Chapter 6: Mobility

Mobility refers to how people and goods move from point to point through different transportation options such as cars and trucks, public transportation, biking, walking, and air. Kenton County is home to nearly 169,000 residents that move in, around, and through the county on a daily basis utilizing all of the aforementioned modes. While modal choices are available, residents’ travels are primarily accomplished through a variety of roadways ranging from rural local streets which wind through the hills and valleys in the southern end of the county, to wide multi-lane major urban arterials, which traverse the county’s urban, suburban and first ring sub areas. Other mobility choices such as public transit, bicycling, and walking also exist in the county but are utilized by the public to a much lesser extent. Information in subsequent portions of this chapter will provide details about each transportation choice, their actual usage as reported by the US Census Bureau, and the network as it exists in Kenton County today.

This chapter also examines the role the county plays in the national transportation infrastructure by reviewing assets such as Interstate 71/75, the Brent Spence Bridge, the Cincinnati/Northern Kentucky International Airport, railroads, and river freight. The county’s transportation system was last comprehensively studied in the 2003 Kenton County Transportation Plan. This plan is scheduled to be updated starting in Mid-2013. This chapter provides a macro level view of transportation as it exists in early 2013.

Mobility Demographics and System Implications

In 2010 the US Census Bureau estimated 75,066 Kenton County residents were age 16 or older, indicating they could meet the legal age requirement to drive a vehicle. Of this population, approximately 84.8 percent were identified as drivers who commuted to work in a single occupancy vehicle, 8.4 percent commuted to and from work in a car/vanpool mode, 2.7 percent utilized public transportation, 0.81 percent walked, and 0.33 percent used another means such as bicycle or taxicab to travel to work. The remaining 3 percent of workers were estimated as working from home. Compared to the rest of the nation, Kenton Countians travel more in single occupancy vehicles and utilize all other modes to a lesser extent as exhibited in Figure 6.1.

The fact that Kenton County residents choose single occupancy vehicles nearly 85% of the time can be attributed to several different factors. Lower point-to-point travel times, convenience, and ease of use are often reported as reasons why people choose personal vehicles over other options. These, coupled with either service or facility limitations in the networks also help account for the over eight percent difference between local and national figures. These factors will be described in greater detail in subsequent sections. However, it should be emphasized that more single occupant vehicles operating on the network naturally results in greater congestion, higher delay, increased fuel consumption, and more wear-and-tear on roadway infrastructure.

Figure 6.1: Modal Choice in United States and Kenton County, Kentucky

<table>
<thead>
<tr>
<th>Transportation Mode</th>
<th>United States Estimate</th>
<th>Percent Used</th>
<th>Kenton County Estimate</th>
<th>Percent Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>136,941,010</td>
<td></td>
<td>75,066</td>
<td></td>
</tr>
<tr>
<td>Car, Truck, or Van-AIone</td>
<td>104,857,517</td>
<td>76.57%</td>
<td>63,678</td>
<td>84.83%</td>
</tr>
<tr>
<td>Car, Truck, or Van-Carpooled</td>
<td>13,266,356</td>
<td>9.69%</td>
<td>6,327</td>
<td>8.43%</td>
</tr>
<tr>
<td>Public Transit (excluding taxicab)</td>
<td>6,768,661</td>
<td>4.94%</td>
<td>2,055</td>
<td>2.74%</td>
</tr>
<tr>
<td>Walked</td>
<td>3,797,048</td>
<td>2.77%</td>
<td>605</td>
<td>0.81%</td>
</tr>
<tr>
<td>Taxicab, Motorcycle, Bicycle, or Other</td>
<td>2,327,228</td>
<td>1.70%</td>
<td>247</td>
<td>0.33%</td>
</tr>
<tr>
<td>Worked at Home</td>
<td>5,924,200</td>
<td>4.33%</td>
<td>2,154</td>
<td>2.87%</td>
</tr>
</tbody>
</table>

Source: US Census Bureau, 2010

Linkage Between Land Use and Transportation

Adjoining land uses play a critical role in how transportation networks function. More intensely utilized land in urban and suburban areas provides more people per net acre and, therefore, more users of the network. Additionally, the historical development of land plays a role in the effectiveness of mobility. For instance, residential uses in an urban area would likely be located on a grid network that gave users many route options in the form of intersecting streets. Suburban areas, however, more typically utilize a cul-de-sac form of development that sends
high numbers of users out to arterial streets via minimal access points. While this form of development might be good for keeping through traffic away from residents, it can negatively impact traffic flow, especially if part of the network becomes blocked.

Kenton County has multiple forms of development across four unique sub areas (urban, first ring suburban, suburban, and rural). Historically, growth in the county started in the urban area and radiated outward along major arterials. In more rural areas, development traditionally grew up around major crossroads. Few limitations were placed on adjoining land uses and growth was allowed to occur with numerous curb cuts along major roadways. As a result, roads like Dixie Highway now experience increased congestion and higher crash concentrations from intense uses along the route.

