutive hours off duty after driving a maximum of 11 hours. Therefore, drivers need to find parking facilities to accommodate long-term rest during a multi-day trip. Since most rest areas along the Interstate Highway System do not accommodate a full 10 hours of undisturbed rest, and drivers may not want to lose time deviating from their route, some truckers illegally park along the side of roads, on rest-area ramps, and in weigh station rest havens that restrict parking to less than 10 hours. Truck parking shortages are a national safety concern as long-haul commercial truck drivers need access to safe, secure, and accessible truck parking.

**Note:** Given the projected growth of truck traffic, the demand for truck parking will continue to outpace the supply of public and private parking facilities and will only exacerbate the truck parking problems experienced in many regions.

*How is truck freight planning initiated?*

Truck freight planning is accomplished on an ongoing basis by KYTC’s Division of Planning, Modal Programs Branch. The Modal Programs Branch’s Intermodal and Freight Team works to ensure compliance with FAST Act initiatives for truck freight including:

- Designation and certification of Rural Freight Corridors and Critical Freight Corridors
- Use of Title 23 funds for truck parking
- Assessment of new truck size and weight provisions
- Implementation of the National Highway Freight Program (NHFP)
- Identification and maintenance of the National Multimodal Freight Network (NMFN), the National Highway Freight Network (NHFN), and the Kentucky Highway Freight Network.

**PL-707.2 TRUCK FREIGHT & TRUCK PARKING (cont.)***What input is required?*

The Intermodal and Freight Team works closely with the KFACT committee to gather industry, Metropolitan Planning Organizations (MPOs), and other state agency input relative to truck freight planning. Among other duties, the KFACT committee develops FAST Act freight project criteria, develops a list of potential freight projects, and reviews and recommends adjustments to freight plans, truck safety concerns (including truck parking needs), and congestion impacts to freight movement.

*What forms are used for truck freight planning?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in the truck freight planning process?*

The KYTC Intermodal and Freight Team's truck freight planning involves on-going interaction with various transportation partners such as the FHWA, the Kentucky Trucking Association, the Kentucky Association of Manufacturing, the Kentucky Departments of Energy and Agriculture, the MPOs, and businesses who rely on trucking to serve their facilities.

Each KYTC partner has its own goals for truck transportation. Examples of these interactions include:

- Provide technical assistance in truck freight planning to KYTC district staff, MPOs, and Area Development Districts (ADDs).
- Evaluate truck freight data gathered by KYTC district staff, MPOs, and ADDs.
- Continue involvement with national truck freight planning and research efforts.
- Coordinate designations and performance measures for the NHFN and NMFN.
- Review and maintain designation of the Kentucky Highway Freight Network.
- Maintain the Kentucky State Freight Plan.
- Create and implement a methodology for freight to be considered in KYTC's SHIFT project prioritization process.
- Track and share information regarding automated and connected vehicles.
- Provide staff support for KFACT.
- Maintain and update Critical Urban Freight Corridor and Critical Rural Freight Corridor networks.
- Maintain and update Critical Rural Freight Facilities data as needed.
- Coordinate and participate in National Truck Network studies.
- Coordinate and participate in truck parking studies and surveys.

**PL-707.2 TRUCK FREIGHT & TRUCK PARKING (cont.)***When is the truck freight planning process complete?*

The truck freight planning process is an ongoing activity within the Division of Planning's Modal Programs Branch. Staying up-to-date on US Department of Transportation (USDOT) and FHWA rulemakings, continually evaluating freight mobility, and working closely with trucking businesses and industry groups is an evolutionary process in which industry innovation, truck safety, and roadway congestion issues are everchanging. Individual plans and programs will have specifically identified target dates for completion, but truck freight planning activities are continual.

*What is the approval chain for truck freight planning?*

The approval chain for truck freight planning begins with KFACT committee recommendations for potential changes in plans and programs or supporting potential truck freight-oriented highway projects. KYTC approvals for individual projects occur through the SHIFT process that recommends projects for the KYTC Six-Year Highway Plan. Changes to truck freight networks ultimately rest with the FHWA Kentucky Division Administrator for national interests, and the KYTC Secretary of Transportation for state plans or programs. Activities for truck freight planning are typically funded under the KYTC Division of Planning's Annual Work Program.

**PL-707.3 RAIL FREIGHT**

Section 2.4 of the Kentucky Freight Plan currently identifies five Class I railroads, one Class II railroad, and thirteen Class III railroads operating within Kentucky through ownership or trackage rights. The [USDOT's Surface Transportation Board \(STB\)](#) defines railroad classification in terms of revenue thresholds adjusted for inflation.

Per the last year of classification (2017), a Class I railroad was defined as a common carrier having operating revenues of \$447.6 million or more. A Class II railroad, also referred to as a regional railroad, was a common carrier (person or company transporting goods or passengers on regular routes at set rates) having operating revenues between \$35.8 million and \$447.6 million. A Class III railroad, also known as a short line railroad, was identified as a rail carrier with yearly operating revenues under \$35.8 million. Class I, II, and III railroads are all privately owned. Railroad operations, such as service locations, shipping rates, and schedules, are all controlled by the railroad companies themselves and are regulated by the USDOT's Federal Railroad Administration (FRA) and STB.

**PL-707.3 RAIL FREIGHT (cont.)**

Kentucky does not own or operate any rail assets. When KYTC considers a new or reconstructed roadway location that intersects or lies adjacent to a rail facility, the Cabinet must coordinate with the railroad company. Kentucky's rail network is located near intermodal facilities that transfer goods from rail to other freight modes. These multimodal freight facilities are critical to Kentucky, providing vital opportunities to improve freight movement efficiency and state economic growth.

*How is rail freight planning work initiated?*

KYTC's Division of Planning, Modal Programs Branch, oversees Kentucky's rail freight planning effort. The Modal Programs Branch's Intermodal and Freight Team works closely with the Federal Railroad Administration (FRA) and Kentucky's short-line railroads to understand and assist in the resolution of rail freight issues.

Since Kentucky's rail lines are privately owned, the FRA is the principal governmental authority for rail freight planning and is responsible for the following:

- Ensure the safety of U.S. passenger and freight rail operations and infrastructure
- Promote safe, efficient, and accessible rail transportation
- Promulgate and enforce rail safety regulations
- Consolidate government support of rail transportation activities
- Administer financial assistance programs
- Conduct research and development in support of improved railroad safety, efficiency, and national transportation policy

*What input is required?*

Successful rail freight planning relies on open communication between KYTC's Intermodal and Freight Team, agencies, businesses, and industries as they interact within the KFACT committee (Kentucky's short line railroads are represented on KFACT), as well as timely responses to KYTC concerns by the FRA and larger railroad companies.

*What forms are used for rail freight planning?*

There is one official TC 59 planning form associated with the rail freight planning process. [TC 59-102](#), Kentucky Railroad Annual Report, guides railroad compliance according to the provisions of [603 KAR 7:090](#). Though not specifically designed for freight planning, tonnage and other individual railroad line data is available from that source.

**PL-707.3 RAIL FREIGHT (cont.)***What are the steps in the rail freight planning process?*

KYTC's Intermodal and Freight Team's rail freight planning effort involves ongoing interaction with various transportation partners such as the FRA, individual railroad companies, other modes of transportation at intermodal transfer points, and local businesses who rely on rail access for materials transport.

Each KYTC partner has its own goals for rail transportation. Examples of these include:

- Provide technical assistance to KYTC district staff, MPOs, and ADDs regarding rail freight planning.
- Evaluate rail freight data gathered by KYTC district staff, MPOs, and ADDs.
- Participate in regional rail freight planning efforts.
- Continue involvement with national rail planning and research efforts.
- Update rail information for state and national freight plans.
- Assess rail freight performance.
- Maintain rail freight website.

*When is the rail freight planning process complete?*

The rail freight planning process is an ongoing activity within the Division of Planning's Modal Programs Branch. Staying up-to-date on USDOT/FRA rulemakings, evaluating rail freight mobility, and working closely with railroad companies is a continuous effort. Individual FRA projects and federal railroad grants awarded will have specifically identified target dates for completion, but rail freight planning activities are continual.

*What is the approval chain for rail freight planning?*

The approval chain for rail freight planning rests largely with FRA. Oversight of the private railroad companies is the FRA's domain. The KYTC Intermodal and Freight Team typically has more interaction with Kentucky's short line railroads, but they are also under FRA purview. Changes to rail freight networks ultimately rests with the USDOT for national interests and the KYTC Secretary of Transportation for state plans or programs. Activities for KYTC's rail freight planning are funded under the KYTC Division of Planning's Annual Work Program.

**PL-707.4 WATERBORNE FREIGHT**

The [Kentucky Freight Plan](#) outlines the significance of the inland waterway system to the Commonwealth. Kentucky lies in the heart of the nation with the Ohio River, Mississippi River, Big Sandy River, and Tug Fork of the Big Sandy River forming our western, northern, and eastern borders. These rivers are vital links in the nation's inland waterway system and offer Kentucky unique advantages for efficient year-round freight transport of bulk materials, agricultural products, chemicals, minerals, metals, wood, manufactured goods, and containerized freight.

**PL-707.4 WATERBORNE FREIGHT (cont.)**

Kentucky's well-developed terminals and riverports—supported by enterprise zones, warehouse facilities, ports of entry, and foreign trade zones—link with an intermodal transportation system that forms a network with the world. Containing over 1,980 miles of navigable inland waterways, Kentucky's rivers connect the Great Lakes, Canada, and Mexico, as well as the deep-draft ports of New Orleans, Louisiana and Mobile, Alabama for shipments overseas.

Kentucky has 11 public riverports and there are more than 100 private riverport terminals in the state. Public riverports are regulated by [KRS 65.520](#) and [KRS 65.530](#), and ship about four million tons of commodities each year. The private riverports typically handle specific commodities like coal, grain, sand, and gravel, and ship over 100 million tons per year. The riverports and inland waterway network in Kentucky are overseen in varying capacities by the U.S. Army Corps of Engineers (USACE), U.S. Coast Guard, federal Maritime Administration (MARAD), various port authorities, Kentucky River Authority, and the Water Transportation Advisory Board (WTAB). The WTAB was established by the Kentucky General Assembly in 2010 to advise the executive and legislative branches of government on matters concerning water transportation.

*How is waterborne freight planning initiated?*

KYTC's waterborne freight planning effort is assigned to KYTC's Division of Planning, Modal Programs Branch, Intermodal and Freight Team, which facilitates the work of the WTAB and coordinates inland waterway issues and concerns with USACE, the Coast Guard, MARAD and other interested parties. The work of the WTAB spans the spectrum of waterborne freight activity, from the creation of new riverports to interactions with national inland waterway research and planning efforts. The Intermodal and Freight Team maintains a constant awareness of these issues and initiates WTAB action or communicates with federal and state agencies to pursue solutions on behalf of Kentucky's waterborne freight industry.

*What input is required?*

Successful waterborne freight planning requires active participation of public riverports, barge lines, waterborne freight consultants, and federal and state jurisdictional authorities who oversee Kentucky's waterways, with the Intermodal and Freight Team. Many of these interests are represented on the WTAB and provide an invaluable service to waterborne freight planning in that role.

*What forms are used in waterborne freight planning?*

There is one official TC 59 planning form involved in this process. [TC 59-105, KY Riverport Improvement \(KRI\) Application](#), guides riverports in applying for funding from the Riverport Financial Assistance Trust Fund as established by [KRS 174.210](#) and administered by KYTC through the WTAB.

**PL-707.4 WATERBORNE FREIGHT**

Accompanying TC 59-105 is the *Kentucky Riverport Improvement (KRI) Guidance Document* available online at [KY Riverport Improvement Grant Program](#).

*What are the steps in the waterborne freight planning process?*

Annual waterborne freight planning programmatic activities undertaken by the Intermodal and Freight Team include:

- Support the activities of the WTAB.
- Provide technical assistance to KYTC district staff, MPOs, and ADDs regarding waterborne freight planning.
- Evaluate waterborne freight data gathered by KYTC district staff, MPOs, and ADDs.
- Participate in regional waterborne freight planning efforts.
- Continue involvement with national waterborne freight and inland waterways planning and research efforts.
- Update waterborne freight information for state and national freight plans.
- Assess Kentucky's waterborne freight system performance.
- Maintain waterborne freight website.

*When is waterborne freight planning complete?*

Waterborne freight planning is an ongoing, annual process that ensures proper communication with and engagement of Kentucky's water transport community. Contracts for those public riverports receiving state KRI Program funds must be executed during the federal fiscal year within which those funds are received. The coordination and support of Kentucky's waterborne freight planning activities is an ongoing assignment for the Intermodal and Freight Team.

*What is the approval chain for waterborne freight planning?*

Approvals for waterborne freight planning rest with the KYTC Secretary of Transportation, through the Division of Planning, as advised by the WTAB. This collaborative effort serves to promote the efficient, consistent, and safe operation of water transport in Kentucky. Waterborne freight planning activities of the Intermodal and Freight Team are funded under the KYTC Division of Planning's Annual Work Program.

**PL-707.5 AIR FREIGHT**

The [Kentucky Freight Plan](#) identifies 58 public use airports located throughout Kentucky providing commuter, private passenger, and cargo services. Kentucky's primary air cargo handling airports are the Louisville Muhammad Ali International Airport and the Cincinnati/Northern Kentucky International Airport.

**PL-707.5 AIR FREIGHT (cont.)**

According to the Airports Council International–North America (ACI-NA) 2013 Airport Traffic Report, both airports were ranked in the top 15 in North America and top 50 in the world in terms of total air cargo tonnage. The Federal Aviation Administration (FAA) ranked the two airports in the top 10 of cargo services airports in the U.S. in terms of landed weight for 2013 (Louisville Muhammad Ali International Airport at 3<sup>rd</sup> and Cincinnati/Northern Kentucky International Airport at 8<sup>th</sup>). Future rankings should be higher as UPS continues to expand operations in Louisville, and the Cincinnati/Northern Kentucky International Airport is expanding to accommodate an Amazon shipping base. The FAA maintains a database for air cargo landings within the United States, and ACI-NA's database accounts for worldwide air cargo activity.

Kentucky public airports are governed by regional airport authorities or local boards. A local board is established by any urban-county government, city, county, or city and county acting jointly, or any combination of two or more cities, counties, or both. Airports are regulated by the U.S. Customs and Border Protection (CBP) and the FAA at the federal level, and by the Kentucky Department of Aviation at the state level.

*How is air freight planning work initiated?*

KYTC's Division of Planning, Modal Programs Branch, assigns the responsibility for monitoring Kentucky's air freight planning activity to its Intermodal and Freight Team which stays abreast of developments in the "air cargo" component of Kentucky's aviation industry. Since Kentucky's international and general aviation airports are privately run, decisions about airport planning are typically made at the FAA level with input from KYTC's Department of Aviation. The KYTC Division of Planning's Intermodal and Freight Team routinely gathers cargo data from private carriers, FAA, and KYTC's Department of Aviation in an effort to understand the freight movement contribution provided by this transportation sector.

*What input is required?*

Airport Board planning and development decisions are based on economic considerations specific to a particular investment or change in fee structure. Typically, these changes are implemented to attract a significant air cargo enhancement. The FAA programmatic decisions about airports and the corresponding Airport Improvement Program (AIP) are generally year-to-year announcements based on funding availability. From the perspective of KYTC's Division of Planning, the Intermodal and Freight Team monitors annual aviation activity and rolls the information obtained from the monitoring effort into state and federal freight plans.

**PL-707.5 AIR FREIGHT (cont.)***What Forms are used for air freight planning?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in the air freight planning Process?*

Typical air freight planning activities undertaken each year include:

- Obtain national and international air cargo data.
- Monitor the role of Kentucky airports in moving air cargo.
- Obtain AIP information from FAA and KYTC's Department of Aviation to determine upcoming, federally funded Kentucky airport enhancements.
- Use air cargo and airport enhancement data to inform state and federally required freight plans.
- Update the Division of Planning's "Freight" webpage as it relates to aviation.

*When is the air freight planning process complete?*

KYTC's Division of Planning air freight planning and monitoring process is an ongoing effort to stay updated on Kentucky aviation improvements or other catalysts for improved air cargo mobility by Kentucky's airports. This is a continuing effort to ensure that air freight data is included in state and federal freight plans.

*What is the approval chain for air freight planning?*

Approvals for air freight planning and monitoring accomplished by the KYTC Division of Planning's Intermodal and Freight Team are internal to the Division of Planning. Air freight planning activities of the Intermodal and Freight Team are funded under the KYTC Division of Planning's Annual Work Program.

**PL-707.6 PIPELINE NETWORK PLANNING**

The [Kentucky Freight Plan](#) identifies approximately 37,000 miles of pipelines that move natural gas, crude oil, refined petroleum products, highly volatile liquids, flammable liquids, and toxic liquids throughout Kentucky. More than 90 percent of these pipelines transport natural gas, and the miles of natural gas transmission pipelines are among the highest of any state in the Southeast.

Kentucky's pipeline network connects to roadways at truck/pipeline terminals where commodities are transferred from pipelines to trucks for further transport on the Kentucky Freight Network. FHWA classifies public roads leading to major intermodal facilities as NHS intermodal connectors, and they account for less than 1 percent of the NHS mileage.

**PL-707.6 PIPELINE NETWORK PLANNING (cont.)**

In Kentucky, three NHS intermodal connectors provide access to pipeline terminals:

- Bells Lane Petroleum/Chemical Pipeline in Louisville
- Campground Road Petroleum Pipeline in Louisville
- Louisville/Ashland Oil/Chevron Distribution Center in Lexington.

Pipelines are privately owned. They are regulated at the federal level by the Pipeline and Hazardous Materials Safety Administration (PHMSA) and at the state level by the Kentucky Public Service Commission (PSC).

*How is pipeline network planning initiated?*

KYTC's Division of Planning, Modal Programs Branch, Intermodal and Freight Team, is responsible for monitoring Kentucky's pipeline network planning activity. The Intermodal and Freight Team stays abreast of developments in the pipeline industry in Kentucky. Since Kentucky's pipelines are privately owned, decisions about pipeline network planning are typically made by the pipeline companies in coordination with state and federal regulators. The KYTC Division of Planning's Intermodal and Freight Team routinely gathers pipeline network data from company reports or PHMSA information in an effort to understand the freight movement contribution provided by this transportation sector.

*What input is required?*

Pipeline companies make planning and development decisions based on economic considerations specific to a particular investment or change in fee structure to attract pipeline business. From the KYTC Division of Planning perspective, the Intermodal and Freight Team monitors annual pipeline activity and rolls the information obtained from the monitoring effort into state and federal freight plans.

*What forms are used for pipeline network planning?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in the pipeline network planning process?*

Typical, annual pipeline network planning activities involve obtaining Kentucky-specific pipeline, monitoring pipeline transport within the state, and using pipeline and transport data to inform state and federally required freight plans.

*When is the pipeline network planning process complete?*

The KYTC Division of Planning pipeline network planning and monitoring process is an ongoing effort to stay updated on Kentucky pipeline improvements and events affecting the pipeline industry. This is a continuing effort to ensure that pipeline freight data is included in state and federal freight plans.

**PL-707.6 PIPELINE NETWORK PLANNING (cont.)**

*What is the approval chain for pipeline network planning?*

Approvals for pipeline network planning and monitoring accomplished by the KYTC Division of Planning's Intermodal and Freight Team are internal to the Division of Planning. Pipeline network planning activities by the Intermodal and Freight Team are funded under the KYTC Division of Planning's Annual Work Program.



	<b>Chapter</b> REPORTING OF PERFORMANCE MEASURES
	<b>Subject</b> Congestion Management

### PL-801.1 OVERVIEW

The KYTC Division of Planning’s processes identify a wide spectrum of transportation system needs, many characterized by traffic congestion. Traffic congestion increases with roadway usage and is usually evidenced by slower speeds, longer trip times, and vehicular queueing. The effects of increased congestion must be properly understood and managed in order to adequately address them.

KYTC’s Division of Planning coordinates with the KYTC district staff in preparing a Data Needs Analysis (DNA) for each highway project included in the Enacted Six-Year Highway Plan if there has been no prior planning activity. A key part of the DNA is a combined assessment of transportation demand, roadway capacity, safety, and roadway deficiencies when preparing an initial “Scoping and Need” and “Draft Project Purpose.” The DNA proposes a “minimum solution” and accompanying cost for any identified highway system problem. Detailed steps in generating project solutions are located online at KYTC Division of Planning, [Congestion Management](#).

Primary congestion management considerations for DNAs, corridor studies, or other project studies undertaken by the Division of Planning are outlined in PL-801.2 through 801.4.

### PL-801.2 CONGESTION TOOLBOX

The [Congestion Toolbox](#) is a comprehensive collection of tools that can be used to measure, manage, reduce, and alleviate congestion. These tools include access management, corridor planning, managed lanes, ramp metering, roundabouts, traffic signal coordination, land-use planning, and many others. The Congestion Toolbox webpage contains six strategies for right-sizing projects that deal with highway congestion:

- **Managing congestion** through access management, freeway lane management, incident management systems, parking strategies, ramp meters, road connectivity, traveler information systems, and turning lanes

**PL-801.2 CONGESTION TOOLBOX (cont.)**

- **Reducing vehicle trips and moving people fewer miles** through effective land use planning, flexible work schedules, and walking or biking
- **Moving more people and freight in fewer vehicles** by using public transit, ridesharing, or greater use of non-highway modes for freight movement
- **Moving more vehicles by improving efficiency** through innovative roadway design or traffic signal technologies
- **Moving more vehicles by adding travel lanes**, when necessary, with consideration of access management, corridor planning, community impacts, and design innovations
- **Improving quality of travel** through enhanced aesthetics and available traveler information systems

The Congestion Toolbox walks the user through each of these strategies when selecting the appropriate tools to address each identified problem.

