

## Planning for Bicycle and Pedestrian Projects

### **Purpose:**

The purpose of this document is to show some of the steps for having a bicycle and/or pedestrian component or stand-alone project included in the Planning and Design process for the Kentucky Transportation Cabinet. The process for each project is unique to the location and the persons involved. However, every project begins as part of a plan.

Please consult the respective KYTC Division Manuals and websites for more detailed information. Please consult the LPA Guide for specifications concerning agreements with local governments. Some projects associated with the Recreational Trails Program (RTP) may vary from the listed process below.

### **Regional/City Bike & Pedestrian Plan Development, Plan Review, and Plan Acceptance (10-25 years before opening):**

A plan may include a whole city/county or just a neighborhood. It does not need to be developed by government, but can be effectively accomplished by local interest groups. A successful plan includes the considerations of citizens, travelers, police/EMS, as well as **approval** by city, county, and state planning organizations.

If the study area is part of a city that has 50,000+ population, the plan also needs to be shared and **approved** by the local Metropolitan Planning Organization (MPO). The following website shows the MPOs for the commonwealth ([here](#)).

Plan considerations include:

- Environmental
  - a. Impacts to local business and property owners
  - b. Community impact (character, cohesiveness, etc.)
  - c. Impact to historic buildings/structures (photo documentation of all structures over 50 yrs old)
  - d. Effects on minority/low income interest
  - e. Air quality
  - f. Noise
  - g. Public parks
  - h. Impacts on indigenous plants and animals
- Economic issues
  - a. Accessibility
  - b. Tourism
  - c. Industrial parks
  - d. Highway user cost
  - e. Property values
  - f. Economic development potential
  - g. Access for emergency services
  - h. Access for transit
  - i. Access to schools, medical facilities, etc.
- Engineering issues
  - a. Driver/user expectations
  - b. Traffic (pedestrians, bicycles, auto, freight)
  - c. Federal and state laws
  - d. Land use and access management
  - e. Cost (Is the bike/ped portion over 20% of total project?)

**Contact the LPA Coordinator for your area / <http://transportation.ky.gov/Local-Programs/LPA/Pages/default.aspx>**

- Inform this contact of the project/work you are planning
- They will provide you with a check list of forms and guides needed
- Training may be available for the current process

**Project Specific- Long Range/Early Planning (10-25 years before opening):**

- This phase is very high-level overview of project and may take 1-2 months to complete documentation and peer review
- Identify the purpose and need for the project
- Identify possible environmental, rights of way, utility, or maintenance issues
- Identify the public concerns- NIMBY-Not in my back yard
- Project Funding
  - A. Capital Expense- Plan, Design, Right of Way, Utilities, Construction (PDRUC)
    1. Funding categories (FHWA, State, Local Government, Private)
    2. Matching fund requirements (state and or federal % that must be provided by sponsor)
    3. Detailed accounting (determine what portions of the project that can be funded with each source)
  - B. Operations and Maintenance
    1. What agency is responsible for operation?
      - a. What is the source of funds?
      - b. Is there an agreement in place
    2. What agency is responsible for maintenance?
      - a. Who will inspect and maintain striping, signage, pavement surface?
      - b. What are the eligible funds

**Project Planning (5-10 years before opening):**

- This step may take 3-18 months depending on scope of project
- Determine the project limits-beginning and ending points or logical termini
- Determine the members of the project development team-federal, state, county, city, MPO, advocate, health, economic development, tourism, transportation, etc
- Verify Funding needs/source for developing plan
- Update Funding needs for total project- PDRUC
- Identify public concern (detailed list of all stake holders)
- Verify project purpose and need statement
- Identify environmental concerns (does an environmental study need to be done?)
- Make project recommendations
  - May need to be tiered based on purpose and need
  - May need to be phased with time and funding availability

**Preliminary Project Design & Environmental Analysis (1-5 years before opening):**

- This step may take 3-18 months depending on scope of project
- Where is project located?
  - Conduct field surveys-What is there today? How much room is needed? How much room is available? Will structures/drainage be needed?