*How is the use of the Congestion Toolbox initiated?*

KYTC's Division of Planning, Strategic Planning Branch, Strategic Corridor Team, applies Congestion Toolbox strategies when developing corridor studies and other project planning studies. The Strategic Corridor Team also communicates the Congestion Toolbox applications to KYTC district staff for use in the preparation of DNAs. These project planning and scoping efforts support the Division of Planning's SHIFT project prioritization process by ensuring that the lowest cost solutions are recommended for each congestion relief project prioritized for Six-Year Highway Plan funding.

*What input is required from others when using the Congestion Toolbox?*

The online Congestion Toolbox contains topical listings with links to KYTC or other site information. For instance, the "Roadway Design" subtopic contains 16 sub-elements (such as, 2+1 Roads, Continuous Green "T," Diverging Diamond Interchange, Road Diets, Roundabouts), each with a link to its own dedicated KYTC webpage. Users may also contact the Strategic Corridor Team or a Highway Design representative to discuss the viability of a particular design feature to address a congestion issue.

*What forms are used?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in using the Congestion Toolbox?*

Congestion Toolbox use is appropriate anytime an identified highway operations problem involves traffic impedances. Once a traffic congestion problem is identified, the Congestion Toolbox may be applied in the following manner:

- Enter the Toolbox with a clear understanding of the root causes of the traffic congestion problem.

**PL-801.2 CONGESTION TOOLBOX (cont.)**

- Consider the strategies presented in the Toolbox and select the strategy or strategies that best address the identified problem scenario.
- Test the specific congestion mitigation applications that have the potential for yielding the appropriate solution for the project location.
- Based on the testing outcomes, select a congestion mitigation strategy or specific design option that best meets the purpose of the project.

The Congestion Toolbox provides the opportunity to consider multiple options for solving a congestion issue. Following the above steps will at least ensure that appropriate consideration is given to each of the six congestion mitigation strategies in choosing an appropriate alternative that right-sizes the recommended solution.

*When is the use of the Congestion Toolbox complete?*

The Congestion Toolbox is primarily used for identification of project planning solutions; however, it is also available for consultation after project selection and funding, and is further refined during its design phase. Though developed as a planning tool, the applications are suited for use over the entire project development process.

*What is the approval chain for using the Congestion Toolbox?*

The Congestion Toolbox is maintained by the Division of Planning for use in the conceptualization of appropriate options for addressing traffic congestion. Strategic Corridor Team updating, refining, and communication activities contained in the Toolbox are supported by the annual Planning Work Program.

**PL-801.3 MOBILITY ANALYSIS PROGRAM**

Mobility analysis is used to identify trends and examine issues related to urban traffic congestion. As outlined online at KYTC's Division of Planning, [mobility analysis](#) can be used for the following:

- Evaluation and prioritization of Six Year Highway Plan project needs in terms of traffic flow efficiency
- Comparison of cities' or corridors' congestion levels
- Establishment of benchmarks benchmarking goals for future congestion and mobility levels for roadway corridors and cities

Historically, the *Highway Capacity Manual* and the Highway Capacity Software have been the tools used to evaluate traffic flow. New tools have emerged in recent years, including:

**PL-801.3 MOBILITY ANALYSIS PROGRAM (cont.)**

- **Travel time-based measures**, such as the Travel Time Index (TTI), Travel Rate Index (TRI), and buffer index. These new travel time base measures were developed by the Texas Transportation Institute through its Annual Urban Mobility Study.
- **Multimodal Level of Service analysis**, which expands capacity analysis to other modes of travel such as transit, pedestrians, and bicycles, as adapted from the *Highway Capacity Manual*.
- **Use of intelligent transportation system (ITS) archived data** for various mobility efforts such as speed, volume and vehicle classification data.
- **Traffic Simulation models** such as FHWA's CORSIM model, PTV Vissim, or Caliper Corporation's TransModeler software.

*How is the Mobility Analysis Program initiated?*

KYTC sponsors the Texas A&M Transportation Institute's *Annual Mobility Report* that uses new travel time-based performance measures to evaluate congestion in 75 major U.S. cities, including Louisville and Cincinnati. The report can be found on the Texas A&M Transportation Institute's [Urban Mobility Information](#) website. The purpose of the mobility monitoring program is to use actual ITS data to calculate travel time-based mobility performance measures. TRIMARC (Louisville) is participating in this FHWA program. To support this program, KYTC has developed a Mobility Analysis Team comprised of members from the Division of Planning, the Division of Traffic Operations, and FHWA. The KYTC Mobility Analysis Team uses the data gleaned from the Transportation Institute's Annual Mobility Report (in concert with Highway Capacity Manual tools, archived ITS data, and FHWA traffic simulation models) to develop, test, and evaluate mobility analysis performance measures for Kentucky.

*What input is required in support of the Mobility Analysis Program?*

To comply with federal requirements for system performance measurement, the KYTC Mobility Analysis Team depends on quality input from the Texas A&M Transportation Institute and other research efforts that help determine the most appropriate approaches for measuring mobility in Kentucky's metropolitan areas.

*What forms are used?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in using the Mobility Analysis Program?*

The KYTC Mobility Analysis Team seeks ways to continuously improve methods for evaluating urban traffic congestion by staying abreast of national research and other states' innovations and best practices. When an opportunity arises to enhance KYTC's approach to urban mobility, the Mobility Analysis Team takes the appropriate steps to:

**PL-801.3 MOBILITY ANALYSIS PROGRAM (cont.)**

- Understand the implications to Kentucky's highway system
- Assess the performance benefits of the enhancement to KYTC and the Metropolitan Planning Organizations (MPOs)
- Develop appropriate recommendations for moving forward
- Oversee implementation of the recommended improvement

*When is the Mobility Analysis Program complete?*

The Mobility Analysis Program is an ongoing activity designed to provide continuous improvement in the development of new tools and approaches to combatting urban traffic congestion.

*What is the approval chain for the Mobility Analysis Program?*

Recommendations from the Mobility Analysis Program that have budgetary implications are communicated to the respective KYTC Division of Planning Branch Managers and the Division Director. Before those improvements can be implemented, an appropriate funding source must be identified and KYTC or MPO approvals granted. The regular activities of the Mobility Analysis Team to monitor and recommend enhancements in urban mobility planning are supported by the annual Planning Work Program.

**PL-801.4 AIR QUALITY PLANNING**

In response to the Clean Air Act (CAA) Amendment (42 U.S.C. 1857–18571, as amended by Pub. L. 91–604), the U.S. Environmental Protection Agency (EPA) established the National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50). These standards for ozone and fine particulate matter establish an acceptable range for all pollutants in a given area. When an area does not meet the standards, it is labeled as “nonattainment.” The Division of Air Quality (DAQ) within the Kentucky Energy and Environment Cabinet (KEEC) is responsible for developing a State Implementation Plan (SIP), outlining how and when the state proposes to meet the NAAQS for each nonattainment area. Each SIP is submitted for approval to the EPA.

Within each SIP, a forecasted emissions budget is developed for each nonattainment area. An emissions budget contains allowable pollutant levels and establishes emission reduction milestones for each pollutant that does not meet the NAAQS standards. To ensure that an emissions budget has been met for mobile sources of pollution (such as, motor vehicles), the EPA and FHWA require that a transportation conformity analysis be conducted for each nonattainment area. The specific requirements and procedures to perform a transportation conformity analysis are described in the Federal *Transportation Conformity Rule* [[176\(c\) \(42 U.S.C. 7506\(c\)\)](#)].

**PL-801.4 AIR QUALITY PLANNING (cont.)**

The interagency consultation (IAC) process is an important tool to completing project-level conformity determinations and hot-spot analyses. A “hot-spot” is defined in 40 CFR 93.101 as an estimation of the likely future localized pollutant concentrations and a comparison of those concentrations to the relevant air quality standards. Interagency consultation must also be used to evaluate and choose associated methods and assumptions to be used in these analyses. The different agencies that can be involved in the IAC process include the project sponsor, other state and local transportation and air quality agencies, EPA, FHWA, and FTA.

Metropolitan Planning Organizations (MPOs) are also required to conduct regional conformity analyses to ensure that federal requirements outlined in the Transportation Conformity Rule are followed when developing or amending a Metropolitan Transportation Plan (MTP), a Transportation Improvement Plan (TIP), or the Long-Range Transportation Plan (LRTP).

KYTC’s *Air Quality Frequently Asked Questions (FAQ) Brochure* is available for additional background information online at KYTC Division of Planning, [Air Quality](#).

*How is air quality planning initiated?*

KYTC’s Division of Planning, Air Quality Coordinator, is responsible for conducting a regional conformity analysis and a review of all regionally significant, non-exempt projects in a particular area to determine what kinds of emissions may occur as a result of their implementation. This must be done as a plan is developed or amended; a capacity changing project is added; or when new standards are released. The Air Quality Coordinator works closely with the MPOs and KYTC’s Division of Environmental Analysis to ensure that the required conformity analyses is performed correctly using the approved EPA Motor Vehicle Emissions Simulator (MOVES) Model.

*What input is required to facilitate air quality planning?*

To ensure that the Motor Vehicle Emission Budgets (MVEBs) within the SIP are not exceeded, the KYTC Division of Planning Air Quality Coordinator works with other Division of Planning Modal staff to provide the following transportation data to DAQ for their use in analyzing transportation-related emissions against the thresholds established within the SIP:

- Vehicle Age Distribution
- Source Use Type Population
- Road Type Distribution
- Ramp Fraction
- Average Speed Distribution
- Vehicle Miles Traveled (VMT) – (Hour, Day, Month, and Year)

**PL-801.4 AIR QUALITY PLANNING (cont.)**

Where available, Vehicle Identification Numbers (VIN) from registered vehicles should be used to calculate Vehicle Age Distribution and Source Use Type Population data. Otherwise, national defaults or Highway Performance Monitoring System (HPMS) data may be applied to calculate Vehicle Age Distribution and Source Use Type Population data. A Travel Demand Model (TDM) is consulted to determine an estimate of the Road Type Distribution for an area.

Ramp Fraction data is supplied for areas in the state where this information is available. Otherwise, national defaults are used for Ramp Fraction estimates. Average Speed Distribution (by roadway functional classification) is established using either direct TDM outputs (when a TDM exists) or data from the Kentucky Transportation Center (KTC) report, *Speed Estimation for Air Quality Analysis*. The KTC speed estimation report can be accessed online at KYTC Division of Planning, [Air Quality](#). For VMT data by roadway classification, direct TDM outputs can be used when a TDM exists, or HPMS county data can be used when a TDM is not available.

*What forms are used?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in air quality planning?*

A transportation conformity analysis verifies if a particular area is meeting the emissions budget and also determines if pollutants continue to exceed the standard or have been lowered to the acceptable standard. If an area's pollutant level is adequately reduced, the EPA will re-designate the area as "Attainment with a Maintenance Plan."

The Division of Planning Air Quality Coordinator and the MPO Coordinators work together to ensure that MPOs are following the federal requirements outlined in the Transportation Conformity Rule when developing or amending an MTP, a TIP, or LRTP. The Division of Planning Air Quality Coordinator and MPO Coordinators work with MPO staff and conformity stakeholders (such as FHWA, the Federal Transit Authority (FTA), KYTC, EPA, DAQ, and other state agencies) who are invited and encouraged to participate via the (IAC) to:

- Set base, analysis, and horizon years
- Develop a project list for each analysis year
- Review and discuss model inputs and assumptions
- Develop and adhere to a schedule
- Follow the current transportation conformity analysis requirements

The Division of Planning Air Quality Coordinator will prepare the conformity document and initiate an IAC to review the entire conformity analysis process.

**PL-801.4 AIR QUALITY PLANNING (cont.)**

If the IAC is not in agreement with the emission estimates, further discussions will take place to try and resolve the issue. Should any significant changes occur, the entire process shall be repeated. If the IAC agrees with the emission estimates, the documentation is submitted to FHWA by the MPO for an official conformity determination. For the most current list of “nonattainment” and “attainment with a maintenance plan” areas throughout Kentucky, see the KYTC Division of Planning’s [Air Quality](#) website.

Using the MVEBs established within the SIP, the KYTC Division of Planning Air Quality Coordinator works with MPOs to stay abreast of changes to transportation plans and programs, as well as project changes, that need to be coordinated with the IAC. With IAC concurrence in air quality analysis results, the respective MPO submits a request for conformity determination to FHWA’s Kentucky Division. FHWA then sends a formal letter to all stakeholders seeking comments on the conformity analysis. In response to FHWA’s letter, the KYTC Division of Planning provides its formal concurrence in the conformity determination. Figure 19 details the Air Quality Planning process.

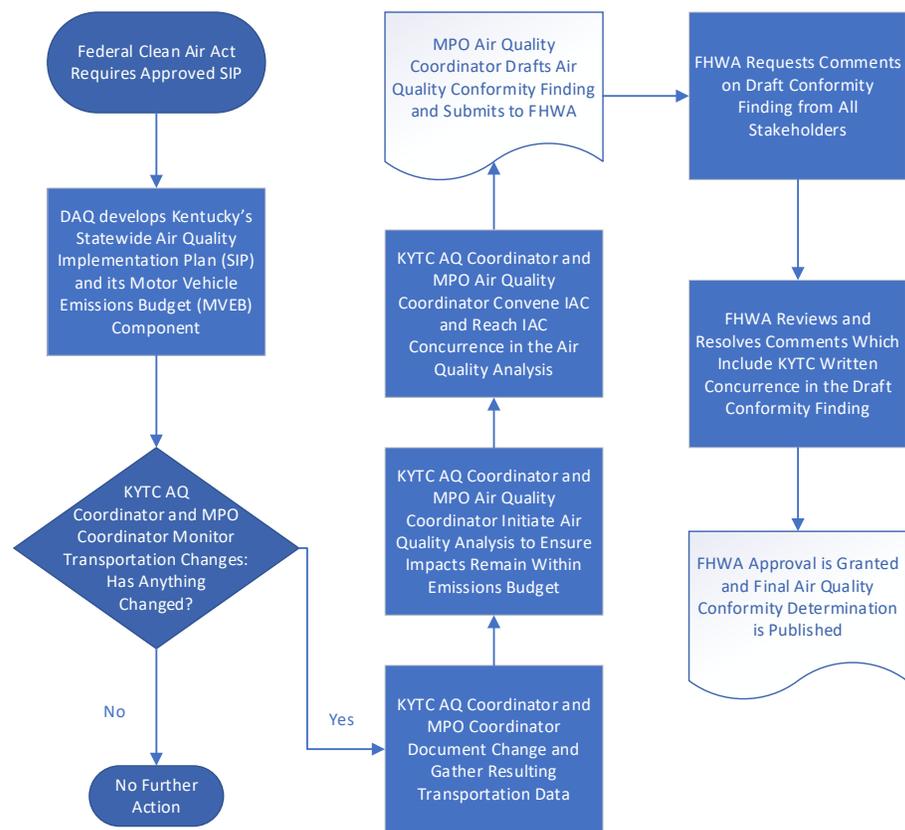


Figure 19. Air Quality Planning Process

**PL-801.4 AIR QUALITY PLANNING (cont.)***When is the air quality planning and consultation effort complete?*

The air quality planning effort is a continuous process, accounting for all transportation plans, programs, and projects that could impact air quality in the Commonwealth. Throughout the year, the FHWA Kentucky Division and the KYTC Division of Planning Air Quality Coordinator organize and conduct monthly or quarterly air quality conference calls as needed. Representatives from FHWA, FTA, EPA, DAQ, KYTC, and the Kentucky MPOs are invited and encouraged to participate. The purpose of these calls is to share information about current air quality initiatives in Kentucky and nationally, including conformity rule changes, designation or re-designation of areas, conformity analysis and questions, and issues that need resolution.

On a quarterly basis, or as needed, the FHWA Kentucky Division and KYTC Division of Planning Air Quality Coordinator organize and conduct a coordination meeting with DAQ. The purpose of this meeting is to identify issues related to conformity that need to be resolved and work toward a resolution.

The KYTC Division of Planning Air Quality Coordinator regularly participates in air quality conference calls with adjacent state agency representatives who have a vested interests in Kentucky's nonattainment and/or attainment with a maintenance plan areas.

The federally funded Congestion Mitigation and Air Quality (CMAQ) program uses transportation dollars to help reduce overall emissions or congestion in nonattainment areas or in attainment with a maintenance plan areas. The CMAQ program is administered by KYTC's Department of Rural and Municipal Aid; however, the Division of Planning Air Quality Coordinator or the respective MPO provide assistance on quantitative analysis for CMAQ project applications.

*What is the approval chain for air quality planning?*

The federal EPA approves State Implementation Plans (SIPs) and accompanying NAAQS emissions budgets for air quality. To ensure that transportation activities operate within those emissions budgets, FHWA requires a conformity analysis whenever changes to transportation plans, programs, or projects occur. The conformity analysis will determine if there are any resulting impacts to the air quality standards as set forth in the SIP. The KYTC Division of Planning Air Quality Coordinator works with the MPO Air Quality Coordinator to obtain IAC concurrence in air quality analysis results before the MPO drafts a formal request for conformity finding approval from the FHWA Kentucky Division. FHWA then conducts a stakeholder comment period during which KYTC provides its written concurrence in the draft conformity finding.

**PL-801.4 AIR QUALITY PLANNING (cont.)**

Upon resolution of all comments, FHWA then approves and publishes the final conformity finding. Activities by the KYTC Division of Planning Air Quality Coordinator to monitor, conduct, and collaborate on air quality analyses are supported by the annual Planning Work Program.



	<b>Chapter</b> REPORTING OF PERFORMANCE MEASURES
	<b>Subject</b> Performance-Based Planning Measures

### PL-802.1 OVERVIEW

Transportation improvement projects are selected based on performance goals, measures, and targets as determined by statewide and metropolitan planning processes. In 2012, federal transportation programs were transitioned to the [National Highway Performance Program \(NHPP\)](#), a performance-based program included in the *Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21)*. In 2015, the *Fixing America's Surface Transportation Act (FAST Act)* continued this performance management approach by encouraging states to invest in projects that collectively make progress toward national transportation goals.

The Federal Highway Administration (FHWA) [Transportation Performance Management \(TPM\)](#) website defines TPM as “a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals,” as reflected in the following examples:

- TPM is systematically applied and is an ongoing process.
- TPM provides key information to help decisionmakers understand the consequences of investment decisions across transportation assets or modes.
- TPM improves communications between decisionmakers, stakeholders and the traveling public.
- TPM ensures that targets and measures are developed in cooperative partnerships and based on data and objective information.

States are required to calculate and report performance measures and targets for the Interstate and non-Interstate National Highway System (NHS) for the purpose of carrying out the NHPP. KYTC complies with MAP-21 and FAST Act requirements by developing performance assessment tools to be used in the evaluation of potential transportation improvements in Kentucky. KYTC's Division of Planning, Modal Programs Branch, is responsible for NHPP areas related to system performance, traffic congestion, and freight movement. NHPP area analyses also include adopting performance measures to comply with federal law.

**PL-802.1 OVERVIEW (cont.)**

To assist in calculation of performance measures, KYTC participates in the Texas A&M Transportation Institute's Support for Urban Mobility Analyses (SUMA) pooled fund study to track and guide mobility measure research. PL-802.2 through PL-802.5 provide an overview of KYTC's performance measures used to ensure selection processes consistent with national transportation goals and performance objectives. Much of the background information for these performance measures was obtained from "[FHWA Computation Procedure for Travel Time Based and Percent Non-Single Occupancy Vehicle \(non-SOV\) Travel Performance Measures](#)," (May 2018), available on the TPM Guidance webpage.

**PL-802.2 LEVEL OF TRAVEL TIME RELIABILITY**

"Travel time reliability" is the consistency or dependability of travel times as measured across various times of the day over multiple days. The FHWA Office of Operations' "[Travel Time Reliability: Making It There On Time, All The Time](#)" brochure asserts that most travelers are less tolerant of unexpected delays because such delays have larger consequences than those drivers face during everyday congestion.

Two Travel Time Reliability Measures for carrying out the NHPP were established under subpart E of 23 CFR 490:

- Percent of the miles traveled on the Interstate that are reliable (referred to as the "Interstate Travel Time Reliability Measure").
- Percent of miles traveled on the non-Interstate NHS that are reliable (referred to as the "Non-Interstate Travel Time Reliability Measure").

In accordance with 23 CFR 490.513(b) and (c), the calculation formats for the Interstate and Non-Interstate Travel Time Reliability Measures are illustrated on Page 7 of the "[FHWA Computation Procedure for Travel Time Based and Percent Non-Single Occupancy Vehicle \(non-SOV\) Travel Performance Measures](#)" booklet. Calculations for each reporting segment must be referenced to a Traffic Message Code (TMC) ID.

*How is the calculation of Level of Travel Time Reliability initiated and used?*

KYTC's Division of Planning, Modal Programs Branch, and Systems Consultant IT are responsible for developing the Level of Travel Time Reliability (LOTTR) calculations for inclusion in Kentucky's annual Highway Performance Monitoring System (HPMS) submittal to FHWA. The LOTTR for each individual reporting segment is calculated for four daily time periods (AM peak, Mid-day, PM peak, and Weekend) over an entire year. For each time period, the 80<sup>th</sup> Percentile Travel Time is divided by the 50<sup>th</sup> Percentile Travel Time to obtain a time period value.

**PL-802.2 LEVEL OF TRAVEL TIME RELIABILITY (cont.)**

A segment of Interstate or Non-Interstate NHS roadway is considered “reliable” if all four LOTTR values are less than 1.50. The travel time reliability for a reporting segment of roadway is calculated using those LOTTR values, their corresponding directional Annual Average Daily Traffic (AADT), and vehicle occupancy factors to determine a weighted reliable person-miles of travel and a weighted person-miles of travel for all reporting segments. The ratio of weighted reliable reporting segments to all weighted reporting segments is the Travel Time Reliability Measure. Using the results of these calculations across the Interstate and the Non-Interstate NHS, statewide and Metropolitan Planning Organization (MPO) aspirational performance targets are then set for each Travel Time Reliability Measure.

The inclusion of travel time reliability data for each HPMS section and the overall percent reliability of each system allows FHWA to determine if, over time, KYTC is making progress toward one of the US Department of Transportation’s (USDOT’s) national NHPP goals, making Interstate routes and Non-Interstate NHS routes more reliable for the traveling public. By comparing the results against statewide and MPO performance targets, KYTC can also determine the areas of the state where greater focus on system reliability may be needed.

*What input is required to calculate the Level of Travel Time Reliability?*

The Level of Travel Time Reliability is defined as the ratio of the longer travel times (80th percentile) to a “normal” travel time (50th percentile), using data from FHWA’s National Performance Level Management Research Data Set (NPMRDS) or equivalent. To calculate the LOTTR for each reporting segment, KYTC’s Division of Planning must have accurate roadway system data for each reporting segment and must be able to reference each reporting segment by Traffic Management Channel (TMC) ID.

The data used for the LOTTR (and other measures) are provided by a third party vendor, and ultimately used to augment the data regularly reported by HPMS with a system performance component. Required reporting accuracy can only be achieved if the original geospatial data is correct, roadway sections are correctly identified, appropriate highway systems information is correctly referenced, and reporting segment traffic and vehicle occupancy data has been correctly loaded. In short, the analysis of travel time reliability requires quality data management from the entire KYTC Division of Planning team.

*What forms are used in calculating the Level of Travel Time Reliability?*

There are no official TC 59 planning forms involved in this process.

**PL-802.2 LEVEL OF TRAVEL TIME RELIABILITY (cont.)***What are the steps in calculating and using the Level of Travel Time Reliability performance measurement?*

KYTC's Division of Planning takes the following steps to calculate and use LOTTR:

- Include LOTTR metrics as a performance component of HPMS
- Refer LOTTR reporting segments to individual HPMS sections
- Collect and process NPMRDS used in calculating LOTTR
- Calculate LOTTR for each TMC ID
- Include LOTTR data for each HPMS section
- Calculate, report to FHWA, and include in the HPMS submittal the "Percent person-miles traveled on the Interstate System that are Reliable" and "Percent person-miles traveled on the non-Interstate NHS that are Reliable"

*When is the effort to calculate the Level of Travel Time Reliability complete?*

LOTTR data for each HPMS section is calculated annually and submitted to FHWA by June 15 each year as part of the HPMS package.

*What is the approval chain for Level of Travel Time Reliability Measures?*

KYTC's Division of Planning, Data Management Branch, incorporates LOTTR performance data into the annual HPMS Reports, which are submitted by the KYTC Division of Planning Director to the KYTC Secretary of Transportation for approval as part of the annual Certification of Public Road Mileage. Upon approval of the KYTC Secretary of Transportation, this certification and other HPMS reports are forwarded to the FHWA Kentucky Division Administrator who forwards the HPMS materials to FHWA Headquarters for inclusion in the National Highway Database. The national data is then used to generate the *Highway Statistics Report* and *Conditions and Performance Report*, both presented annually to Congress.

**PL-802.3 TRUCK TRAVEL TIME RELIABILITY**

The Truck Travel Time Reliability (TTTR) Index is referred to by FHWA as the "Freight Reliability Measure." The use of one Freight Reliability Measure to assess freight movement on the Interstate Highway System was established under subpart F of 23 CFR part 490. In accordance with 23 CFR 490.613(b), the calculation format for the Freight Reliability Measure is illustrated on Page 9 of the "[FHWA Computation Procedure for Travel Time Based and Percent Non-Single Occupancy Vehicle \(non-SOV\) Travel Performance Measures](#)" booklet. The TTTR Index uses Interstate System truck travel time data for five time periods daily from the National Performance Management Research Data Set (NPMRDS). Calculations for each reporting segment must be referenced to an appropriate TMC ID.

**PL-802.3 TRUCK TRAVEL TIME RELIABILITY (cont.)***How is the calculation of Truck Travel Time Reliability initiated and used?*

KYTC's Division of Planning, Modal Programs Branch, and Systems Consultant IT are responsible for developing the TTTR Index calculations for inclusion in Kentucky's annual HPMS submittal to FHWA. The calculation for each individual reporting segment uses data extracted from NPMRDS for five time periods (AM peak, Mid-day, PM peak, Overnight, and Weekend) to determine the TTTR Index. The Normal Truck Travel Time (50th percentile) is determined from each of the NPMRDS truck travel time data sets as the time in which 50 percent of the times in the data set are shorter in duration and 50 percent are longer in duration. The 95th percentile truck travel time is determined from each of the truck travel time data sets defined as the time in which 95 percent of the times in the data set are shorter in duration. To determine the reliability of a segment, the TTTR measure/index is calculated as the ratio of the longer travel times (95<sup>th</sup> percentile) to a "normal" travel time (50<sup>th</sup> percentile). The segment values are then summed and divided by the total interstate mileage to obtain a statewide or regional value.

The inclusion of truck travel time reliability data for each HPMS section allows FHWA to determine if, over time, KYTC is making progress toward one of USDOT's national NHPP goals, improving efficiency of the system, and making major highway freight routes more reliable for the freight industry. By comparing the results against statewide and MPO performance targets, FHWA can also determine the areas of the state where greater focus on system reliability may be needed.

*What input is required to calculate Truck Travel Time Reliability?*

To calculate the TTTR Index for each reporting segment, KYTC's Division of Planning must have accurate Interstate roadway system data for each reporting segment and must be able to reference each reporting segment to an appropriate TMC ID valid HPMS section. The ultimate use of the TTTR Index is to augment the data regularly reported by HPMS with a freight system performance component.

The freight system performance component identifies "freight bottlenecks" within the state and is submitted with the Biannual Performance Report. Required reporting accuracy can only be achieved if the original geospatial data is correct, roadway sections are correctly identified, appropriate highway systems information is correctly referenced, and reporting segment traffic and vehicle occupancy data has been correctly loaded. In short, the analysis of truck travel time reliability requires quality data management from the entire KYTC Division of Planning team to achieve success.

*What forms are used to calculate Truck Travel Time Reliability?*

There are no official TC 59 planning forms involved in this process.

**PL-802.3 TRUCK TRAVEL TIME RELIABILITY (cont.)***What are the steps in calculating and using Truck Travel Time Reliability?*

KYTC's Division of Planning takes the following steps to calculate and use the TTTR Index:

- Include NPMRDS to support the calculation of the TTTR Index as a performance component to HPMS
- Refer TTTR reporting segments to an appropriate TMC ID
- Collect and process data used in TTTR Index calculations
- Calculate the TTTR Index for each Traffic Message Code ID
- Include TTTR Index data for each HPMS TMC ID
- Report TTTR Index information for each TMC ID in the annual HPMS submittal to FHWA

*When is the effort to calculate Truck Travel Time Reliability complete?*

The TTTR Index for each TMC ID is calculated and submitted to FHWA by June 15 each year as part of the HPMS package.

*What is the approval chain for Truck Travel Time Reliability?*

KYTC's Division of Planning, Data Management Branch, incorporates the TTTR Index performance data into the annual HPMS Reports, which are submitted by the KYTC Division of Planning Director to the KYTC Secretary of Transportation for approval as part of the annual Certification of Public Road Mileage. Once approved by the KYTC Secretary of Transportation, this certification and other HPMS reports are forwarded to the FHWA Kentucky Division Administrator who forwards the HPMS materials to FHWA Headquarters by June 1 each year for inclusion in the National Highway Database. The national data is then used to generate the *Highway Statistics Report* and *Conditions and Performance Report* presented annually to Congress.

**PL-802.4 ANNUAL HOURS OF PEAK HOUR EXCESSIVE DELAY**

The Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita is referred to by FHWA as one of two "CMAQ Traffic Congestion Measures." To assess traffic congestion for the purpose of carrying out the CMAQ Program, the PHED and the "Percent Non-SOV Travel Measure" (PL-802.5), were established under subpart G of 23 CFR 490. The PHED Measure applies to both traveling directions of the mainline highway segments on the NHS that cross any part of an urbanized area with a population of more than 1 million within its state geographic boundary and that urbanized area contains any part of nonattainment or maintenance areas for any one of criteria pollutants (O<sub>3</sub>, CO, PM-10 or PM-2.5) listed under the National Ambient Air Quality Standards (NAAQS) as specified in 23 CFR 490.105 (e)(8) and 490.703.

**PL-802.4 ANNUAL HOURS OF PEAK HOUR EXCESSIVE DELAY (cont.)**

In accordance with 23 CFR 490.713(b), the calculation format for the Freight Reliability Measure is illustrated on page 11 of “[FHWA Computation Procedure for Travel Time Based and Percent Non-Single Occupancy Vehicle \(non-SOV\) Travel Performance Measures.](#)” The PHED Measure uses NPMRDS data to determine the annual hours of peak hour excessive delay (PHED) per capita on the NHS. The threshold for excessive delay is based on the greater travel time measured in 15-minute intervals when travelling at 20 miles per hour, or 60% of the posted speed limit travel time. Peak travel hours are defined as 6:00 a.m. to 10:00 a.m. local time on weekday mornings with the weekday afternoon period defined as either 3:00 p.m. to 7:00 p.m. or 4:00 p.m. to 8:00 p.m. local time, providing flexibility to state DOTs and MPOs. Kentucky has elected to use the hours of 4:00 p.m. to 8:00 p.m. for its afternoon PHED calculations. The total excessive delay metric is weighted by vehicle volumes and vehicle occupancy. Calculations for each reporting segment must be referenced to an appropriate TMC ID.

Currently, OKI is the only Kentucky MPO that meets the 1 million population threshold for this performance measure. Beginning with HPMS reporting in 2022, the population threshold drops to 200,000 people in any part of the urbanized area. When this happens, Kentucky may supply PHED Measure data in HPMS for OKI, Louisville (KIPDA MPO), Henderson (Evansville MPO), and Ashland (KYOVA MPO).

*How is the calculation for Annual Hours of Peak Hour Excessive Delay (PHED) initiated and used?*

With assistance from KYTC’s Division of Planning, Modal Programs Branch, and Systems Consultant IT, MPOs are responsible for developing the PHED information for inclusion in Kentucky’s annual HPMS submittal to FHWA. The calculation for each reporting segment in Kentucky’s urbanized areas uses length, weighted speed limit, hourly directional volume estimates, census population, and vehicle occupancy data extracted from the NPMRDS for the peak hours of 6:00 a.m. to 10:00 a.m. and from 4:00 p.m. to 8:00 p.m. to determine the PHED. The inclusion of excessive peak hour delay data for each HPMS section (TMC ID) allows FHWA to determine if the MPO is making progress toward reducing traffic congestion (one of USDOT’s national NHPP goals). By comparing the specific MPO results against other MPOs nationally, FHWA can also determine relative MPO performance and if MPO PHED performance target adjustments are needed.

*What input is required from others in calculating and using the Annual Hours of Peak Hour Excessive Delay (PHED)?*

KYTC’s Division of Planning must have accurate roadway system data to calculate the PHED Measure for each reporting segment and must be able to reference each reporting segment to an appropriate TMC ID.

**PL-802.4 ANNUAL HOURS OF PEAK HOUR EXCESSIVE DELAY (cont.)**

PHED information is ultimately used to augment the data regularly reported by HPMS with a traffic congestion reduction performance component. The degree of reporting accuracy required can only be achieved if the original geospatial data is correct, the roadway sections are correctly identified, the appropriate highway systems information is correctly referenced, and the reporting segment traffic and vehicle occupancy data has been correctly loaded. In short, the analysis requires quality data management from the entire KYTC Division of Planning team to achieve success.

*What forms are used in calculating the Annual Hours of Peak Hour Excessive Delay (PHED)?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in calculating and using the Annual Hours of Peak Hour Excessive Delay (PHED)?*

The MPO – in conjunction with KYTC’s Division of Planning – calculates and uses the PHED Measure as follows:

- The MPO determines that it will use NPMRDS to support the calculation of the PHED Measure as a performance component to HPMS.
- Required data to be used in calculating the PHED Measure is collected and processed.
- PHED Measure calculations are done for each TMC ID.
- PHED Measure data for each section is included within HPMS.
- The PHED information for each TMC ID is reported to FHWA in the annual HPMS submittal.

*When is the calculation of Annual Hours of Peak Hour Excessive Delay (PHED) complete?*

The PHED Measurement for each HPMS section is calculated and submitted to FHWA annually by June 15 as part of the HPMS package.

*What is the approval chain for the calculation of Annual Hours of Peak Hour Excessive Delay (PHED)?*

KYTC’s Division of Planning, Data Management Branch, incorporates the PHED performance data into the annual HPMS reports. Those reports are then submitted by the KYTC Division of Planning Director to the KYTC Secretary of Transportation for the annual Certification of Public Road Mileage. Once approved by the KYTC Secretary of Transportation, this certification and other HPMS reports are forwarded to the FHWA Kentucky Division Administrator who concurs and sends the HPMS materials to FHWA Headquarters by June 1 each year for inclusion in the National Highway Database. The national data is then used to generate the annual *Highway Statistics Report* and the annual *Conditions and Performance Report* to Congress.

**PL-802.5 PERCENT NON-SINGLE OCCUPANT VEHICLE TRAVEL**

The Percent Non-Single Occupant Vehicle (Non-SOV) Travel is referred to by FHWA as one of the two “CMAQ Traffic Congestion Measures.” To assess traffic congestion for the purpose of carrying out the CMAQ Program, the PHED ([PL-802.4](#)) and the “Percent Non-SOV Travel Measure,” were established under subpart G of 23 CFR 490. The Percent Non-SOV Travel Measure is defined by 23 CFR 490.101 as any travel mode other than driving alone in a motorized vehicle, including travel avoided by telecommuting. General equations and a description of the three options for computing the Percent Non-SOV Travel Measure for an applicable urbanized area are provided in 23 CFR 490.713(c).

As specified in 23 CFR 490.709(f)(2) and (3), states are required to report the data collection method used to determine the Percent Non-SOV Travel Measure for each urbanized area with a population of more than 1 million within its state geographic boundary, which contains any part of nonattainment or maintenance areas for any one of criteria pollutants (O<sub>3</sub>, CO, PM-10, or PM-2.5) listed under the National Ambient Air Quality Standards (NAAQS) as specified in 23 CFR 490.105 (e)(8) and 490.703.

In accordance with 23 CFR 490.713(d)(1), KYTC is using Method A (the American Community Survey) as the method for calculating the Percent Non-SOV Travel Measure. This format is illustrated on page 13 of “[FHWA Computation Procedure for Travel Time Based and Percent Non-Single Occupancy Vehicle \(%n-SOV\) Travel Performance Measures.](#)” Calculations for each reporting segment must be referenced to an appropriate HPMS section.

Currently, OKI is the only Kentucky MPO that meets the 1 million population threshold for this performance measure. Beginning with HPMS reporting in 2022, the population threshold drops to 200,000 people in any part of the urbanized area. When this happens, Kentucky may supply Percent Non-SOV Measure data in HPMS for OKI, Louisville (KIPDA MPO), Henderson (Evansville MPO), and Ashland (KYOVA MPO).

*How is the calculation for Percent Non-Single Occupant Vehicle (Non-SOV) Travel initiated?*

With assistance from KYTC’s Division of Planning, Modal Programs Branch, and Systems Consultant IT, MPOs are responsible for developing the Percent Non-SOV Travel information for inclusion in Kentucky’s annual HPMS submittal to FHWA. The calculation for each reporting segment uses data from the American Community Survey. The inclusion of Percent Non-SOV Travel data for each TMC ID allows FHWA to determine if the MPO is making progress toward reducing traffic congestion (one of USDOT’s national NHPP goals). By comparing the specific MPO results against other MPOs nationally, FHWA can also determine relative MPO performance and if MPO Percent Non-SOV Travel performance target adjustments are needed.

**PL-802.5 PERCENT NON-SINGLE OCCUPANT VEHICLE TRAVEL (cont.)***What input is required from others in calculating the Percent Non-Single Occupant Vehicle (Non-SOV) Travel?*

To calculate the Percent Non-SOV Travel Measure for each reporting segment, KYTC's Division of Planning must have accurate roadway system data for each reporting segment and must be able to reference each reporting segment to a valid HPMS section. Percent Non-SOV Travel information is ultimately used to augment the data regularly reported by HPMS with a traffic congestion reduction performance component. The degree of reporting accuracy required can only be achieved if the original geospatial data is correct, the roadway sections are correctly identified, the appropriate highway systems information is correctly referenced, and the reporting segment traffic and vehicle occupancy data has been correctly loaded. In short, the analysis requires quality data management from the entire KYTC Division of Planning team to achieve success.

*What Forms are used to calculate the Percent Non-Single Occupant Vehicle (Non-SOV) Travel?*

There are no official TC 59 planning forms involved in this process.

*What are the steps in calculating and using the Percent Non-Single Occupant Vehicle (Non-SOV) Travel?*

The MPO – in conjunction with KYTC's Division of Planning – calculates and uses the Percent Non-SOV Travel Measure as follows:

- The MPO has decided that it will use Method A, the American Community Survey, to support the calculation of the Percent Non-SOV Travel Measure as a performance component to HPMS.
- The Percent Non-SOV Travel reporting segments are each referenced to individual HPMS sections.
- Required data to be used in calculating the Percent Non-SOV Travel Measure is collected and processed.
- The Percent Non-SOV Travel Measure is calculated for each HPMS section.
- Percent Non-SOV Travel Measure data for each section is included within HPMS.
- The Percent Non-SOV Travel information for each HPMS section is reported to FHWA in the annual HPMS submittal.

*When is the calculation for Percent Non-Single Occupant Vehicle (Non-SOV) Travel complete?*

The Percent Non-SOV Travel Measurement for each HPMS section is calculated and submitted to FHWA annually by June 15 as part of the HPMS package.

**PL-802.5 PERCENT NON-SINGLE OCCUPANT VEHICLE TRAVEL (cont.)***What is the approval chain for the calculation of Percent Non-Single Occupant Vehicle (Non-SOV) Travel?*

KYTC's Division of Planning, Data Management Branch, incorporates the Percent Non-Single Occupant Vehicle Travel Measurement into the annual HPMS reports. Those reports are then submitted by the KYTC Division of Planning Director to the KYTC Secretary of Transportation for the annual Certification of Public Road Mileage. Once approved by the KYTC Secretary of Transportation, this certification and other HPMS reports are forwarded to the FHWA Kentucky Division Administrator who concurs and sends the HPMS materials to FHWA Headquarters by June 1 each year for inclusion in the National Highway Database. The national data is then used to generate the annual *Highway Statistics Report* and the annual *Conditions and Performance Report* to Congress.



 <p>Division of <b>PLANNING</b> Kentucky Transportation Cabinet</p>	<p><i>Chapter</i></p> <p>PROJECT PRIORITIZATION</p>
	<p><i>Subject</i></p> <p>Strategic Highway Investment Formula for Tomorrow (SHIFT)</p>

**PL-901.1 OVERVIEW**

In 2015, KYTC’s Division of Planning began developing a process that would better allocate the Commonwealth’s limited transportation funds, produce a data-driven Six-Year Highway Plan, and more fully comply with [KRS 176.430](#). The Strategic Highway Investment Formula for Tomorrow (SHIFT) was the result. As outlined by the [Division of Planning](#), SHIFT is a collaborative, transparent, and objective approach to prioritizing potential Six-Year Highway Plan projects. SHIFT provides a clear road map for KYTC’s Six-Year Highway Plan projected construction spending through the identification of high priority, larger scale safety, reconstruction, widening, new route, and new interchange highway improvement projects.

SHIFT does not apply to maintenance work, local government projects, and projects that use dedicated federal funds, such as the federal Highway Safety Improvement Program (HSIP).

**PL-901.2 MODEL DEVELOPMENT**

The SHIFT process was developed by a workgroup consisting of members from KYTC’s Division of Planning, Area Development Districts (ADDs), Metropolitan Planning Organizations (MPOs), and technical advisors from KYTC and the Kentucky Transportation Center (KTC). In developing the SHIFT prioritization model, the workgroup evaluated multiple transportation planning factors and adjusted them for unique aspects of Kentucky’s transportation system. Figure 20 reflects the five components used in the data-driven formula scoring process.