- Who and How will this project impact?
  - Conduct inventories to identify protected/endangered species, low income/minority populations, and important resources (Environmental resource field resource survey)
- Develop project alternatives
  - Sidewalk, multi-use path, wide shoulder, do nothing
  - Includes Bicycle/Pedestrian Level of Service analysis of each to show benefit
- Prepare environmental documentation- See Division of Environmental Analysis Manual for details.
- Conduct public meetings as described by agency public involvement plan.
  - Conduct formal/informal meetings and share early public concerns, environmental concerns, project limits, project goals, funding resources, and project alternatives

**Final Project Design (0.5-2 years before opening):**

- This step may take 3-18 months depending on scope of project. See Division of Highway Design Manual for details
- Develop final alignments- Exactly where is the project located?
- Finalize right-of-way plans and purchasing requirements
- Identify and address public comments (from Preliminary Design's public meeting)
- Review environmental commitments
- Evaluate roadway capacity changes/effects
  - a. Identify highway capacity issues of roadway being constructed or changed
  - b. Identify possible highway capacity issues on parallel routes
  - c. Identify possible highway capacity issues of cross routes (within project limits)
- Develop construction plans
  - a. Drawings/designs of final alternative
  - b. Cost estimates of final alternative
- Operation and Maintenance plan agreements in place
- Final Public meetings (as needed) -Refer to attached documents (Highway Design Manual 601-603,exhibit 600-01, and exhibit 600-02)

**Project Construction (0.5-2 years before opening):**

- This step may take 3-18 months depending on scope of project. See Division of Construction Manual for details
- Project goes to letting with bid package prepared as part of final design
- Pre-construction public notice signs along project limits
- Fulfillment of environmental commitments
- Construction/changes of the roadway

\*\*\*\*\*

**Excerpts of Guidance from the -“[Pedestrian & Bicycle Travel Policy](#),” from Kentucky Transportation Cabinet, 2002, pp 4-8.**

The Kentucky Transportation Cabinet (KYTC) will consider the incorporation of pedestrian facilities on all new or reconstructed state-maintained roadways in existing and planned urban and suburban areas. For purposes of this recommended policy, an urban or suburban area is any place designated as an urban area or census designated place (CDP), by the U.S. Bureau of Census. KYTC will consider pedestrian facilities if the roadway project meets one or more of the following criteria:

- A pedestrian facility already exists on the current roadway.
- The recommended roadway cross section is urban (curb and gutter).
- Project limits are adjacent to an existing residential, commercial, industrial, institutional, public or semi-public use area or adjacent to an area planned to develop one of these uses within the next 20 years. Planned development may be determined by zoning designations, a local comprehensive plan, or the public-involvement process.
- A state, locally, or regionally adopted pedestrian network or policy has designated pedestrian improvements in the area of the specific roadway project or for that classification of roadway.
- A KYTC Small Urban Transportation Study has specific pedestrian improvements recommended for the roadway project.
- Pedestrian traffic exists along the current roadway: This may be determined by the observation of pedestrian traffic or by the public-involvement process.
- Public interest in and demand for pedestrian facilities are determined at the planning and preliminary engineering public-involvement stages

**Other Considerations**

- KYTC project-level decisions will complement local pedestrian plans to the maximum reasonable extent.
- KYTC project-level decisions will evaluate future connections to close gaps in parallel connectivity between projects and developed areas/community destinations or existing pedestrian facilities within 300 feet beyond normal project limits within existing publicly owned rights of way.
- KYTC project-level decisions will evaluate future connections to close gaps in perpendicular connectivity to developed areas/community destinations or existing pedestrian facilities within 100 feet of the roadway edge of pavement within existing publicly owned rights of way.
- KYTC project-level decisions will consider pedestrian access to existing and planned transit stops.

**Choosing Types of Pedestrian Facilities**

After determining that a pedestrian facility is necessary, the design team will refer to the appropriate Design Memorandum which will be developed by the Division of Highway Design. The Division of Highway Design will develop the Design Memorandum for Accommodating Pedestrians and Bicycles from the information and guidelines researched and presented by the Pedestrian and Bicycle Task Force.

**Recommended Guidance from the -“[Pedestrian & Bicycle Travel Policy](#),”--Maintenance of Bicycle and Pedestrian Facilities**

**Sidewalks**

Maintenance of sidewalks within city limits is the responsibility of the city. Maintenance of sidewalks outside city limits is the responsibility of the Kentucky Transportation Cabinet (KYTC) if the KYTC constructed the facility. Maintenance of facilities constructed by the fiscal court or city is the responsibility of that entity. Maintenance by the KYTC is limited to repairing the surface, mowing, and clearing vegetation. This maintenance is on the same schedule as normal roadway maintenance.

**Bicycle Lanes**

Maintenance of bicycle lanes is considered incidental to normal KYTC roadway maintenance. Maintenance by the KYTC is limited to repairing the surface, resurfacing, removing snow, striping, signing, and sweeping if the KYTC normally sweeps the roadway. This maintenance is on the same schedule as normal roadway maintenance.

**Shared Use Paths**

Maintenance of shared-use paths is the responsibility of the local government.

**Maintenance Roadway Projects and State-Force Projects**

Maintenance roadway projects and state-force projects are usually projects which are not extensive projects. However, these projects can improve accessibility and safety for non-motorized travel in Kentucky. Whether a traffic signal is redesigned, sight distance corrected, or an intersection improved, pedestrian and bicycle accommodations are considered. The Division of Planning will continue to offer an annual workshop in Pedestrian and Bicycle Design. In addition, District Maintenance, Traffic Engineers, and the Road Scholar Course will receive pertinent information concerning the most effective approved crosswalk striping designs, bicycle-friendly grates, and ADA Guidelines.

**Shoulder Rumble Strips**

A separate task force whose members will be drawn from the Pedestrian and Bicycle Task Force and members from the Divisions of Highway Design, Construction, Planning, and Traffic Operations will study and recommend guidelines concerning shoulder rumble strips. The Federal Highway Administration (FHWA) released a technical advisory about rumble strip design in December 2001.

**KYTC Pedestrian & Bicycle Travel Policy can be found at:**

[http://transportation.ky.gov/Bike-Walk/Documents/Task%20Force%20FINAL%20June%202018\\_02%20policy%20rec%20to%20Sec%20Codell.PDF](http://transportation.ky.gov/Bike-Walk/Documents/Task%20Force%20FINAL%20June%202018_02%20policy%20rec%20to%20Sec%20Codell.PDF)

\*\*\*\*\*

## **KYTC Guidance for Local Public Agencies (LPA)**

See the LPA website at: <http://transportation.ky.gov/Local-Programs/LPA/Pages/default.aspx>

The LPA web page is designed for use by Local Public Agencies (LPAs) receiving federal transportation funding for locally administered projects and consultants working with LPA administered projects.

The LPA Guide shall be used with the following federal funding categories:

- Transportation Alternative Projects (TAP) (formerly known as Transportation Enhancement (TE))
- Safe Routes to School (SRTS)
- Congestion Mitigation and Air Quality (CMAQ)
- National Scenic Byways
- Transportation Community and Systems Preservation (TCSP)
- Recreational Trails
- Planning funds

Any LPAs with projects funded through any of the programs mentioned above must follow the Kentucky Transportation Cabinet's LPA Guide when completing the project. The referenced web site contains the guide and provides links to the most commonly used forms in the administration of these projects. In addition, you will find links to resources such as manuals, policies, and websites that may be of assistance during the course of the project.