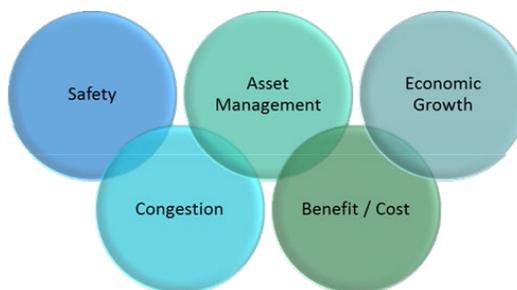


Figure 20. SHIFTS Scoring Components

**PL-901.3 IMPLEMENTATION**

After seeking input from ADDs, MPOs, and KYTC district staff, KYTC developed an 18-month implementation process for SHIFT in advance of each biennial highway plan cycle. This process includes:

- Continuing development and evaluation of SHIFT processes and scoring formulas
- Obtaining project sponsors for each project evaluated by SHIFT
- Verifying baseline data
- Identifying statewide project priorities
- Requesting input from ADD and MPO transportation committees in the regional prioritization effort
- Finalizing project selection for KYTC's Recommended Six-Year Highway Plan

*How is the SHIFT process initiated?*

The SHIFT *process* begins during summer of each even-numbered year after the Kentucky General Assembly has produced the latest edition of the Enacted Six-Year Highway Plan.

The typical SHIFT timeline is as follows:

- **Summer of an even-numbered year:** Evaluation and adjustment of SHIFT methodology, formulas, weighting, and scoring categories.
- **Winter of an even-numbered year:** Project sponsorship determined.
- **Spring of the succeeding odd-numbered year:** Individual project data verified.
- **Early Summer of the succeeding odd-numbered year:** SHIFT statewide priorities determined.
- **Late Summer of the succeeding odd-numbered year:** SHIFT regional priorities determined.
- **Fall of the succeeding odd-numbered year:** The draft Governor's Recommended Six-Year Highway Plan developed.
- **Winter of the succeeding even-numbered year** (usually in January): The Governor's Recommended Six-Year Highway Plan delivered to the Kentucky General Assembly.
- **Spring of the succeeding even-numbered year** (usually in April): The Kentucky General Assembly produces the Enacted Six-Year Highway Plan.

*What inputs to the SHIFT process are required from others?*

KYTC districts, ADDs, MPOs, and local elected officials must provide their full support in order to effectively deliver quality project prioritization data to KYTC decision-makers and the Governor. Additionally, the SHIFT process relies extensively on data generated by KYTC, MPOs, and ADDs which must be continuously updated, verified, and enhanced as methodologies are updated and data resources expand. Because quality data is so critical to SHIFT, the Division of Planning will continue its efforts to ensure that SHIFT is supported by the very best and most timely highway program and project data.

**PL-901.3 IMPLEMENTATION (cont.)***What forms are used in the SHIFT process?*

While there are no official TC-59 planning forms involved in this process, it is necessary to establish a new project in the Division of Planning's Continuous Highway Analysis Framework (CHAF) database in order for the project to be considered by SHIFT. The request for a new CHAF project can be made through procedures outlined in [PL-703.4](#).

*What are the steps in the SHIFT process?*

The SHIFT transportation prioritization process is essentially an eight-step process occurring on a two-year cycle. These eight steps are as follows:

- 1. The List:** KYTC starts the SHIFT process with a list of projects previously identified by state and local transportation leaders (KYTC districts, ADDs, and MPOs), but not yet funded by the KYTC Six-Year Highway Plan. The Division of Planning ensures that these projects are contained in the Continuing Highway Analysis Framework (CHAF) database, with each project's purpose and cost properly identified. Local leaders review and update CHAF information and may add or delete projects from this list in consultation with their respective local committee structure. The local MPO or ADD committee is composed of local officials and stakeholders who vote on the projects they wish to sponsor through the SHIFT process. If a new project is added to the local list, the new project must be created in CHAF in order for it to be evaluated alongside other projects being considered by SHIFT.
- 2. Sponsorship:** Local transportation leaders must sponsor projects for them to be considered part of the SHIFT process. Each KYTC district, MPO, or ADD is allocated a number of project sponsorships based on population, lane-miles, and number of counties served. Local officials work through their MPO or ADD committee to select the projects the committee wishes to sponsor. Each KYTC district selects the projects it wishes to sponsor based on district priorities and input from local officials.
- 3. Review and Scoring:** Each sponsored project is reviewed and scored on a scale of 0 to 100 points using a formula that applies objective measures for five key attributes: safety, congestion, asset management, economic growth, and benefit-cost.  
**Note:** While the state and regional scales are both 0-100, the data portion score of the regional scale only totals to 70 because of the 30-point possible boost ([PL-901.3, Item 5](#)).

**PL-901.3 IMPLEMENTATION (cont.)**

- *Safety* scores are primarily driven by crash history, but also by roadway characteristics.
- *Congestion* scores are based on hourly volume, as well as volume-to-capacity ratio.
- *Asset management* components consider bridge and pavement needs within the project limits that could be addressed by the proposed project and resulting in an added benefit.
- *Economic growth* scores consider accessibility and connectivity needs based on improvement type, county economic indicators, truck reliability and coal haul route data, and average daily traffic.
- *Benefit-cost* ratios use benefits derived from travel-time and crash reduction savings divided by the project cost.

Projects of statewide significance—interstates, parkways, and other National Highway System (NHS) routes—are scored first. The remaining projects, known as regional projects, are scored using a similar formula.

4. **Statewide Priorities:** KYTC identifies the top-scoring, statewide projects; about one-third of those identified are selected for priority funding. The remaining statewide projects are considered for funding in discussions of the regional priorities.
5. **Local Boosting:** Local transportation leaders take the lead role in prioritizing regional priorities, which include highways and local roads, as well as the remaining statewide projects. Using local insight, KYTC districts, MPOs, and ADDs may “boost” the scores for their top priority projects by adding 15 points to the base scores on the 0 to 100-point scale. Projects boosted by both the KYTC district’s 15 additional points and the MPO/ADD’s 15 additional points receive a total boost of 30 points (referred to as a “turbo boost.”)
6. **Regional Priorities:** Kentucky is divided into four geographic regions, each containing three contiguous KYTC districts. *Each region is assigned an equal allocation of funds for the SHIFT exercise.* The top-ranked projects in each region are the SHIFT regional priorities considered for inclusion in the draft KYTC Recommended Six-Year Highway Plan.
7. **Recommended Six-Year Highway Plan:** KYTC’s Division of Planning, the State Highway Engineer’s Office, and KYTC’s Division of Program Management combine the statewide and regional priorities to help develop the Governor’s Recommended Six-Year Highway Plan, which is presented to the Kentucky General Assembly in late January/early February of each even-numbered year.

**PL-901.3 IMPLEMENTATION (cont.)**

8. **Enacted Six-Year Highway Plan:** During each regular legislative session (usually by mid-April of each even-numbered year), lawmakers fine-tune the Governor's Recommended Six-Year Highway Plan based on additional information and funding availability. The result is the Enacted Six-Year Highway Plan, which includes two years of funded projects and spending priorities for the following four years.

*When is the SHIFT effort complete?*

The SHIFT effort is complete when resulting statewide and regional project priorities are assimilated into the Governor's Recommended Six-Year Highway Plan, which is ultimately submitted to the Kentucky legislature for approval.

*What is the approval chain for SHIFT?*

SHIFT process adjustments and project priority recommendations are accomplished under the direct approval of the KYTC Division of Planning Director. KYTC's Division of Program Management, State Highway Engineer, and Secretary of Transportation use SHIFT recommendations in the formulation of the draft Six-Year Highway Plan presented to the Governor. With the Governor's approval, KYTC then produces the Governor's Recommended Six-Year Highway Plan for delivery to the Kentucky General Assembly. The General Assembly holds ultimate approval by producing the Enacted Six-Year Highway Plan.



	<b>Chapter</b> PROJECT PRIORITIZATION
	<b>Subject</b> SHIFT Statewide & Regional Scoring

**PL-902.1 STATEWIDE SCORING FORMULA**

The results of the Strategic Highway Investment Formula for Tomorrow (SHIFT) process are used to assess relative project priorities on a statewide and regional basis. Each project is reviewed and scored on a scale of 0 to 100 points by applying a formula using objective measures for five key attributes: safety, congestion, asset management, economic growth, and benefit/cost. Projects of statewide significance (interstates, parkways, and other major connecting routes) are scored first. The remaining projects, referred to as “regional projects,” are scored using a similar formula. KYTC then identifies the top scoring statewide projects; about one-third are selected for priority funding. The remaining statewide projects are considered in the regional prioritization process. Statewide scoring elements are illustrated in Figure 21.

Priority	Score
Improve Safety	25%
Reduce Congestion	20%
Fuel Economic Growth	20%
Spend Tax Dollars Wisely (Benefit /Cost)	20%
Preserve Infrastructure (Asset Management)	15%
<b>TOTAL</b>	<b>100%</b>

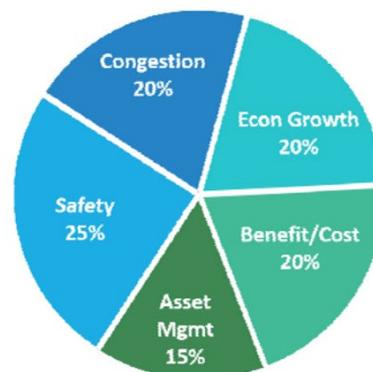


Figure 21. SHIF Statewide Scoring Formula

**PL-902.2 REGIONAL SCORING FORMULA**

Seventy percent of SHIF scoring for regional projects is data-driven, with the remaining 30 percent of scoring relying on subjective local input-based on KYTC district, ADD, and MPO priorities. Local transportation leaders take the lead in prioritizing regional priorities, highways, local roads, and remaining statewide projects.

**PL-902.2 REGIONAL SCORING FORMULA (cont.)**

Using local insights for project prioritization, ADDs, MPOs, and KYTC districts may “boost” the scores for their top priority projects by adding 15 points to their base scores on the 0-to-100-point scale.

**Note:** While the state and regional scales are both 0-100, the data portion score of the regional scale only totals to 70 because of the 30-point possible boost (PL-901.3, Item 5).

Projects boosted by both a KYTC District and ADD/MPO receive an additional 30 points—a “turbo boost.” Regional scoring elements are illustrated in Figure 22.

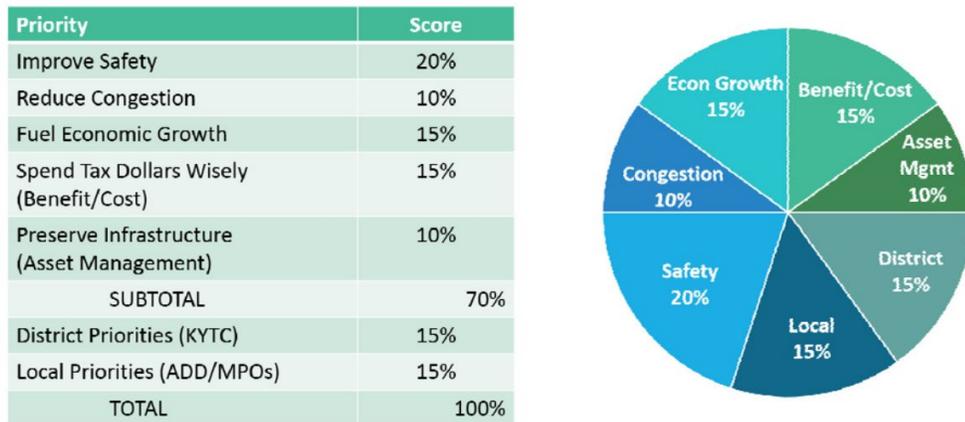


Figure 22. SHIFT Regional Scoring Formula

**PL-902.3 GEOGRAPHIC REGIONS & SCORING ADJUSTMENTS**

SHIFT also ensures proper attention is given to the statewide distribution of highway funding. To accomplish this, SHIFT divides Kentucky into four geographic regions, each containing three contiguous KYTC districts (Figure 23). Regions include KYTC districts that possess similar characteristics, such as mountainous terrain, urban areas, highway mileage, or population, to ensure regional transportation goals are not too diverse. For planning purposes, SHIFT assigns an equivalent amount of Six-Year Highway Plan funding to each region for application across its top-ranking project priorities. Within a region, SHIFT also permits the Regional Scoring Formula to be adjusted by up to five percent by adding more weight to one of the five scoring attributes at the expense of another. For example, the funding allocation for “Improve Safety” may be increased by 5% with a corresponding 5% reduction in “Benefit/Cost.” No regional scoring formula component can be zero. The three KYTC Chief District Engineers within a region collaborate to reconcile any differences in scoring formula adjustments or other regional funding concerns.

**PL-902.3 GEOGRAPHIC REGIONS & SCORING ADJUSTMENTS (cont.)**

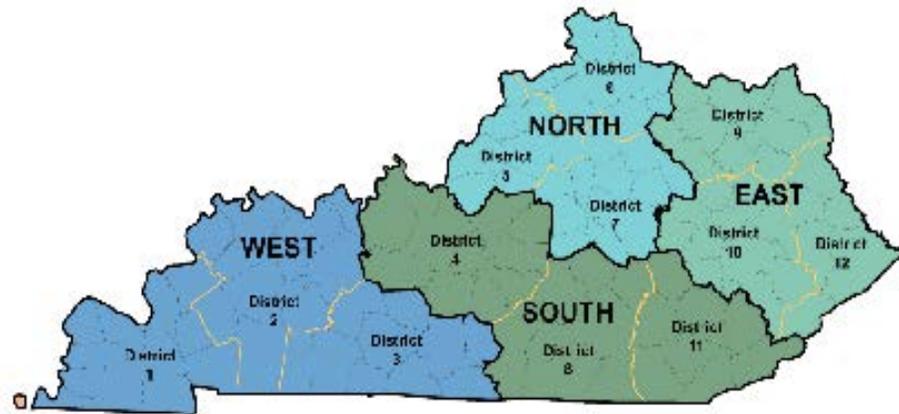


Figure 23. Kentucky Regions for SHIFT

**PL-902.4 SCORING BOOST PROCESS**

To facilitate the discussion of local priorities, the SHIFT process allows KYTC districts, ADDs, and MPOs to identify specific projects to “boost” within their respective purview. The boost for regional scoring gives an opportunity to apply more points to projects that have needs unidentifiable through scoring algorithms, such as local economic development and associated traffic increases not captured by the SHIFT scoring process metrics. The process is open and transparent and encourages collaboration and coordination between state and local officials. Figure 24 displays how the “boost” process works within the SHIFT prioritization framework.

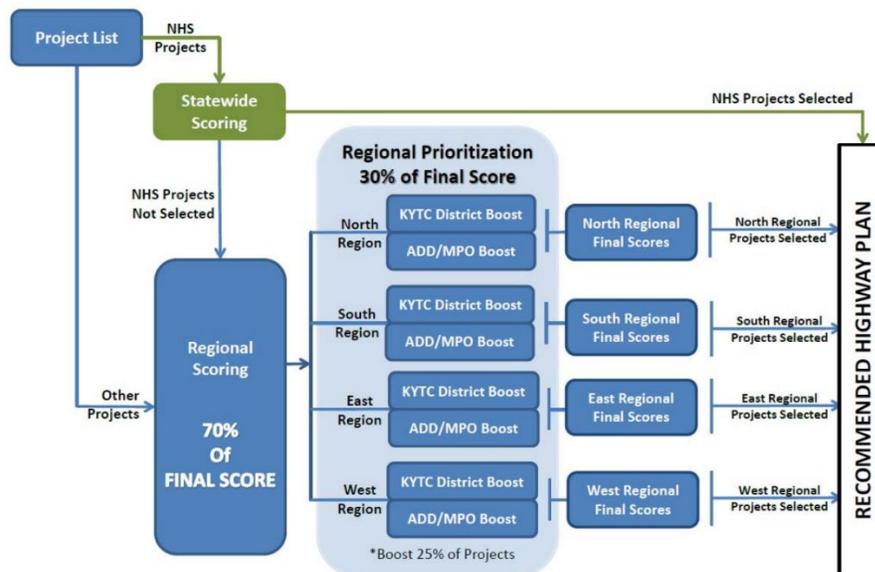


Figure 24. SHIFT Scoring Boost Process





<b>“3C”</b>	Continuing, Comprehensive, and Cooperative Planning Process
<b>AADT</b>	Annual Average Daily Traffic
<b>AASHTO</b>	American Association of State Highway and Transportation Officials
<b>ADA</b>	Americans with Disabilities Act
<b>ADD</b>	Area Development District
<b>ADHS</b>	Appalachian Development Highway System
<b>ARC</b>	Appalachian Regional Commission
<b>ATR</b>	Automatic Traffic Recorders
<b>AWP</b>	ADD Annual Work Program
<b>BR</b>	Bike Route
<b>CAA</b>	Clean Air Act
<b>CFR</b>	Code of Federal Regulation
<b>CHAF</b>	Continuing Highway Analysis Framework
<b>CMAQ</b>	Congestion Mitigation and Air Quality Program
<b>DAQ</b>	Division of Air Quality, Kentucky Energy and Environment Cabinet
<b>DEA</b>	Division of Environmental Analysis
<b>DNA</b>	Data Needs Analysis Process
<b>DTP</b>	District Transportation Planning Process

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<b>EEC</b>	Excess Expected Crashes
<b>EPA</b>	Environmental Protection Agency
<b>ESRI</b>	Environmental Systems Research Institute
<b>FAA</b>	Federal Aviation Administration
<b>FAF</b>	Freight Analysis Framework
<b>FAST Act</b>	Fixing America's Surface Transportation Act
<b>FBD</b>	Ferry Boat Discretionary Grant Program
<b>FBP</b>	Ferry Boat Program Formula Funds Grant
<b>FH</b>	Forest Highways
<b>FHWA</b>	Federal Highway Administration
<b>FMIS</b>	Financial Management Information System
<b>FRA</b>	Federal Rail Administration
<b>FTA</b>	Federal Transit Administration
<b>FY</b>	Fiscal Year
<b>GHSA</b>	Governor's Highway Safety Association
<b>GIS</b>	Geographic Information System
<b>GPS</b>	Global Positioning System
<b>HIS</b>	Highway Information System
<b>HPMS</b>	Highway Performance Monitoring System
<b>HSIP</b>	Highway Safety Improvement Program
<b>IJS</b>	Interchange Justification Study
<b>IMR</b>	Interchange Modification Report
<b>ISTEA</b>	Intermodal Surface Transportation Efficiency Act of 1991

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<b>KAR</b>	Kentucky Association of Riverports Kentucky Administrative Regulation
<b>KBBC</b>	Kentucky Bicycle and Bikeway Commission
<b>KBT</b>	Kentuckians for Better Transportation
<b>KFACT</b>	Kentucky Freight Advisory Committee for Transportation
<b>KFP</b>	Kentucky Freight Plan
<b>KIPDA</b>	Kentuckiana Regional Planning and Development Agency
<b>KPDES</b>	Kentucky Pollutant Discharge Elimination System
<b>KPTIA</b>	Kentucky Public Transportation Infrastructure Authority
<b>KRCI</b>	Kentucky Rail Crossing Improvement Program
<b>KRI</b>	Kentucky Riverport Improvement Program
<b>KRS</b>	Kentucky Revised Statutes
<b>KSRP</b>	Kentucky Statewide Rail Plan
<b>KTC</b>	Kentucky Transportation Center
<b>KYOVA</b>	Kentucky, Ohio and West Virginia Regional Agency
<b>KYSTM</b>	Kentucky Statewide Travel Demand Model
<b>KYTC</b>	Kentucky Transportation Cabinet
<b>LPA</b>	Local Public Agency
<b>LRS</b>	Linear Referencing System
<b>L RTP</b>	Long Range Transportation Plan
<b>LRSTP</b>	Long Range Statewide Transportation Plan
<b>MAP-21</b>	Moving Ahead for Progress in the 21st Century Act
<b>MOVES</b>	Motor Vehicle Emission Simulator
<b>MPH</b>	Miles Per Hour
<b>MPO</b>	Metropolitan Planning Organization
<b>MS4</b>	Municipal Separate Storm Sewer System

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<b>MTP</b>	Metropolitan Transportation Plan
<b>MUTCD</b>	Manual on Uniform Traffic Control Devices
<b>MVEB</b>	Motor Vehicle Emission Budgets
<b>NAAQC</b>	National Ambient Air Quality Standards
<b>NBI</b>	National Bridge Inventory
<b>NHFP</b>	National Highway Freight Program
<b>NHN</b>	National Highway Network
<b>NHPP</b>	National Highway Performance Program
<b>NHS</b>	National Highway System
<b>NKY</b>	Northern Kentucky
<b>NN</b>	National Truck Network
<b>OKI</b>	Ohio-Kentucky-Indiana Regional Council of Governments
<b>OLP</b>	Office of Local Programs
<b>PBPP</b>	Performance-Based Planning and Programming
<b>PGM</b>	Planning Guidance Manual
<b>PHMSA</b>	Pipeline and Hazardous Materials Safety Administration
<b>PIF</b>	Project Identification Form
<b>PL</b>	Federal Metropolitan Planning Funds
<b>PM</b>	Particulate Matter
<b>RCI</b>	Railroad Crossing Inventory
<b>RDT</b>	Research, Development, and Technology
<b>RS</b>	Rural Secondary Road

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<b>SAH</b>	Federal STP Funds Dedicated to Huntington/Ashland
<b>SAFETEA-LU</b>	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
<b>SHIFT</b>	Strategic Highway Investment Formula for Tomorrow
<b>SHN</b>	Federal STP Funds Dedicated to Henderson
<b>SHSP</b>	Strategic Highway Safety Plan
<b>SIP</b>	State Air Quality Implementation Plan
<b>SLO</b>	Federal STP Funds Dedicated to Louisville
<b>SLX</b>	Federal STP Funds Dedicated to Lexington
<b>SNK</b>	Federal STP Funds Dedicated to Northern Kentucky
<b>SP</b>	State Project Funding
<b>SPR</b>	State Planning and Research Funds
<b>SPRS</b>	State Primary Road System
<b>SS</b>	State Secondary Road
<b>STAA</b>	Surface Transportation Assistance Act
<b>STBG</b>	Surface Transportation Block Grant Program
<b>STIP</b>	Federally Required Statewide Transportation Improvement Program
<b>STP</b>	Statewide Transportation Plan or Surface Transportation Program
<b>STRAHNET</b>	Strategic Defense Highway Network
<b>SUA</b>	Small Urban Area (< 50,000 population)
<b>SYP</b>	Six-Year Highway Plan
<b>TA</b>	Federal Transportation Alternatives Program
<b>TAMP</b>	Transportation Asset Management Plan
<b>TAP</b>	Transportation Alternatives Program
<b>TEA-21</b>	Transportation Equity Act for the 21st Century
<b>TED</b>	Transportation Enterprise Database

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<b>TIP</b>	Federally Required Metropolitan Transportation Improvement Plan
<b>TMA</b>	Transportation Management Area
<b>TRADAS</b>	Traffic County Processing Database
<b>UNL</b>	Unscheduled Needs List
<b>UPL</b>	Unscheduled Projects List
<b>USACE</b>	United States Army Corps of Engineers
<b>USDOT</b>	United States Department of Transportation
<b>USEPA</b>	United States Environmental Protection Agency
<b>VHD</b>	Vehicle Hours of Delay
<b>VMT</b>	Vehicle Miles Traveled
<b>VSF</b>	Volume to Service Flow Ratio
<b>WCUS</b>	Waterborne Commerce of the United States
<b>WIM</b>	Weigh-in-Motion
<b>WTAB</b>	Water Transportation Advisory Board



**Adequacy Rating**

A numerical score from 0 to 100 evaluating the current condition of a roadway segment based on congestion, safety, and pavement condition.