### **List of suggested organizations and stakeholders:**

#### **KYTC**

Division of Planning  
Division of Highway Design  
Division of Structural Design  
Division of Maintenance  
Permits Section  
Division of Right of Way & Utilities

Office of Highway Safety  
Office of Project Delivery & Preservation  
Division of Construction  
Division of Materials  
Division of Equipment  
Division of Traffic Operations-Signals

#### **City/County**

Traffic  
Planning and Zoning  
Police/EMS  
Schools  
County Extension Office

Chamber of Commerce  
Health Departments  
Utility Companies (public/private)  
Economic Development

#### **Regional Planning Organizations**

Area Development District  
Metropolitan Planning Agency (cities over 50,000 population)

## **Local Groups**

Girl/Boy Scouts

Local Bike/Hike Clubs

4-H Clubs

Local Employers

Local Railroad Companies

Lions, Kiwanis, Elks Club

University Sorority/Fraternity Organization

- Recommended performance measure to use with or as a guide with all bike/ped projects:  
[http://www.fhwa.dot.gov/environment/transportation\\_alternatives/performance\\_management/guidebook/tap\\_pm\\_guidebook.pdf](http://www.fhwa.dot.gov/environment/transportation_alternatives/performance_management/guidebook/tap_pm_guidebook.pdf)

## **Measuring Performance (TAP PM Guidebook)**

### **3.1 Why Measure Performance?**

Although title 23 does not require performance measures or a performance management approach for the TAP, there are several reasons for program managers to adopt a performance management approach toward the administrative and project selection responsibilities of the program. Beyond legislative requirements, the reason why many transportation agencies, as well as non-transportation entities, have implemented performance-based decision making is that when done well, it produces better results. The FHWA Performance-Based Planning and Programming Guidebook (2013) identifies four types of benefits:

- 1) Improved investment decision making**—Ensures that the program supports overall objectives for transportation in the Nation, State, and/or region; enables agencies to answer the question “how are we doing?”; and enables agencies to develop strategies that target areas for improvement.

*For TAP, this may mean... supporting the selection of projects that best address program goals and objectives; ensuring timely obligation and expenditure of funds (including previous Transportation Enhancement funds).*

- 2) Improved return on investments and resource allocation; demonstrates link between funding and performance**—Creates important linkage between allocation of funds, human and programmatic resources, and outcomes; creates opportunities for efficient use of funds and human resources.

*For TAP, this may mean... better results of investments as demonstrated by project outcomes—such as for each dollar spent, seeing better outcomes as to the increase in the completeness and quality of a pedestrian and bicycle network, including increased linkages connecting networks.*

- 3) Improved system performance**—Better decisions and better investment should lead to better outcomes for system infrastructure development and performance.

*For TAP, this may mean... improvements in the amount and/or quality of storm water or vegetation management, improved safety, increases in bicycling and walking, or a reduction in air pollution from automobile travel.*

- 4) Increased accountability and transparency**—Increases transparency of agencies’ activities, programs, and projects and agency performance.

*For TAP, this may mean... being able to demonstrate outcomes of investments in terms of outcomes meaningful to the general public. Program results can be described in terms of real measureable results (as defined in performance metrics). A few examples might include: reduced time to approve projects through environmental streamlining procedures, programmatic agreements, and project design flexibility; new miles of trails; number of traffic calming installations or improvements: number of projects that will improve safe pedestrian travel; or the number of historic sites preserved or rehabilitated.*

### **SETTING GOALS (FHWA PM Guidebook)**

Using community goals as a framework, performance measures can track progress and aid decision making relating to these goals. Community goals supported by transportation can be organized into seven categories. These goals reflect the broad aims of government and community and are not limited in scope to transportation, though transportation does have a direct relationship to the public's ability to achieve these goals. All of the key performance measures identified in this Guidebook measure performance against one or more of these goals.

The pedestrian and bicycle performance measures identified in the matrix can be used toward one or more of seven goals.

**CONNECTIVITY** – interconnected pedestrian and/or bicycle transportation facilities that allow people of all ages and abilities to safely and conveniently get where they want to go.

**ECONOMIC** – describes how transportation decisions impact the economic health of a municipality or region.

**ENVIRONMENT** – environmental measures promote the creation and maintenance of a transportation system that minimizes and/or mitigates impacts to the natural environment. Air quality impacts are the most common type of environmental measure, but others evaluate impervious surface and storm water and noise pollution.

**EQUITY** – recognizing the disparate costs and impacts of transportation decisions on populations of different income levels, agencies are beginning to calculate equity factors. Households without access to vehicles are not usually well-served by auto-oriented transportation solutions and require walking, bicycling, and transit infrastructure. One component of equity is ensuring that pedestrian facilities along public rights-of-way are accessible so they do not discriminate against people with disabilities and serve people of all ages and abilities.

**HEALTH** – public health impacts of transportation decisions typically include changes to levels of physical activity, safety, and air quality. Increases in walking and bicycling are correlated with higher levels of public health.

**LIVABILITY** – quality of life impacts of transportation systems are evaluated by many local jurisdictions. Livability measures directly acknowledge the trade-offs between the demands



of auto travelers passing through an area and those living adjacent to transportation infrastructure. Measures that reflect public opinion are also included within this category.

**SAFETY** - addresses the safety of the transportation system for all users. Safety performance measures typically track crashes, injuries, and fatalities, though some are based on estimated changes in numbers of crashes.

**-WHAT GOALS ARE THE PERFORMANCE MEASUREMENT PROGRAM SUPPORTING?**

Understand the purpose of measuring performance by aligning measures with community goals. Use the goals to frame the selection of performance measures.

**TABLE 3 COMMUNITY GOALS AND RELATED TRANSPORTATION MEASURES**

COMMUNITY GOALS CATEGORIES	TRANSPORTATION MEASURES CATEGORIES					
	ACCESSIBILITY	COMPLIANCE	DEMAND	INFRASTRUCTURE	MOBILITY	RELIABILITY
CONNECTIVITY	High	Low		High	High	Low
ECONOMY	High			Low	High	High
ENVIRONMENT	High		High		Low	Low
EQUITY	High	Low	Low	High	High	Low
HEALTH	High	Low	High	High	Low	Low
LIVABILITY	High	Low	Low	High	Low	High
SAFETY	High	High	High	High	High	Low



**TABLE 5 GOALS APPLICABLE TO PERFORMANCE MEASURES**

PERFORMANCE MEASURES	GOALS						
	CONNECTIVITY	ECONOMIC	ENVIRONMENT	EQUITY	HEALTH	LIVABILITY	SAFETY
Access to Community Destinations	X	X	X	X	X	X	X
Access to Jobs	X	X		X			
Adherence to Accessibility Laws	X	X		X	X	X	X
Adherence to Traffic Laws					X		X
Average Travel Time	X	X		X		X	X
Average Trip Length	X	X		X		X	X
Connectivity Index	X	X		X		X	X
Crashes				X	X	X	X
Crossing Opportunities	X			X	X	X	X
Delay				X		X	X
Density of Destinations	X	X		X	X	X	X
Facility Maintenance	X			X		X	X
Job Creation		X					
Land Consumption		X	X			X	
Land Value		X					

PERFORMANCE MEASURES	GOALS						
	CONNECTIVITY	ECONOMIC	ENVIRONMENT	EQUITY	HEALTH	LIVABILITY	SAFETY
Level of Service				X		X	X
Miles of Pedestrian/Bicycle Facilities	X			X	X	X	X
Mode Split			X	X	X	X	
Network Completeness	X	X	X	X	X	X	X
Pedestrian Space		X		X		X	X
Person Throughput		X		X			
Physical Activity and Health				X	X	X	
Population Served by Walk/Bike/Transit	X			X	X	X	X
Retail Impacts		X					
Route Directness	X	X	X	X		X	X
Street Trees			X		X	X	X
Transportation-Disadvantaged Population Served	X			X			
User Perceptions					X	X	X
Vehicle Miles Traveled (VMT) Impacts			X		X	X	X
Volume			X		X		X