**Air Cargo (A/G)  
(or airfreight carriers, and  
derivatives of these names)**

Airlines dedicated to the transport of cargo. Some cargo airlines are divisions or subsidiaries of larger passenger airlines.

**Air Carrier**

The commercial system of air transportation comprising large certificated air carriers, small certificated air carriers, commuter air carriers, on-demand air taxis, supplemental air carriers, and air travel clubs.

**American Association of State  
Highway and Transportation  
Officials (AASHTO)**

An organization of state Departments of Transportation.

**Americans with Disabilities  
Act (ADA)**

Americans with Disabilities Act of 1990 – The ADA requires accessible public transportation services and facilities for persons with disabilities, including supplemental service in areas where fixed route transit service is operated.

**Annual Average Daily  
Traffic (AADT)**

Average daily traffic on a roadway link for all days of the week during a period of one year, expressed in VPD (vehicles per day).

**Appalachian Development  
Highway System (ADHS)**

An administrative designation of a highway system in the Appalachian Regional Commission (ARC) region of Kentucky.

**Appalachian Regional Commission (ARC)**

A regional economic development agency that represents a partnership of federal, state, and local government. Established by an act of Congress in 1965, ARC is composed of the governors of the 13 Appalachian states and a federal co-chair, who is appointed by the president. Local participation is provided through multi-county local development districts.

**Area Development District (ADD)**

Kentucky's counties are grouped into 15 regions known as Area Development Districts (ADDs). The ADDs contract annually with the KYTC to facilitate a Public and Local Officials Transportation Committee. The primary objective is to obtain information identifying proposed regional needs for use in conjunction with the UNL and prioritized every two years, which is then provided as input to the Kentucky Transportation Cabinet's Biennial Highway Plan.

**At-grade**

Typically referring to railroad or other crossings where the road and railroad intersect on the same level or grade.

**Average Daily Traffic (ADT)**

The total traffic volume during a given period of time, range from 2 days to 364 consecutive days, divided by number of days in that time period, and expressed in VPD (vehicles per day.)

**Bridge Replacement and Rehabilitation**

A funding category for Federal Highway Trust Funds to be used for replacing and rehabilitating bridges. These funds may be used, within certain limits, on locally-maintained as well as state-maintained bridges.

**BUILD Grants**

Federal "Better Utilizing Investments to Leverage Development" Grants for use in achieving national transportation objectives.

**CHAF**

The Continuing Highway Analysis Framework that is used to support the Division of Planning's SHIFT prioritization process. This database contains background project information, maps, etc. specifically related to proposed projects, their scope, and their scope.

**Class I Railroad**

Class I Railroads, as defined by the Surface Transportation Board for 2017, are those having annual gross revenue of \$447.6 million or more.

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<b>Class II Railroad</b>	Class II Railroads, also referred to as regional railroads, are those having annual gross revenue greater than \$35.8 million but less than \$447.6 million.
<b>Class III Railroad</b>	Class III railroads are those having annual gross revenue less than \$35.8 million.
<b>Clean Air Act (CAA)</b>	The CAA was amended in 1990 (often referred to as the Clean Air Act Amendment) and imposes more stringent requirements for State Implementation Plans to improve air quality. The Environmental Protection Agency published the Transportation Conformity Rule in the Federal Register on November 24, 1994 (40 CFR 51). This rule established the criteria and procedures for determining that transportation plans, programs and projects, which are approved in 23 United States Code or the Federal Transit Act, conform to the state or federal air quality implementation plans.
<b>Congestion Mitigation Air Quality (CMAQ)</b>	A categorical Federal-aid funding program created with the ISTEA. This program directs funding to projects that contribute to meeting National air quality standards. CMAQ funds generally may not be used for projects that result in the construction of new capacity available to SOVs (single-occupant vehicles).
<b>Dam</b>	A barrier that impounds water, generally used to retain water and manage water flow.
<b>Data Needs Analysis (DNA)</b>	The Kentucky Transportation Cabinet (KYTC) conducts Data Needs Analysis (DNA) Studies on projects that have had no previous planning activity or a study prior to the Design phase. The purpose of DNA studies is to better define the scope of the project, identify environmental concerns early in the process and determine if the funds allocated in the Highway Plan are adequate for the project.

**District Transportation Planning (DTP) Process**

The KYTC DTP process provides the support through which projects may progress from an idea to the Highway Plan. This will ensure that projects move forward, meet the goals and objectives of both the Transportation Cabinet and the Highway District Offices, and have a data-driven foundation for their inclusion into a future Highway Plan. The intent is to complement the current metropolitan and regional planning processes, which provide for public involvement and local official input, with an engineering review. By providing quantifiable information related to needs and deficiencies across Kentucky's highway system, optimal decisions concerning the expenditure of available resources for KYTC projects can be made.

**Endangered Species**

The term "endangered species" means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.

**Federal Aviation Administration (FAA)**

A division of the United States Department of Transportation that is responsible for aviation policy and administration.

**Fixing America's Surface Transportation (FAST) Act**

Federal transportation reauthorization legislation enacted on December 4, 2015, as Public Law 114-94. The FAST Act built on changes made by MAP-21 by providing long-term funding certainty for surface transportation. New programs, including a National Multimodal Freight Policy, apportioning funding through a new National Highway Freight Program, and new discretionary grant programs were authorized. The provisions of the FAST Act expire on September 30, 2020.

**Freight Analysis Framework (FAF)**

A federal database that integrates data from a variety of sources to estimate commodity flows and related freight transportation activity among states, regions, and major international gateways.

**Federal Highway Trust Fund**

Dedicated federal fund specifically for transportation projects based primarily on motor fuel tax that was first created in 1956.

**Federal Highway Administration (FHWA)**

A division of the United States Department of Transportation that is responsible for highway policy and funding.

**Federal Interstate Maintenance Funds**

An outdated, but still referenced, Interstate Maintenance (IM) program that provides funding for resurfacing, restoring, rehabilitating and reconstructing (4R) most routes on the Interstate System.

**Federal Rail Administration (FRA)**

Division of the United States Department of Transportation that is responsible for most railroad policy matters. Railroad rates and abandonment proceedings are administered by the Interstate Commerce Commission (ICC).

**Fiscal Year**

The state fiscal year is defined as July 1 through June 30 of a given year for finance purposes. The federal fiscal year is defined as October 1 through September 30 of any given year.

**Federal Transit Administration (FTA)**

A division of the United States Department of Transportation that is responsible for administration of transit programs and grants.

**Fine Particulate Matter (PM 2.5)**

Particulate matter consists of airborne solid particles and liquid droplets. Particulate matter may be in the form of fly ash, soot, dust, fog, fumes, etc. These particles are classified as "coarse" if they are smaller than 10 microns, or "fine" if they are smaller than 2.5 microns. Coarse airborne particles are produced during grinding operations, or from the physical disturbance of dust by natural air turbulence processes, such as wind. Fine particles can be a by-product of fossil fuel combustion, such as diesel and bus engines. Fine particles can easily reach remote lung areas, and their presence in the lungs is linked to serious respiratory ailments such as asthma, chronic bronchitis and aggravated coughing. Exposure to these particles may aggravate other medical conditions such as heart disease and emphysema and may cause premature death. In the environment, particulate matter contributes to diminished visibility and particle deposition (soiling).

**Functional Class  
(system classification)**

Functional classification groups streets and highways into classes or systems according to the character of service they are intended to provide. This classification recognizes that individual roads and streets do not serve travel independently. Rather, travel involves movement through a network of inter-related roads and streets. Because a highway network is limited and restrictive, the movement must be channeled through an efficient, hierarchical system of facilities that progress from a lower classification handling short, locally oriented trips to a higher classification as the trips become longer and connect regional and inter-regional traffic generators. The level of service provided by, and function performed by, each facility within this hierarchical system determines its functional classification. The classifications are as follows: Rural Principal Arterial, Rural Minor Arterial, Rural Collector Road, Rural Local Road, Urban Principal Arterial, Urban Minor Arterial, Urban Collector Street, and Urban Local Road.

**General Aviation**

That portion of civil aviation which encompasses all facets of aviation except air carriers holding a certificate of public convenience and necessity from the Civil Aeronautics Board and large aircraft commercial operators. It represents 92% of U.S. aircraft and more than 65% of U.S. flight hours flown by outside major and regional airlines and the military. Often misunderstood as only small, propeller-driven aircraft, even a large jet or a cargo plane operated under FAR Part 91 can be considered a general aviation aircraft.

**General Aviation Airport (GAA)**

A classification of airports which accommodates small to medium-sized aircraft and provide services for businesses, government and personal aircraft.

**Global Positioning System (GPS)**

A satellite-based navigation system.

**Governors Highway Safety Association (GHSA)**

This non-profit organization based in Washington, DC that represents the state and territorial highway safety offices that implement programs to address behavioral highway safety issues, including the following: occupant protection, impaired driving, and speeding. GHSA provides leadership and advocacy for the states and territories to improve traffic safety, influence national policy, enhance program management and promote best practices.

**Geographic Information System (GIS)**

A computer system used to visualize, question, analyze and interpret data to understand relationships, patterns and trends related to positions on Earth's surface.

**High Occupancy Vehicle Lanes**

Vehicles carrying two or more people. The number that constitutes an HOV for the purposes of HOV highway lanes may be designated differently by different transportation agencies.

**Highway Information System (HIS)**

Kentucky's HIS is a database containing information about highway system assets that is developed and maintained by the Kentucky Transportation Cabinet. Individual databases are maintained as layers in the IMS and can be displayed individually or in combination for use in displaying information about the status of Kentucky's highway system.

**Highway Performance Monitoring System (HPMS)**

A database maintained by each state and provided annually to the FHWA to assess the use, condition, performance, and operational characteristics of the nation's highway infrastructure. HPMS is used to monitor vehicular travel to certify public mileage data, and to facilitate planning and policymaking at the national level.

**High-speed Rail**

A type of rail transport that operates significantly faster than traditional rail traffic, using an integrated system of specialized rolling stock and dedicated tracks.

**INFRA Grants**

Federal "Infrastructure for Rebuilding America" Grants for projects that address critical issues facing our nation's highways and bridges.

**Intermodal**

The ability to connect, and the connections between, modes of transportation.

**Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)**

A federal five-year transportation funding act passed in 1991 which changed the approach to transportation funding programs. Through various measures, this act required a greater degree of intermodal coordination, regional, and statewide planning than was required under previous highway and transit funding measures.

**Intelligent Transportation System (ITS)**

A developed integrated system of highway monitoring and information services and technology being developed to allow drivers and public transit users the ability to make optimal use of the transportation network.

**Kentucky Model Procurement Code**

Kentucky Revised Statutes (KRS) 45 and 45A, as further implemented by 200 KAR 5 (Purchasing), sets forth commodity procurement requirements for Kentucky state government agencies.

**Light Rail**

A streetcar-type vehicle operated on city streets, semi-exclusive rights-of-way, or exclusive rights-of-way. Service may be provided by step-entry vehicles or by level boarding.

**Load Carrying Capacity**

This is the weight limit in tons that has been determined that a bridge can safely carry. This is typically determined by our bridge load rating section using acceptable engineering calculations and/or engineering judgment based on the condition of the bridge. If a bridge has a posted weight limit of 15 tons, then it has been determined that bridge can safely carry 15 tons continuously.

**Lock**

A short confined section of a river or other waterway in which the water level can be changed by gates and sluices used for raising and lowering vessels between two gates.

**Manual on Uniform Traffic Control Devices (MUTCD)**

The MUTCD defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. The MUTCD is published by the Federal Highway Administration (FHWA) under 23 Code of Federal Regulations (CFR), Part 655, Subpart F. The MUTCD, which has been administered by the FHWA since 1971, is a compilation of national standards for all traffic control devices, including road markings, highway signs, and traffic signals.

**Metropolitan Planning Organization (MPO)**

A regional planning organization designated as being responsible, together with the state, for conducting the continuing, cooperative, and comprehensive planning process for the Metropolitan Area as designated by the Federal Government (more than 50,000 people). This organization is responsible for the regional planning process for the metropolitan area as required by federal legislation under ISTEA, TEA-21, SAFETEA-LU and MAP-21.

**Motor Vehicle Emission Budgets**

The portion of the total allowable emissions defined in the submitted or approved control strategy implementation plan revision or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the National Ambient Air Quality Standards (NAAQS), for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions.

**Moving Ahead for Progress in the 21st Century Act (MAP-21)**

Is a federal regulation signed into law in 2012 to fund surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014. MAP-21 was the first long-term highway authorization enacted since 2005. It was a milestone for the U.S. economy and the Nation's surface transportation program. By transforming the policy and programmatic framework for investments to guide the system's growth and development, MAP-21 creates a streamlined and performance-based surface transportation program and built on many of the highway, transit, bike, and pedestrian programs and policies established in 1991.

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<b>National Highway System (NHS)</b>	This network of interstate and state highway systems which serve longer distance mobility needs, are important to the nation's economy, defense, and mobility, and are eligible for matching federal funds for capital improvements as designated and approved in accordance with the provisions of (23 U.S.C. 103b) (23CFR500).
<b>National Truck Network (NN)</b>	In compliance with the Surface Transportation Assistance Act of 1982 (STAA) and DOT Appropriations Act of 1983 and KRS 189.222, Kentucky has established a network of highways on which motor vehicles with increased dimensions (STAA vehicles) may operate on state-maintained highways five (5) driving miles from the designated system and fifteen (15) miles from an interstate or parkway exit for the purpose of attaining reasonable access to terminals, facilities for food, fuel, repairs, or rest. The allowed access is reduced to one (1) driving mile from the designated system on public use highways which are not state-maintained.
<b>Ozone</b>	A colorless gas with a sweet odor. Ozone is not a direct emission from transportation sources. It is a secondary pollutant formed when VOCs and NOx combine in the presence of sunlight. Ozone is associated with smog or haze conditions. Although the ozone in the upper atmosphere protects us from harmful ultraviolet rays, ground-level ozone produces an unhealthy environment in which to live. Ozone is created by human and natural sources.
<b>Performance-Based Planning and Programming (PBPP)</b>	A system-level, knowledge-driven process that builds upon the concept of "performance management". PBPP refers to the application of performance management within the planning and programming process of transportation agencies to achieve desired performance outcomes for the multimodal transportation system. This includes a range of activist and products undertaken by a transportation agency together with other agencies, stakeholders, and public as part of a 3 C (cooperative, continuing, and comprehensive) process.
<b>Performance Management</b>	A strategic approach that uses data to support decisions which help to achieve the desired outcomes. Those desired outcomes support the overall aims of a transportation plan: the goals and the vision.

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<b>Project Identification Form (PIF)</b>	This is a secured web application that houses the pertinent data used in tracking, analyzing and prioritizing all UNL and UPL projects. The KYTC Division of Planning facilitates the development and revision of this application and processes. Maps and pictures for the project may also be attached in this database.
<b>Rural Secondary Program</b>	The Rural Secondary (RS) Program is funded by 22.2% of the motor fuels tax revenue. These funds are used for the construction, reconstruction and maintenance of secondary and rural roads in each county. Allocation of RS funds is determined using the Fifts Formula. The Transportation Cabinet is responsible for expending all Rural Secondary Program funds.
<b>Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)</b>	The federal transportation reauthorization legislation, enacted August 10, 2005, as Public Law 109-59. SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009 and continued many of the provisions of TEA-21, but also further emphasized and elevated the importance of safety and security, further coordination of statewide planning with the metropolitan areas, consultation with local elected officials, and continued public involvement.
<b>Section 106 Consulting parties</b>	Section 106 of the National Historic Preservation Act states that certain individuals and organizations with demonstrated interest in the undertaking may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties. Consulting parties participate in the process of identifying historic properties that may be affected by the project, providing input regarding the effects that the project may have on these properties and assisting in the development of appropriate mitigative measures to resolve any adverse effects. Consulting parties as identified in 36 CFR 800.2(c) may include but not be limited to federally recognized Indian Tribes, Tribal Historic Preservation Officers, National Park Service, and Local Governments.

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<b>SHIFT</b>	The Strategic Highway Investment Formula for Tomorrow is a highway project analysis tool that uses safety, congestion, asset management, benefit/cost, and economic growth as metrics for which scores are compiled and projects ranked/prioritized on regional and statewide levels.
<b>Six-Year Highway Plan (SYP)</b>	Mandated by KRS 176.430, the Kentucky Transportation Cabinet develops a listing of both federal and state highway projects with associated phase, location, funding source, year, and cost as approved by the Kentucky General Assembly on a biennial basis.
<b>Small Urban Areas (SUA)</b>	Areas of population greater than 5,000 but less than 50,000 qualify as small urban according to FHWA definitions.
<b>State Implementation Plan (SIP)</b>	Produced by the state environmental agency, not the Metropolitan Planning Organization (MPO). A plan mandated by the Clean Air Act that contains procedures to monitor, control, maintain, and enforce compliance with the National Ambient Air Quality Standards (NAAQS). This plan must be considered in the transportation planning process.
<b>State Planning and Research Funds (SPR)</b>	A federal funding category for the planning, research and development of highway programs.
<b>State Primary Road System (SPRS)</b>	Under KRS 177.020 the State Primary Road System classifies state-maintained roadways by the type of service and function they provide. The (603 KAR 3:030) legislation designates the following classes, State Primary System, State Secondary System, Rural Secondary System, Supplemental Roads.
<b>State Road Fund</b>	Dedicated state fund specifically for transportation projects based primarily on the state's motor fuels and vehicle usage taxes.

**Statewide Transportation  
Improvements Program (STIP)**

This program was required under ISTEA, and continued under TEA-21, SAFETEA-LU and MAP-21. The STIP is a capital improvement program for all federally funded state surface transportation (highway, bus and rail) projects which are anticipated for a specified period. The STIP is a subset of the Six-Year Highway Plan and the Statewide Transportation Plan and includes projects for a four-year period. This staged, multi-year, statewide, intermodal program of transportation projects is consistent with the statewide transportation plan and planning processes as well as metropolitan plans, TIPs, and processes. The STIP must also be financially balanced.

**Statewide Transportation  
Plan (STP)**

Statewide Transportation Plan is a federally required long-range transportation plan for a minimum period of twenty years. The federal legislation requires that a plan be developed for at least a twenty-year period and must include funding information. The document is updated periodically and may include projects or just address state policy.

**Surface Transportation  
Program (STP)**

The Federal Surface Transportation Program is a funding category included under ISTEA and continued under TEA-21 and SAFETEA-LU for transportation roadway projects. The STP funds cannot be used for improvements on a highway, which is functionally classified as a rural minor collector or local road.

**Substructure (bridge)**

The substructure consists of all parts that support the superstructure including the abutments or end-bents, piers or interior bents, footings, and pilings.

**Superstructure (bridge)**

The structural parts of the bridge that provide the horizontal span of the bridge. This is the portion of the bridge above the bridge bearings.

**Terminal**

A station where transport vehicles load or unload passengers or goods.

**Threatened Species**

The term “threatened species” means any species which is likely to become an endangered species within the foreseeable future throughout all or a sizable portion of its range.

**Transportation Equity Act for the 21st Century – 1998 (TEA-21)**

A federal transportation legislation passed in June of 1998 which continued many of the provisions of ISTEA, but also further emphasized the coordination of statewide planning with the metropolitan areas, consultation with local elected officials, and continued public involvement.

**Transportation Improvement Program (TIP)**

A document prepared by a metropolitan planning organization that lists projects to be funded with FHWA/FTA funds for the next one to three-year period. This document identifies the projects for inclusion into the STIP. This document must be financially constrained and must be a direct subset of the area's Long-Range Transportation Plan.

**Transportation Management Area (TMA)**

Is an urbanized areas (UZAs) with populations greater than 200,000 as determined by the 2010 Census as hereby designated by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) in compliance with the agencies' authorizing statutes, 23 U.S.C. 134, and 49 U.S.C. 5303. This action supersedes the agencies' designations of TMAs made in the Federal Register on July 8, 2002, at 67 FR 45173. There are now four TMAs in Kentucky: Louisville, Lexington, Cincinnati/Northern Kentucky, and Evansville/Henderson. The five non-TMA MPOs are as follows: Ashland, Bowling Green, Clarksville, Owensboro, and Radcliff-Elizabethtown.

**United States Army Corps of Engineers (USACE)**

A federal agency under the United States Department of Defense and a major Army command made up of some 36,500 civilian and military personnel, making it one of the world's largest public engineering, design, and construction management agencies. Although generally associated with dams, canals and flood protection in the United States, USACE is involved in a wide range of public works throughout the world. The Corps of Engineers provides outdoor recreation opportunities to the public and provides 24% of U.S. hydropower capacity. Their mission is to "Deliver vital public and military engineering services; partnering in peace and war to strengthen our Nation's security, energize the economy and reduce risks from disasters."

**United States Department of Transportation (USDOT)**

A federal cabinet department of the United States government that was created in 1966 and is governed by the United States Secretary of Transportation. This agency is concerned with transportation and institutes and coordinates national transportation programs. Its mission is to "Serve the United States by ensuring a fast, safe, efficient, accessible, and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future."

**United States Environmental Protection Agency (USEPA)**

A federal agency of the United States government that was created by an act of Congress in 1970 and independent of the executive departments. Its mission is to protect human and environmental health. This agency is responsible for conducting environmental assessments, research and education to create and enforce standards and laws that will promote the health of individuals and the environment.

**Unscheduled Needs List (UNL)**

The unconstrained list of all potential needs or deficiencies identified or suggested for consideration for future additions to the Unscheduled Projects List (UPL). Once used interchangeably with the Unscheduled Projects List, these potential projects represent qualitatively identified or perceived needs and/or deficiencies ("gaps"), which may or may not be supported with data, for which conceptual projects may have been developed but which have not been included in the prioritized UPL.

**Unscheduled Project List (UPL)**

The prioritized list of potential projects for consideration in future versions of the Biennial Highway Plan. Once used interchangeably with "Unscheduled Needs List" (UNL), these projects represent identified needs with data supported deficiencies for which conceptual projects may have been developed but for which there are no current funding commitments.

**Urban Area**

Areas of population greater than 5,000 can qualify as urban as defined by the U.S. Census Bureau. (23 U.S.C. 101(a)(33)). An urban area boundary, which encircles the urbanized area in a region, is developed by states in cooperation with local officials.

- Vehicle Miles Traveled (VMT)** This is a measure of the level of travel activity in an area. The figure is generally found by multiplying the average length of trip by the total number of trips, based on actual traffic counts.
- Volume to Capacity (V/C) Ratio** This is a measurement of the operating capacity of a roadway or intersection where the number of vehicles passing through is divided by the number of vehicles that could theoretically pass through when at capacity. If vehicles (V) divided by capacity (C) is less than one, the facility has additional available capacity. V/C ratios higher than 0.9 for rural roadways and 1.0 for urban roadways indicate congested conditions.
- Volume to Service Flow Ratio (VSF)** The ratio of a facility's actual vehicular traffic volume to its theoretical maximum potential vehicular traffic volume; a ratio higher than about 0.6 indicates traffic volumes are approaching congested conditions.
- Water Transportation Advisory Board (WTAB)** This board was established under KRS through Kentucky legislation as an advisory body to the executive and legislative branches of government on matters pertaining to water transportation.
- Waterborne Commerce of the United States (WCUS)** This document is compiled under the supervision of the Institute for Water Resources, U.S. Army Corps of Engineers and created as a series of publications which provides data, statistics and graphics on the foreign and domestic waterborne commerce moved on the United States waters.





<b><u>TABLE NUMBER</u></b>	<b><u>TABLE TITLE</u></b>	<b><u>MANUAL REFERENCE</u></b>
1	TC 59 Planning Forms.....	201
2	Planning Activity Matrix .....	203
3	Approvals for Planning Consultant Management .....	206
4	Division of Planning Data Collections .....	502

<b><u>FIGURE NUMBER</u></b>	<b><u>FIGURE TITLE</u></b>	<b><u>MANUAL REFERENCE</u></b>
1	Transportation Project Relationships .....	201
2	Division of Planning Organizational Chart .....	202
3	LRSTP Development Process.....	302
4	KY Freight Plan (KFP) Development Process .....	303
5	KY Statewide Rail Plan Development Process .....	304
6	Six-Year Highway Plan Development Process .....	305
7	Planning Work Program Process.....	402
8	Training for KYTC Division of Planning Personnel: Needs Identification and Support .....	403
9	Annual Coal Haul and Extended Weight Highway Systems Update Process .....	503

<b><u>FIGURE NUMBER</u></b>	<b><u>FIGURE TITLE</u></b>	<b><u>MANUAL REFERENCE</u></b>
10	Annual HPMS Reporting Process .....	505
11	KYTC Official Order Process for Highway System Modification .....	603
12	KYTC Official Order Process for SPRS Roadway Closure/Abandonment .....	603
13	Statewide Planning Process .....	703
14	ADD AWP Approval Process .....	703
15	Small Urban Area (SUA) Study Process .....	704
16	Corridor Study Process.....	704
17	Data Needs Analysis (DNA) Study Process .....	704
18	Interchange Justification Study (IJS) Process .....	704
19	Air Quality Planning Process .....	801
20	SHIFT Scoring Components .....	901
21	SHIFT Statewide Scoring Formula.....	902
22	SHIFT Regional Scoring Formula .....	902
23	Kentucky Regions for SHIFT .....	902
24	SHIFT Scoring Boost Process .....	902



 <p>Division of <b>PLANNING</b> Kentucky Transportation Cabinet</p>	<p><i>Chapter</i></p> <p>EXHIBITS</p>
	<p><i>Subject</i></p> <p>Table of Exhibits</p>

<u>EXHIBIT NUMBER</u>	<u>EXHIBIT TITLE &amp; FORM NUMBER</u>	<u>MANUAL REFERENCE</u>
9001	TC 59-7, <i>Consultant Performance Evaluation</i> .....	206.3
9002	Example: Division of Planning Personnel Training.....	403.1
9003	TC 59-100, <i>Coal Shipment Route and Tonnage Report</i> .....	503.6
9004	TC 71-227, <i>Cooperative Agreement for Coal Haul</i> .....	503.6
9005	Example Traffic Count Request.....	504.2
9006	Example Official Order of Acceptance .....	603.1
9007	Example Official Order of Reclassification .....	603.1
9008	Example Official Order of Redefinition .....	603.1
9009	Example Official Order of Transfer .....	603.1
9010	Example Official Order of Closure.....	603.1
9011	Example Official Order of Closure/Abandonment.....	603.1
9012	Example KYTC District Official Order Tracking Sheet.....	603.2
9013	Example Right-of-Way Relinquishment Letter from FHWA .....	603.3
9014	Example Federal Right-of-Way Coordination with KYTC District.....	603.3
9015	Example KYTC District to Local Entity Property Transfer Letter .....	603.3
9016	Example Local Resolution Regarding Property Transfer.....	603.3
9017	Example Finance Cabinet Property Transfer Approval Letter .....	603.3

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9018	Sample USACE Public Notice.....	703.7
9019	Sample USACE Public Notice Internal KYTC Coordination Email .....	703.7
9020	Sample KYTC Response to USACE Public Notice.....	703.7
9021	Blank DNA Scoping Study Form .....	704.4





Kentucky Transportation Cabinet  
Division of Planning

TC 59-7  
03/2016

CONSULTANT PERFORMANCE EVALUATION

NAME & ADDRESS OF CONSULTANT:		PROJECT IDENTIFICATION:								
<b>CONTRACT DATA</b>										
Contract No:		Type of Work:		Type of Contract:		Notice to Proceed Date:				
Amount of Original Contract:		Total Amount of Modifications:			Total Amount of Contract:					
Date Contract Awarded:		Contracted Completion Date (Including Extensions):			Actual Completion Date:					
NAME OF SUBCONSULTANTS AND TYPE OF WORK:										
<b>RATING CATEGORIES</b>				<b>RATINGS</b>						
				4	3	2	1	0*	Wgt**	Tot
<b>A. PROJECT MANAGEMENT</b>	MANAGEMENT	a. Project Meetings	Attended All <input checked="" type="checkbox"/>	Attended Most <input type="checkbox"/>	Attended Some <input type="checkbox"/>	Attended Few <input type="checkbox"/>		1	4	
		b. Leadership	Followed Project Objectives/Guidelines <input checked="" type="checkbox"/>	Some Guidance Required <input type="checkbox"/>	Frequent Guidance Required <input type="checkbox"/>	Continual Guidance Required <input type="checkbox"/>		2	8	
	PROJECT MANAGER	a. Organization/ Preparedness & Capability	Well Organized No Oversights <input checked="" type="checkbox"/>	Minor Oversights <input type="checkbox"/>	Frequent Oversights <input type="checkbox"/>	Major Oversights <input type="checkbox"/>		2	8	
		a. Reasonable Fee	No Disagreements In Negotiations <input checked="" type="checkbox"/>	Minor Disagreements In Negotiations <input type="checkbox"/>	Few Disagreements In Negotiations <input type="checkbox"/>	Major Disagreements In Negotiations <input type="checkbox"/>		1	4	
	COORDINATION/ TIMELINESS	b. Responsiveness	All Requests Quickly Resolved <input checked="" type="checkbox"/>	Most Requests Resolved in Reasonable Time <input type="checkbox"/>	Some Requests Resolved in Reasonable Time <input type="checkbox"/>	Few Requests Resolved in Reasonable Time <input type="checkbox"/>		2	8	
		c. Schedule (see criteria below)	All Completion Dates Met <sup>1</sup> <input checked="" type="checkbox"/>	Most Completion Dates Met <sup>2</sup> <input type="checkbox"/>	Few Completion Dates Met <sup>3</sup> <input type="checkbox"/>	No Completion Dates Met <sup>4</sup> <input type="checkbox"/>		4	16	
		d. Relationships	Received/Responded Well to Constructive Criticism <input checked="" type="checkbox"/>	Responded Favorably to Most Recommendations <input type="checkbox"/>	Responded Favorably to Some Recommendations <input type="checkbox"/>	Did not Respond Favorably to Constructive Criticism <input type="checkbox"/>		1	4	
		e. Direction of Subs	Provided Excellent Guidance <input checked="" type="checkbox"/>	Required Some Department Guidance <input type="checkbox"/>	Required Frequent Department Guidance <input type="checkbox"/>	Inadequate Guidance <input type="checkbox"/>		1	4	
		f. Contract Administration	Required Submittals Timely and Accurate <input checked="" type="checkbox"/>	Most Submittals on Time with Few Mistakes <input type="checkbox"/>	Late Submittals and/or Numerous Mistakes <input type="checkbox"/>	Many Resubmittals Required <input type="checkbox"/>		1	4	
		GENERAL RATING SCALE		POSSIBLE RATING OF 100 POINTS				TOTAL		100
Poor (0-69) Fair (70-79) Good (80-89) Excellent (90-100)		General Rating				EXCELLENT				
(Name & Title)		Signature:				Date:				
Rated By:		Signature:				Date:				
Concurred by:		Signature:				Date:				
Comments:										

<sup>1</sup> 100% of completion dates met.  
<sup>2</sup> 75-99.9% of completion dates met.  
<sup>3</sup> 50-74.9% of completion dates met.  
<sup>4</sup> 0-49.9% of completion dates met.  
 \* Zero rating indicates extreme dissatisfaction with the performance in this category.  
 \*\* Weight varies by type of project. Weight is to be assigned so maximum total points equal 100.

Chapter 2 Personnel Training	SPR Work Program	Personnel Training	Traffic and Equipment Management	Roadway Systems	Cartography	Highway Information System	Strategic Corridor Planning	Statewide Transportation Planning	Metropolitan Planning Organizations	Performance Measures and Congestion/ Mobility Analysis	Air Quality	Multimodal Transportation	Traffic Data Forecasting	Bicycle and Pedestrian Program	Highway Safety Improvement Program	Quality Assurance
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>Conferences</b>																
GIS T						X	X	X		X						
GIS-KYTC						X				X		X	X	X		
KAMP Annual Meeting				X	X	X										
COGNA Annual Meeting																
HIS Conf						X					X	X	X	X		
Asset Mangement Conf										X		X				
Bentley Training Conf						X										
HIDAC						X										
ACEC Partnering Conference			X			X	X	X	X	X	X	X	X	X		
TRB Annual Meeting						X	X	X	X	X	X	X	X	X		
TRB Tools of the Trade: Small and Medium Communities									X	X	X	X	X	X		
National Freight Conf												X				
Bicycle and Pedestrian Facilities Conf							X	X	X					X		
ITE Section Conference									X			X	X	X		
American Planners Association							X	X	X		X	X	X	X		
AMPO									X							
NADO																
North American Travel Monitoring Expo & Conf										X			X			
AASHTO Standing Committees						X	X	X	X	X	X	X	X	X		
The Committee for Non Motorized Transportation														X		
TRB Workgroups/Research						X	X	X	X	X	X	X	X	X		
WVDOH Planning Conference									X			X	X	X		
Ohio Planning Conference									X			X	X	X		

Chapter 2 Personnel Training	SPR Work Program	Personnel Training	Traffic and Equipment Management	Roadway Systems	Cartography	Highway Information System	Strategic Corridor Planning	Statewide Transportation Planning	Metropolitan Planning Organizations	Performance Measures and Congestion/ Mobility Analysis	Air Quality	Multimodal Transportation	Traffic Data Forecasting	Bicycle and Pedestrian Program	Highway Safety Improvement Program	Quality Assurance
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>Training Events</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PEEK																
TMG													X			
High Desert Jackalope Training			X							X			X			
Adobe Illustrator					X								X			
Microstation				X	X	X	X	X	X							
HPMS						X				X		X	X			
Business Objects Training						X		X		X		X	X			
SQL Training						X				X			X			
Visual Basic (macros)						X				X			X			
Bentley InRoads							X	X	X							
Public Involvement in Transportation Decision Making Process											X	X	X	X		
Effective Communications in Public Involvement											X	X	X	X		
Fundamentals of Title VI/EJ							X	X	X		X	X		X		
Practical Conflict Management Skills for Env Issues											X					
Highway Capacity 2010							X	X	X	X		X	X			
KYTC Traffic Engineering Design							X	X	X				X	X		
Public Involvement							X	X	X		X	X	X	X		
Road Safety Audit Training							X	X	X			X		X		
Highway Safety Manual Training							X	X	X					X		
Purpose and Needs Statement Training														X		



Kentucky Transportation Cabinet  
Division of Planning

**COAL SHIPMENT ROUTE AND TONNAGE REPORT**

TC 59-100  
1/2013

REPORTING PERIOD (Year, Months): \_\_\_\_\_

REPORTING COMPANY: \_\_\_\_\_  
 Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Local Contact Person: \_\_\_\_\_ Severance Tax No: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Email Address: \_\_\_\_\_

**Coal Shipment Route and Tonnage Report #1**

1. ORIGIN/Name of Unit: \_\_\_\_\_ County \_\_\_\_\_ Permit # \_\_\_\_\_  
 Latitude ° ' " Longitude ° ' " File # \_\_\_\_\_  
 Type of Operation:  Prep Plant/Tipple  Surface Mine  Underground Mine  Other  
 If other, please specify): \_\_\_\_\_

2. NAME OF DESTINATION \_\_\_\_\_ Road \_\_\_\_\_ County \_\_\_\_\_

3. TONS TRUCKED from ONE ORIGIN to ONE DESTINATION \_\_\_\_\_

List below all State, County, and/or City roads used from above ORIGIN to DESTINATION

COUNTY	ROUTE #	ROAD NAME	BEGMILEPOINT*	DIRECTION	ENDMILEPOINT*	LENGTH

**Coal Shipment Route and Tonnage Report #2**

1. ORIGIN/Name of Unit: \_\_\_\_\_ County \_\_\_\_\_ Permit # \_\_\_\_\_  
 Latitude ° ' " Longitude ° ' " File # \_\_\_\_\_  
 Type of Operation:  Prep Plant/Tipple  Surface Mine  Underground Mine  Other  
 If other, please specify): \_\_\_\_\_

2. NAME OF DESTINATION \_\_\_\_\_ Road \_\_\_\_\_ County \_\_\_\_\_

3. TONS TRUCKED from ONE ORIGIN to ONE DESTINATION \_\_\_\_\_

List below all State, County, and/or City roads used from above ORIGIN to DESTINATION

COUNTY	ROUTE #	ROAD NAME	BEGMILEPOINT*	DIRECTION	ENDMILEPOINT*	LENGTH

**Coal Shipment Route and Tonnage Report #3**

1. ORIGIN/Name of Unit: \_\_\_\_\_ County \_\_\_\_\_ Permit # \_\_\_\_\_  
 Latitude ° ' " Longitude ° ' " File # \_\_\_\_\_  
 Type of Operation:  Prep Plant/Tipple  Surface Mine  Underground Mine  Other  
 If other, please specify): \_\_\_\_\_

2. NAME OF DESTINATION \_\_\_\_\_ Road \_\_\_\_\_ County \_\_\_\_\_

3. TONS TRUCKED from ONE ORIGIN to ONE DESTINATION \_\_\_\_\_

List below all State, County, and/or City roads used from above ORIGIN to DESTINATION

COUNTY	ROUTE #	ROAD NAME	BEGMILEPOINT*	DIRECTION	ENDMILEPOINT*	LENGTH

\*MILEPOINT information available on-line on the interactive map at <http://maps.kytc.ky.gov/photolog/?config=GeneralHighway>, the route log query at [http://apps.transportation.ky.gov/DML\\_Reports/Official\\_MP\\_RL\\_params.aspx](http://apps.transportation.ky.gov/DML_Reports/Official_MP_RL_params.aspx), at the Highway District Office, or from the Division of Planning at 502-584-7183. \*\*Form available electronically from the Division of Planning, Roadway Systems Team or at <http://transportation.ky.gov/Planning/Pages/Coal-Haul.aspx>.



Kentucky Transportation Cabinet  
Division of Maintenance  
**COOPERATIVE AGREEMENT**

TC 71-227  
08/2008  
Page 1 of 5

THIS AGREEMENT, entered into this \_\_\_\_ day of \_\_\_\_, 20\_\_\_\_, between the Department of Highways, Transportation Cabinet, Commonwealth of Kentucky and \_\_\_\_ with an address of \_\_\_\_, hereinafter referred to as "Company".

WHEREAS, the Company desires to transport coal on state-maintained highways in vehicles weighing in excess of the weight limits established by the Secretary of Transportation pursuant to KRS 189.222 on certain specified routes; and

WHEREAS, pursuant to the provisions of KRS 177.979 the Department of Highways is authorized to enter into cooperative agreements providing for an equitable apportionment of the incremental costs to the Commonwealth of Kentucky resulting from such overweight transportation; and

WHEREAS, the Department of Highways has certified that all road segments and bridges covered by this agreement as listed in the *Certified Transportation Plan* (TC 71-9 form) attached hereto are a part of the state-maintained system of highways; and

WHEREAS, the Company would like to transport coal at extended weights on segments of state-maintained roads listed in the *Certified Transportation Plan* (TC 71-9 form).

NOW THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth and the provisions of KRS 177.979, the parties hereby agree as follows:

- (1) Except as provided, below, the Company shall indemnify and hold harmless the Commonwealth of Kentucky, Transportation Cabinet, its officers, agents, and employees from all suits, actions, or claims for injuries or damages sustained as a result of the Company's hauling of coal as provided in this agreement in vehicles whose gross vehicle weight exceeds the weight limits established pursuant to KRS 189.222.
- (2) All obligations incurred under this agreement are subject to any law or administrative regulation now existing.
- (3) In carrying out any of the provisions of this agreement or in exercising any power or authority granted to them by or within the scope of this agreement, no personal or individual liability shall be threatened or imposed upon the Secretary of Transportation, the Commissioner of Highways, the State Highway Engineer, or their authorized representatives in their personal individual capacities. In all such matters, these officials are acting solely as agents and representatives of the Commonwealth.
- (4) This agreement may be amended at any time upon the written mutual agreement of both parties. Further, this agreement may be terminated by the Transportation Cabinet, Department of Highways upon 30 days written notice to the Company. This agreement may be terminated by the Company upon written notice to the Transportation Cabinet, Department of Highways. However, such termination by the Transportation Cabinet, Department of Highways or the Company shall not relieve the Company of any contractual obligations incurred prior to said cancellation.
- (5) The Company shall furnish sufficient labor, materials, and equipment or funds to restore the road segments and bridges listed in the *Certified Transportation Plan* (TC 71-9 form)



Kentucky Transportation Cabinet  
Division of Maintenance  
**COOPERATIVE AGREEMENT**

TC 71-227  
08/2008  
Page 2 of 5

to a condition mutually agreed to by both parties as being equal to that which existed prior to the commencement of the hauling of coal pursuant to this agreement and to fulfill all obligations incurred by the Company under this agreement prior to the effective date of such termination.

- (6) It is understood by both parties that it is the intention of the Company to terminate this cooperative agreement after 50,000 tons of coal have been transported under this agreement. After the Company has fulfilled the following conditions, the road segments shall be eligible for immediate inclusion in the Extended Weight Coal and Coal By-Products Haul Road System:
- (a) Furnished sufficient labor, materials, and equipment or money to restore the road segments listed in the *Certified Transportation Plan* (TC 71-9 form) to a condition mutually agreed to by both parties as being equal to that which existed prior to the commencement of the hauling of coal pursuant to this agreement;
  - (b) Transported at least 50,000 tons of coal over the road segments;
  - (c) Reported the coal transportation to the Transportation Cabinet on the forms required by KRS 177.977 and 603 KAR 5:115; and
  - (d) Satisfied any other obligations incurred by the Company under this agreement.

The Transportation Cabinet shall execute an Official Order to include the road segments in the Extended Weight Coal and Coal By-Products Haul Road System.

- (7) It is agreed and understood that if there is a change in any of the conditions under which this agreement was executed, the Secretary of the Transportation Cabinet may suspend, alter, amend, or modify the terms and conditions of this agreement or may alter the classification of any road or bridge listed in the *Certified Transportation Plan* (TC 71-9 form) if deemed such action is necessary to promote the safety and convenience of the traveling public. In emergencies, the immediate posting or closing of a road or bridge may be affected without notice to the Company. Should such suspension, alteration, amendment, or modification result in a substantial change in the character of the Company's operations or its contractual performance as required, the parties herein may terminate this agreement or execute a supplemental agreement to provide an equitable adjustment in the terms of this agreement in accordance with paragraph 4.
- (8) The Company shall not load or cause to be loaded or operate or cause to be operated any vehicle in excess of the gross weights specified in this agreement on the road segments specified in the *Certified Transportation Plan* (TC 71-9 form).
- (9) This agreement shall not be construed as changing the trucking weight classification of the roads listed in the *Certified Transportation Plan* (TC 71-9 form) and it does not indicate a willingness by the Transportation Cabinet to allow overweight hauling except by permit or agreement.
- (10) No cartage or commodity other than coal may be transported under the terms of this agreement in vehicles whose dimensions, gross weight, gross axle weight, or tire weight exceed the limits prescribed by the Secretary of Transportation pursuant to KRS 189.222.
- (11) The Department of Highways may furnish any necessary supervision and inspection on any road construction project undertaken by the Company under this agreement. The



Kentucky Transportation Cabinet  
 Division of Maintenance  
**COOPERATIVE AGREEMENT**

TC 71-227  
 08/2008  
 Page 3 of 5

Company shall furnish all labor, materials, equipment, tools, and supplies or funds deemed necessary by the Department to adequately perform maintenance and traffic operations on the road(s) and bridge(s) listed in the *Certified Transportation Plan* (TC 71-9 form) that are designated for maintenance.

- (12) The Company agrees that upon notification from the Department of Highways, it shall timely provide for the design, construction, reconstruction or maintenance over and above normal routine maintenance pursuant to KRS 177.979 for the road segments covered by this agreement.
- (13) The maximum gross weights (including vehicle and load that may be transported pursuant to this plan shall not exceed the maximum weights listed below:

Weight	Truck Type*
_____ Lbs.	IV
_____ Lbs.	V

\* Truck types are identified in 603 KAR 5:230.

- (14) Prior to receiving authorization to begin transporting coal pursuant to this cooperative agreement, the Company shall file with the Transportation Cabinet, Department of Highways a corporate bond, cash bond, or securities in the amount of \$ \_\_\_\_\_. The Company shall be the principal obligor and the Transportation Cabinet, Department of Highways shall be the obligee. The bond shall be conditioned upon the Company's compliance with the terms of this cooperative agreement and shall remain in full force and effect until released by the Transportation Cabinet, Department of Highways.
- (15) The Company acknowledges its sole responsibility for damage to a county road or city street that it utilized as part of the Company's transportation route.
- (16) The Company shall keep accurate records of coal tonnage transported pursuant to this agreement. Said records shall be available for audit by the Transportation Cabinet upon reasonable notice.
- (17) If any term or provision, or any part of any term or provision of this agreement is held to be unenforceable, it shall be severed as narrowly as possible, and the remaining terms and provisions shall be enforced in accordance with the tenor of this agreement.
- (18) The Company and the Cabinet agree that this agreement is made and entered into in the Commonwealth of Kentucky and shall in all respects be interpreted, enforced, and governed under the laws of said Commonwealth. The Company and the Cabinet agree that the venue of any action to enforce and/or interpret the provisions of said agreement shall be Franklin Circuit Court.
- (19) This agreement is non-transferable and shall not be assigned without the written consent of the Transportation Cabinet, Department of Highways.



Kentucky Transportation Cabinet  
Division of Maintenance  
**COOPERATIVE AGREEMENT**

TC 71-227  
08/2008  
Page 4 of 5

Cooperative Coal Haul Agreement with \_\_\_\_\_ in  
\_\_\_\_\_ County.

APPROVAL RECOMMENDED BY:

\_\_\_\_\_  
Chief District Engineer                      Highway District No.

APPROVAL AND RECOMMENDED BY:

\_\_\_\_\_  
State Highway Engineer

APPROVED AS TO FORM AND LEGALITY:

\_\_\_\_\_  
Executive Director, Office of Legal Services

EXECUTED ON BEHALF OF: Transportation Cabinet

BY: \_\_\_\_\_  
Secretary of Transportation



Kentucky Transportation Cabinet  
Division of Maintenance  
**COOPERATIVE AGREEMENT**

TC 71-227  
08/2008  
Page 5 of 5

EXECUTED ON BEHALF OF: \_\_\_\_\_  
Company Name

BY: \_\_\_\_\_  
Authorized Representative

I hereby affirm that I am the appropriate official with COMPANY to execute this agreement and full authority to do so. In addition, I affirm that the COMPANY has voluntarily entered into this cooperative agreement.

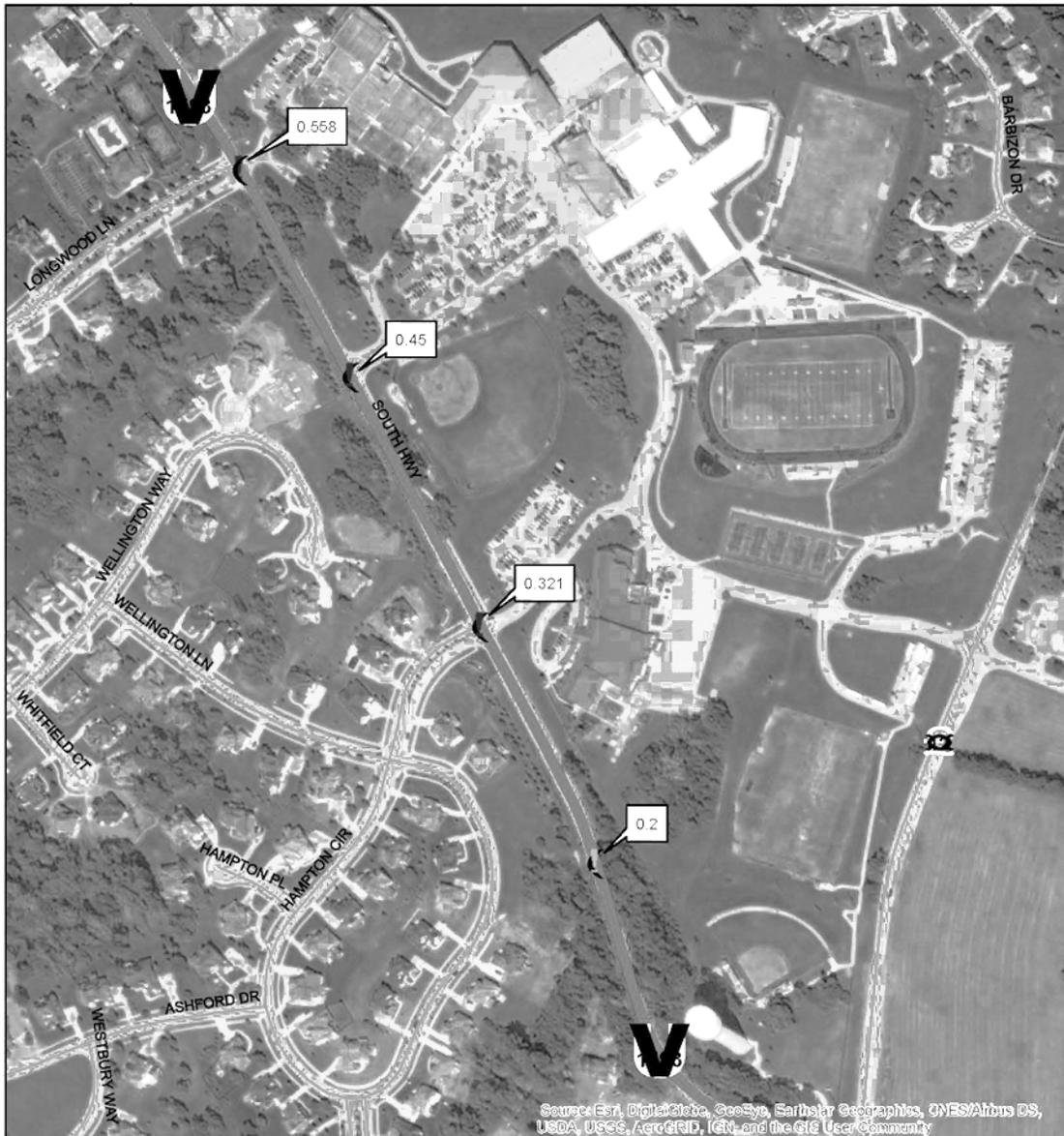
STATE OF KENTUCKY  
COUNTY OF \_\_\_\_\_

Signed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission expires: \_\_\_\_\_





### KY 1793 DNA Study Oldham County



**Legend**

- TM Count
- Class Count

0 0.025 0.05 0.1 Miles

OFFICIAL ORDER \_\_\_\_\_

SUBJECT: \_\_\_\_\_ County  
(Route Number)

Pursuant to the provisions of KRS 177.020, it is hereby directed that the newly constructed section of (Route Number) in \_\_\_\_\_ County be accepted into the State Primary Road System as a (Identification of System). (Route Number) will be described as follows:

Identification and description of facility

It is further directed that the \_\_\_\_\_ County Judge/Executive and the \_\_\_\_\_ County Clerk be furnished a copy of this Official Order.

Signed and approved on this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Secretary  
Kentucky Transportation Cabinet

Approved as to form and legality

\_\_\_\_\_  
Office of General Counsel

OFFICIAL ORDER \_\_\_\_\_

SUBJECT: \_\_\_\_\_ County  
(Route Number)

Pursuant to the provisions of KRS 177.020 and 603 KAR 3:030, it is hereby directed that (Route Number) described as follows be reclassified within the State Primary Road System as (Identification of Systems):

Identification and description of facility

It is further directed that the \_\_\_\_\_ County Judge/Executive and the \_\_\_\_\_ County Clerk be furnished a copy of this Official Order.

Signed and approved on this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Secretary  
Kentucky Transportation Cabinet

Approved as to form and legality

\_\_\_\_\_  
Office of General Counsel

OFFICIAL ORDER \_\_\_\_\_

SUBJECT: \_\_\_\_\_ County  
(Route Number)

Pursuant to the provisions of KRS 177.020 and 603 KAR 3:030, it is hereby directed that due to a data and field review, the following route was discovered to be longer than on record by 0.075 mile.

(Route Number) will now be described as follows:

Identification and description of facility

It is further directed that the \_\_\_\_\_ County Judge/Executive and the \_\_\_\_\_ County Clerk be furnished a copy of this Official Order.

Signed and approved on this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Secretary  
Kentucky Transportation Cabinet

Approved as to form and legality

\_\_\_\_\_  
Office of General Counsel

## OFFICIAL ORDER \_\_\_\_\_

SUBJECT: \_\_\_\_\_ County  
(Route Number)

Pursuant to the provisions of KRS 177.020 and 603 KAR 3:030, and pursuant to \_\_\_\_\_ County Fiscal Court action dated \_\_\_\_\_, the following roadbeds and associated rights-of-way shall be eliminated from the State Primary Road System and all ownership and maintenance responsibilities transferred to the \_\_\_\_\_ County Fiscal Court:

## Identification and description of facility

Pursuant to an agreement between the Commonwealth of Kentucky, Transportation Cabinet, and the \_\_\_\_\_ County Fiscal Court as adopted on (DATE), the \_\_\_\_\_ County Fiscal Court has accepted ownership and maintenance responsibility of said roadbeds and associated rights-of-way described above.

Therefore, all rights, responsibilities, and liabilities for the eliminated roadbeds and associated rights-of-way described above, now held by the Commonwealth of Kentucky, will be transferred to the \_\_\_\_\_ County Fiscal Court. Title to the eliminated roadbeds and associated rights-of-way described above shall be transferred to the \_\_\_\_\_ County Fiscal Court by quitclaim deed, upon approval, which is hereby requested, and execution of quitclaim\* deed by the Secretary of the Finance and Administration Cabinet.

OFFICIAL ORDER \_\_\_\_\_

Any future sale or transfer by the \_\_\_\_\_ County Fiscal Court of all or any part thereof, which removes same from public domain, may require compensation to the Commonwealth of Kentucky according to law and regulation.

It is further directed that the \_\_\_\_\_ County Judge/Executive and the \_\_\_\_\_ County Clerk be furnished a copy of this Official Order.

Signed and approved on this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Secretary  
Kentucky Transportation Cabinet

Approved as to form and legality

\_\_\_\_\_  
Office of General Counsel

\* If we hold in fee simple deed and are transferring the property to another government/public agency for no consideration (compensation) then we will transfer by “special warranty” deed instead of “quitclaim” deed.

OFFICIAL ORDER \_\_\_\_\_

SUBJECT: \_\_\_\_\_ County  
(Route Number)

Pursuant to the provisions of KRS 177.020 and 603 KAR 3:030, it is directed that (Route Number) in \_\_\_\_\_ County be eliminated from the State Primary Road System. It is directed that the facility described below be deemed a discontinued state facility and be closed to public use:

Identification and description of facility

It is further directed that the \_\_\_\_\_ County Judge/Executive and the \_\_\_\_\_ County Clerk be furnished a copy of this Official Order.

Signed and approved on this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Secretary  
Kentucky Transportation Cabinet

Approved as to form and legality

\_\_\_\_\_  
Office of General Counsel

OFFICIAL ORDER \_\_\_\_\_

SUBJECT: \_\_\_\_\_ County  
(Route Number)

Pursuant to the provisions of KRS 177.020 and 603 KAR 3:030, it is directed that (Route Number) in \_\_\_\_\_ County be eliminated from the State Primary Road System. It is directed that the facility described below be deemed a discontinued state facility and be closed to public use:

Identification and description of facility

It shall be known that the roadbeds and associated rights-of-way described above were offered to the \_\_\_\_\_ County Fiscal Court on (DATE) and was rejected by the (DATE) County Fiscal Court by letter (attached hereto) on (DATE).

It shall also be known that it is in the best interest of the Commonwealth of Kentucky that the normal abandonment procedures of KRS 177.020 be bypassed since \_\_\_\_\_ County Fiscal Court has rejected responsibility and that only one property owner has rights to the above parcel(s) of land and that there are no other property owners that are entitled to necessary access over the road.

EXHIBIT 303-6

Official Order of Closure/Abandonment

OFFICIAL ORDER \_\_\_\_\_

Therefore, all title, interest in, rights, and responsibilities for the eliminated roadbeds and associated rights-of-way described above, now held by the Commonwealth of Kentucky, will be transferred to the adjacent property owner (Property Owner's Name) by Quitclaim Deed \*, upon approval, which is hereby requested, and execution of Deed by the Secretary of the Finance and Administration Cabinet.

It is further directed that the \_\_\_\_\_ County Judge/Executive and the \_\_\_\_\_ County Clerk be furnished a copy of this Official Order.

Signed and approved on this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Secretary  
Kentucky Transportation Cabinet

Approved as to form and legality

\_\_\_\_\_  
Office of General Counsel

\* If we hold in fee simple deed and are transferring the property to another for no consideration (compensation) then we will transfer by "special warranty" deed instead of "quitclaim" deed.

**ROADSYSTEMS: TRANSFERS to /from KYTC and ABANDONMENTS**

Initiation of Action:  Result of STP Project:  All affected roads to/from within Project Limits  Non-STP Project Request (Only Agency-to-Agency)

Item No. \_\_\_\_\_ County: \_\_\_\_\_

Project Status (provide most applicable date):

Joint Inspection: \_\_\_\_\_

Letting Date: \_\_\_\_\_

Construction Complete: \_\_\_\_\_

Post-Construction: \_\_\_\_\_

**Transfer TO KYTC FROM** (Agency) \_\_\_\_\_

Segment	Road Name	State / County Road Number			BMP (Sta.)	BMP (Sta.)	Length (mi)	Classification		Elements Being Transferred (check only what applies)								
		Ex. Road No.	Rev. Road No.	New Road No.				State System	Functional	Pavement	Sidewalks	Permanent Easement	Detention Basin	Lighting	Other			
a:																		
b:																		
c:																		
d:																		
e:																		

Total Length (mi): 0.000

**Transfer FROM KYTC TO** (Agency) \_\_\_\_\_

Segment	Road Name	State / County Road Number			BMP (Sta.)	BMP (Sta.)	Length (mi)	Classification		Elements Being Transferred (check only what applies)								
		Ex. Road No.	Rev. Road No.	New Road No.				State System	Functional	Pavement	Sidewalks	Permanent Easement	Detention Basin	Lighting	Other			
a:																		
b:																		
c:																		
d:																		
e:																		

Total Length (mi): 0.000

**Abandonment**

Segment	Road Name	State / County Road Number			BMP (Sta.)	BMP (Sta.)	Length (mi)	Classification	
		Ex. Road No.	Rev. Road No.	New Road No.				State System	Functional
a:									
b:									
c:									
d:									
e:									

Total Length (mi): 0.000

Actions

Send Agency request for resolution \_\_\_\_\_ (date) \_\_\_\_\_

Background checks prepared \_\_\_\_\_

Deeds of transfer prepared \_\_\_\_\_

Maps prepared \_\_\_\_\_

Signed Resolution from Agency received \_\_\_\_\_

Submitted to Frankfort for Action \_\_\_\_\_

Notes:

Printed on: \_\_\_\_\_



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

Kentucky Division

February 12, 2019

330 West Broadway  
Frankfort, KY 40601  
PH (502) 223-6720  
FAX (502) 2236735  
<http://www.fhwa.dot.gov/kydiv>

In Reply Refer To:  
HDA-KY

Amanda R. Spencer, P.E.  
Director  
Division of Planning  
Kentucky Transportation Cabinet  
200 Mero Street, 5<sup>th</sup> Floor  
Frankfort, KY 40622

Dear Ms. Spencer:

The Kentucky Division of the Federal Highway Administration has reviewed and concurs with your request to relinquish and transfer by quitclaim deed the property listed below:

**High Rise Drive and associated right-of-way to the  
City of Newport, Campbell County, KY  
(adjacent to I-471, serves as a frontage road from the intersection with  
KY-1892 (Grand Avenue) near High Rise Drive (Station 10+34.00), to the beginning of a  
private lot near High Rise Drive (Station 16+34.0), a distance of 600 feet (0.114 miles))**

We reviewed this request and the documentation provided by KYTC District 6 and found that this request meets the criteria outlined in 23 CFR 620 Subpart B: Relinquishment of Highway Facilities Section 620.203(c)(2).

Immediately following action by the State, a copy of a suitable map or maps identified by the Federal-aid project number, with the facilities to be relinquished and the date of such relinquishment action clearly delineated thereon shall be furnished to this office for record purposes. Should you have questions or concerns, please contact me at (502) 223-6729.

Sincerely,

Bernadette Dupont  
Transportation Specialist

cc: Michael Loyselle, FHWA-KY  
Bob Yeager, KYTC-D6  
Carol Callan-Ramler, KYTC-D6

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**MEMORANDUM**

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**TO:** Amanda R. Spencer, P.E.  
Director  
Division of Planning  
Secretary

**FROM:** Carol Callan-Ramler, P.E.  
Planning Supervisor  
KYTC District 6

**DATE:**

**SUBJECT:** Relinquishment of High Rise Drive to the City of Newport,  
Campbell County KY

We have been contacted by the City of Newport regarding ownership of the subject roadway segment. Upon review, we have determined that this roadway was constructed during the construction of I-471 as a frontage road to provide access to the Grand Towers apartment building located at 1359 Grand Avenue in the City of Newport. The roadway and associated right-of-way were never officially transferred to the City of Newport.

We are requesting that this portion of High Rise Drive and the associated right-of-way currently being maintained by the City of Newport be officially transferred to the city. The City is in agreement with this request. A Commissioners Order adopted on January 23, 2017, attached herewith, is the official agreement.

Since the portion of High Rise Drive being considered for transfer borders I-471 and now serves as a frontage road from KY-1892 (Grand Avenue), we are aware that certain criteria must be address and considered prior to FHWA granting permission for the road to be transferred.

The District has reviewed the area of roadway in question and offers the following responses to the review criteria:

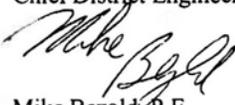
1. The District does not foresee that the land encompassing the roadway right-of-way will be needed for Federal-aid highway purposes. There are no projects currently in the Kentucky Transportation Cabinets Six Year Highway Plan for this area and no projects are anticipated.
2. The right-of-way currently retained along I-471 and KY 1892 is adequate under present day standards. Relinquishment of the subject will not adversely impact the federal or state facilities involved.
3. The release of this roadway of High Rise Drive will allow not adversely affect the Federal-aid highway facility or the traffic thereon. By transferring this roadway to

the city, the roadway will continue to be used as access to the properties that it currently serve and allow the city to make improvements as part of a long range development plan. No changes of use will occur.

4. The land to be relinquished are not suitable for retention in order to restore, preserve, or improve the scenic beauty adjacent to the highway consonant with the intent of 23 U.S.C. 319 and Pub. L. 89-285, Title III, sections 302-305 (Highway Beautification Act of 1965). These lands currently for use as a frontage roadway to access several properties along KY-1982 (Grand Avenue). Aesthetic beautification of these lands would not be of benefit to I-471.

Enclosed are marked plan sheets indicating the limits of the roadway and right-of-way to be transferred. If you have any questions or need additional information, please feel free to contact this office.

Attachments

<p><b>Steven L. Beshear</b> Governor</p>	 <b>TRANSPORTATION CABINET</b> Department of Highways District 6 Office 421 Buttermilk Pike Covington, KY 41017 (859) 341-2700	<p><b>RECEIVED</b></p> <p>OCT 08 2010</p> <p><b>Div. of Planning</b>  <b>Michael W. Hancock, P.E.</b>          Secretary</p>
<p>September 30, 2010</p>		
<p>The Honorable Denny Bowman          Mayor, City of Covington          638 Madison Avenue          Covington, KY 41011</p>		
<p>Dear Mayor Bowman:</p>		
<p>The Kentucky Transportation Cabinet is currently completing the design of the reconstruction of KY 16 through South Covington. This segment of KY 16 is being reconstructed to a five-lane highway that will consist of four through lanes and a two way left turn lanes. We are contacting you at this time to: receive City Permission to reconstruct City Streets and perform work on City Right of Way, and to determine the ultimate ownership/maintenance responsibility for City Streets that are being reconstructed.</p>		
<p>Upon completion of this project, the reconnected City Streets will continue to function as City Streets. We are contacting the City to request that any connections of City Streets to relocated KY 16 be accepted into the City street system.</p>		
<p>If the City is in agreement with our request, we will need a resolution (sample enclosed) from City Council stating that the City agrees to: allow KYTC to perform work on City Right of Way and will accept any right of way required to reconstruct City Streets, accepting ownership and maintenance responsibility for the items described as follows:</p>		
<p>City Streets reconstructed with this project are: Sipple Drive, Wayskin Drive, Brandtly Ridge Drive, Clover Drive, Sunbright Drive, Garner Drive, and Heathermoor Boulevard.</p>		
<p>If the City decides to decline this request, please respond in writing that the City has declined. Construction is scheduled to begin in December, but we will need the City's response before moving forward with construction. Enclosed is a set of plans with the areas to be transferred colored. If you have any question give me a call Mike Bezold (859) 341-2707 ext. 259.</p>		
<p>Respectfully,          Robert A. Hans, P.E.          Chief District Engineer</p>  <p>Mike Bezold, P.E.          Planning Supervisor</p>		
<p>Enclosures          cc: Carol Brent</p>	 An Equal Opportunity Employer M/F/D	

**RESOLUTION**

At a duly called and conducted meeting of the Covington City Council held on \_\_\_\_\_ the following resolution was duly adopted:

WHEREAS, the Kentucky Transportation Cabinet is proposed to reconstruct KY 16, designated as Item 6-344.00, from the Klette Road to the interchange at I-275 in Kenton County; and

WHEREAS, this reconstruction also includes the reconstruction of a City Streets that connect to KY 16; and

WHEREAS, these segments will provide access to residents and businesses in the City of Covington; and

WHEREAS, these City Streets are on the Right of Way of the City of Covington; and

WHEREAS, the City of Covington resolves that the City shall allow the construction/reconstruction of city streets, and agrees to allow the Department of Highways and contractors selected by the Department of Highways to perform the required work on right of way owned by the City: and,

WHEREAS, upon completion of this reconstruction the City Council agrees to accept the maintenance responsibility for and ownership of reconstructed segments of:

Sipple Drive, Wayskin Drive, Brandtly Ridge Drive, Clover Drive, Sunbright Drive, Garner Drive, and Heathermoor Boulevard

NOW THEREFORE, the Covington City Council does hereby resolve and agree to accept the proposal of the Department of Highways and agrees to the conditions set forth herein.

The foregoing resolution was adopted as above set forth by majority roll call vote of all members of the City Council present, a quorum being constituted and said resolution has been duly made a permanent part of the minutes of the City Council.

AYES

NAYS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signed and adopted this \_\_\_\_\_ day of \_\_\_\_\_, 2010 by the City of Covington (Kenton County) Kentucky.

\_\_\_\_\_  
Mayor, City of Covington

\_\_\_\_\_  
Attest by:

COMMONWEALTH OF KENTUCKY  
FINANCE AND ADMINISTRATION  
CABINET

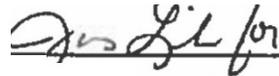
OFFICE OF THE SECRETARY OFFICIAL ORDER NO. 10-060

**Warren County**  
**Dye Ford Road (CR 1205) Upton Road (CR 1209)**  
**Magnum Road (CR 1690) Sylvia Way (CR 1633E)**  
**Acea, Road (CR 1320)**  
**Roadbed and Associated Right-of-Way**

Transportation Cabinet Official Order No. 10 7285 has been reviewed and it is now determined that the property set forth in said Official Order is not needed for a public purpose by the Commonwealth of Kentucky, Transportation Cabinet, and it is in the best interests of the Commonwealth of Kentucky that the property be conveyed by Quitclaim Deed to the Warren County Fiscal Court, for no monetary consideration providing the Deed states that should the property cease to be used as public highway facilities by the Warren County Fiscal Court, the property shall revert to the Commonwealth of Kentucky, for the use and benefit of the Transportation Cabinet, without monetary consideration. The Transportation Cabinet is hereby authorized to draft the necessary instruments of conveyance, all in accordance with KRS Chapters 45A and 56.

Signed and approved by me this 2.5-th day of \_

February 2012.



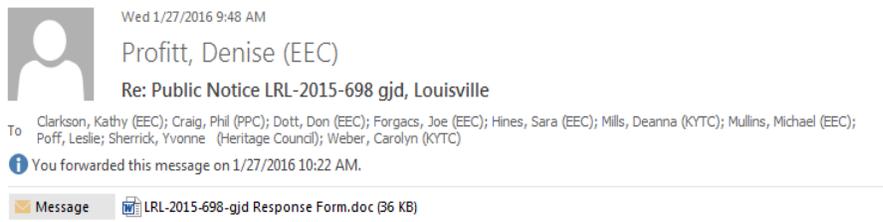
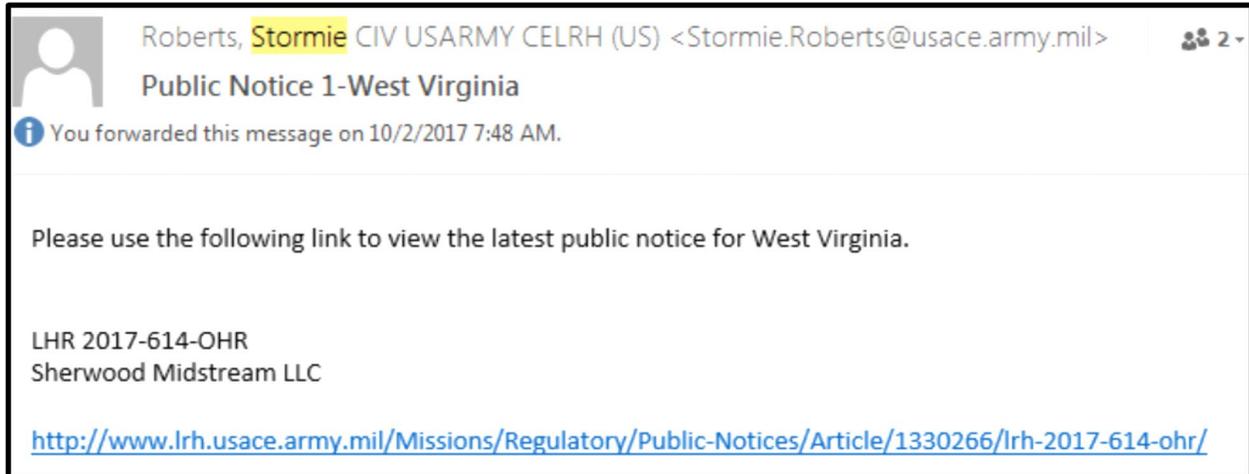
**LORJ LANERY, SECRETARY**  
FINANCE AND ADMINISTRATION CABINET

APPROVED AS TO FORM & LEGALITY:



ATTORNEY, LEGAL AND LEGISLATIVE SERVICES FINANCE  
AND ADMINISTRATION CABINET

The KYTC USACE liaisons will receive an email notification from the USACE:



The above listed Public Notice is now available for viewing and comments.

Thank you,

*Denise Profitt  
Department for Environmental Protection  
Commissioner's Office  
300 Fair Oaks Lane  
Frankfort, Kentucky 40601  
(502) 564-2150*

In September 2017, KYTC-DEA consulted the USACE regarding these duplicate EEC notices to verify KYTC's notification requirements/obligations. It was determined that the current KYTC notification procedures were acceptable to the USACE and KYTC should continue to send any comments directly to the USACE.

Sample forwarding notice to district offices:

**D-6: Boone, Kenton, and Campbell Counties: Robert Yeager and Stacey Hans**

Stacey and Bob,

On behalf of the Sreenu Gutti, the Army Corp of Engineers Liaison for the Division of Planning, I am forwarding this information to you regarding a Public Notice for a project in Hamilton County, Ohio, that is neighboring your District. If there are any comments or concerns relative to the Public Notice, please send them to me [before Monday, June 22, 2015](#).

**Army Corp. of Engineers Public Notice LRH 2015-436-OHR** concerns the discharge of 1,944 cubic yards of dredged and/or fill material into approximately 0.66 acre of six wetlands, 340 linear feet of intermittent stream and 0.45 acre of pond in association with the construction of the Blue Ash Development Project, within the watershed of Mill Creek, in the city of Blue Ash, in Hamilton County, Ohio.

Please note that the link below will take you directly to this particular permit notice where additional details are available.

<http://www.lrh.usace.army.mil/Missions/Regulatory/PublicNotices/tabid/4125/Year/2015/Default.aspx>

Thank you,  
Your name

Sample of forwarding district responses back to USACE:

 Fri 3/11/2016 1:36 PM  
Higdon, Tonya (KYTC)  
LRL-2015-614-pjl

To lrl.regulatorypubliccomment@usace.army.mil  
Cc Profitt, Denise (EEC); Waldner, David (KYTC); Hans, Stacey (KYTC-D06); Yeager, Robert (KYTC-D06); Gutti, Srinivasa (KYTC); Ross, Steve (KYTC); Mills, Deanna (KYTC); Brown, Ruby LRL

 This message was sent with High importance.

Good Day To Whom It May Concern,

On behalf of the Kentucky Transportation Cabinet, please see our response below with an important note to the applicant.

For quick reference, this public notice can be viewed on the United States Army Corp of Engineers (USACE) website at the following link:  
<http://www.lrl.usace.army.mil/Missions/Regulatory/PublicNotices/tabid/10590/Article/656993/lrl-2015-614.aspx>

Sincerely,  
*Tonya M. Higdon, P.E.*  
Transportation Engineering Specialist  
Kentucky Transportation Cabinet  
Division of Planning, 5th Floor West  
200 Main Street

*As an example, the following email responded to a USACE notice for a series of public hearings for channel and levee improvements on the Mississippi River, not the normal notice of a specific small project:*

ATTN: CEMVN-PDC-UDC

Regarding: Kentucky Transportation comment on the **Mississippi River Mainline Levee (MRL) Supplemental Environmental Impact Statement (SEIS II)**

**KYTC Liaison to the USACE contact information:**

**Deanna Mills, P.E.**

**Kentucky Transportation Cabinet – Division of Planning**

**200 Mero Street**

**Frankfort, KY 40622**

**(502) 782-5085**

[Deanna.Mills@ky.gov](mailto:Deanna.Mills@ky.gov)

To whom it may concern,

As the Kentucky Transportation Cabinet (KYTC) liaison to the Army Corps of Engineers, I am sending information to you regarding a large KYTC bridge project currently in planning and environmental stages. This project may be pertinent your MRL SEIS II. The original [USACE notice](#) of public hearing email was sent on August 23, 2018, and the comment period continues through October 15, 2018.

KYTC is in the planning stage of replacing the US 51 bridge over the Ohio River in Ballard County, Kentucky; between Cairo, Illinois and Wickliffe, Kentucky; commonly referred to as the Cairo Bridge. This bridge is located just north of the Mississippi River and Ohio River confluence. The [KYTC 2018 Highway Plan](#) currently lists three projects for preliminary engineering and environmental documentation beginning in 2020, with some construction funding scheduled as early as 2024. A [US 51 Ohio River Bridge Alternative Selection Report](#) was completed in 2014 to look at rehabilitation or replacement recommendations.



Please feel free to contact me if additional information on the Cairo Bridge project is needed.

Thank you,  
Deanna P. Mills, P.E.

I. PRELIMINARY PROJECT INFORMATION				
<b>County:</b>		<b>Item No.:</b>		
<b>Route Number(s):*</b>		<b>Road Name:</b>		
<b>Program No.:</b>		<b>UPN:</b>	(Function) (County #) (Route) (MPs)	
<b>Federal Project No.:</b>		<b>Type of Work:</b>		
(Year)	<b>Highway Plan Project Description:</b>			
<b>Beginning MP:</b>		<b>Ending MP:</b>	<b>Project Length:</b>	
<b>In TIP:</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<a href="#">Reconcile Project Information in Clearview</a>		
<b>State Class.:</b>	<input type="checkbox"/> Primary <input type="checkbox"/> Secondary	<b>Route is on:</b>	<input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt	
<b>Functional Class.:</b>	<input type="checkbox"/> Urban <input type="checkbox"/> Rural <input type="checkbox"/> Arterial	<b>Truck Class.:</b>	<input type="checkbox"/> % Trucks:	
<b>MPO Area:</b>	Not Applicable	<b>Terrain:</b>		
<b>ADT (current):</b>	(Year)			
<b>Access Control:</b>	<input type="checkbox"/> None <input type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial	<b>Spacing:</b>		
<b>Median Type:</b>	<input type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):			
<b>Existing Bike Accommodations:</b>		<b>Ped:</b>	<input type="checkbox"/> Sidewalk	
<b>Posted Speed:</b>	<input type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input type="checkbox"/> 55 mph	<input type="checkbox"/> Other (Specify):		
<b>KYTC Guidelines Preliminarily Based on :</b>		<b>MPH Proposed Design Speed</b>		
<b>COMMON GEOMETRIC PRACTICES**</b>				
<b>Roadway Data:</b>	<b>EXISTING</b>			
No. of Lanes		<a href="#">Existing Rdwy. Plans available?</a>		
Lane Width		<input type="checkbox"/> Yes <input type="checkbox"/> No		
Shoulder Width		Year of Plans: _____		
Max. Superelevation***		<input type="checkbox"/> <a href="#">Traffic Forecast Requested</a>		
Minimum Radius***		Date Requested: _____		
Maximum Grade		<input type="checkbox"/> Mapping/Survey Requested		
Minimum Sight Dist.		Date Requested: _____		
Sidewalk Width(urban)		Type: _____		
Clear-zone <sup>†</sup>				
Project Notes/Design Exceptions?				
<b>Bridge No.:#</b>	(Bridge #1)	(Bridge #2)		
Sufficiency Rating			<a href="#">Existing Geotech Data Available?</a>	
Total Length			<input type="checkbox"/> Yes <input type="checkbox"/> No	
Width, curb to curb			Detour Length(s): _____	
Span Lengths				
Year Built				
Posted Weight Limit				
Structurally Deficient?				
Functionally Obsolete?				
Existing Bridge Type				
*If more than one road is included in the project, include additional sheets. **Based on proposed Design Speed ***AASHTO's A Policy on Geometric Design of Highways and Streets †AASHTO's Roadside Design Guide ‡If more than two bridges are located on the project, include additional sheets.				

II. PROJECT PURPOSE AND NEED				
<b>A. Legislation</b>				
	<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
		D		
		R		
		U		
		C		
<b>B. Project Status</b>				
<b>C. System Linkage</b>				
<b>D. Modal Interrelationships</b>				
<b>E. Social Demands &amp; Economic Development</b>				

II. PROJECT PURPOSE AND NEED (cont.)	
<b>F. Transportation Demand</b>	
<b>G. Capacity</b>	
<b>H. Safety</b>	
<b>I. Roadway Deficiencies</b>	

<b>III. PRELIMINARY ENVIRONMENTAL OVERVIEW</b>	
<p><b>A. Air Quality</b>                      Project is in:    <input type="checkbox"/> Attainment area    <input type="checkbox"/> Nonattainment or Maintenance Area    <input type="checkbox"/> PM 2.5 County                      STIP Pg.#: _____    TIP Pg.#: _____</p>	
<p><b>B. Archeology/Historic Resources</b>  <input type="checkbox"/> Known Archeological or Historic Resources are present</p>	
<p><b>C. Threatened and Endangered Species</b></p>	
<p><b>D. Hazardous Materials</b>  <input type="checkbox"/> Potentially Contaminated Sites are present    <input type="checkbox"/> Potential Bridge or Structure Demolition</p>	
<p><b>E. Permitting</b>                      Check all that may apply:    <input type="checkbox"/> Waters of the US    <input type="checkbox"/> MS4 area    <input type="checkbox"/> Floodplain Impacts    <input type="checkbox"/> Navigable Waters of the US Impacts                      Are 401/404 Permits likely to be required?    <input type="checkbox"/> Yes    <input type="checkbox"/> No    Impacts to:    <input type="checkbox"/> Wetlands    <input type="checkbox"/> Stream/Lake/Pond  <input type="checkbox"/> ACE LON    <input type="checkbox"/> ACE NW    <input type="checkbox"/> ACE IP    <input type="checkbox"/> DOW IWQC    <input type="checkbox"/> Special Use Waters</p>	
<p><b>F. Noise</b>                      Are existing or planned noise sensitive receptors adjacent to the proposed project?    <input type="checkbox"/> Yes    <input type="checkbox"/> No                      Is this considered a "Type I Project" according to the <a href="#">KYTC Noise Analysis and Abatement Policy?</a>    <input type="checkbox"/> Yes    <input type="checkbox"/> No</p>	
<p><b>G. Socioeconomic</b>                      Check all that may apply:    <input type="checkbox"/> Low Income/Minority Populations affected    <input type="checkbox"/> Relocations    <input type="checkbox"/> Local Land Use Plan available</p>	
<p><b>H. Section 4(f) or 6(f) Resources</b>                      The following are present on the project:    <input type="checkbox"/> Section 4(f) Resources    <input type="checkbox"/> Section 6(f) Resources</p>	
<p><b>Anticipated Environmental Document:</b></p>	<p>None (Completely State funded) <span style="float: right;">▼</span></p>

IV. PROJECT SCOPING, NEEDS & PURPOSE	
<b>A. Scoping &amp; Need:</b>	
<b>B. Draft Project Purpose:</b>	

V. PROJECT ESTIMATE & METHODOLOGY		
Estimate Methodology:	Current Estimate	
	Phase	Estimate
	Planning	
	Design	
	R/W	
	Utilities	
	Const	
	<b>Total</b>	

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION
Company Name -
Contact -
Address -
Phone No. -
Company Name -
Contact -
Address -
Phone No. -
Company Name -
Contact -
Address -
Phone No. -
Company Name -
Contact -
Address -
Phone No. -
Company Name -
Contact -
Address -
Phone No. -

**VII. TABLES AND EXHIBITS**

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**VII. TABLES AND EXHIBITS (cont.)**

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