As demand requires the addition of new roadways and street realignment, analysis of the impact of adjoining land uses should be considered. Care should be taken to increase safety along these and existing roadways by implementing carefully planned corridors that balance the public’s health, safety, and welfare and provide ample access to private property owners. The Kenton County Transportation Plan Update, which is currently being studied, seeks to place an increased emphasis on the interrelatedness of land use and transportation. The plan is scheduled to be complete by July 2014.

**Vehicular Roadway Network**

Analysis of the existing transportation network indicates that roadways are the most robust transportation system within the county. Motorized vehicular travel comprises approximately 96 percent of all travel in Kenton County. Within the county’s borders, there are almost 2000 lane miles of roadway. Over two-thirds of the network (1,334.47 lane miles) is comprised of local streets that primarily service residential land uses. The remaining third is distributed among interstates, arterials, and collectors. A map of all the functionally classified roadways is provided in Figure 6.2.

Functional classification of roadways is important because the order helps understand a roadway type and types of land uses that might adjoin the thoroughfare. For instance, an Urban Principal Arterial would likely be a four or five lane roadway located in an urban or suburban setting with multiple access points and differing land uses such as residential, commercial, or office along the route. A Rural Local roadway; however, would be a more winding one or two lane road with predominantly residential or agricultural uses adjoining the street and lower densities. Each roadway type is important to the overall network and helps identify where higher vehicular demands exists on the network. The classification scale also helps identify where new development might be most appropriate with supporting transportation infrastructure already in place.

**Bicycle Facilities**

Bicycles are chosen by Kenton County residents very infrequently as represented in Figure 6.1 of this chapter. Nevertheless, they are a part of the overall transportation system that allows for a more active mobility option. They also help to improve traffic flow by lowering the amount of vehicles on the roadway thereby reducing delay, congestion, and vehicle emissions.

Currently only 16.92 miles of dedicated bicycle facilities are located within the county. Of these facilities, 5.68 miles are constructed as paved bicycle lanes alongside Madison Pike and Turkeyfoot Road, 10.07 miles exist as shared roadways as part of the Northern Kentucky Riverpath and Licking River Trail, and 1.17 miles are located within park settings at Pioneer Park and the Licking River Greenway. Existing bicycle facilities comprise 0.008 percent of the total of the Kenton County roadway network.

Finding the ideal amount of cycling infrastructure for a community can be an elusive task as all communities are different in terms of demographics, desire for amenities, and even topography. Research was conducted into communities with similar population size that have been awarded Platinum or Gold status as “Bicycle Friendly Communities” in 2013 by the League of American Bicyclists (LAB). Figure 6.3 provides comparative information on bicycle facilities for some communities that are similar to Kenton County in population size or geographic area.

Comparison of these Platinum and Gold cities as ranked by the LAB shows that Kenton County’s dedicated bicycle and pedestrian facilities are significantly lower. Additionally, these communities often implement bicycle parking programs, education and outreach efforts, and other infrastructure changes, such as highly-visible bright green bicycle boxes at busy intersections, to increase safety. Their rankings in the top two award categories by the LAB are by concerted efforts and dedicated programs designed to increase cycling numbers and safety. If Kenton County wishes to achieve similar results, coordinated efforts will be needed.
Figure 6.2: Roadway Functional Classification

Legend
- Rural Principal Arterial Interstate
- Rural Principal Arterial Other
- Rural Major Collector
- Rural Minor Collector
- Urban Principal Arterial Interstate
- Urban Principal Arterial Other
- Urban Minor Arterial
- Urban Collector
- Urban Local
- Rural Local

The information in this product is accurate for planning purposes only.

Source: Planning and Development Services of Kenton County
A possible starting point for Kenton County would be to update the Kenton County Bicycle Plan, which was last published in 1999. The plan could be used as a basis for future recommendations that might help improve cycling as a viable transportation option locally. The update would allow for examination of characteristics unique to Kenton County such as topographic challenges that are often cited as reasons why people do not cycle as frequently. It should be noted that, needs for facilities will change depending on the respective sub area. The cycling needs in the urban area may necessitate a dedicated multi-use path whereas the rural area may only need signage or educational efforts for cyclists and motorists. These potential efforts should not solely be viewed as ways to increase cycling. As more cyclists operate within the network for transportation trips they will reduce the number of motorized vehicles on the roadway. Increased users of alternate modes of transit will help alleviate congestion, reduce delay, and diminish emissions in the area as a whole.

Plans currently exist to add 22 miles to the existing bicycle trails in Kenton County. These facilities consist of the Northern Kentucky Rt. 8 River Path (8 miles), Banklick Creek Trail (7 miles), and Licking River Trail (7 miles). Each of these trails is designed to be shared use paths. Several projects are also identified for construction along roadways which will be either widened or realigned. Roadways including Industrial Road (1 mile), KY 536 (10 miles), and Taylor Mill Road (4 miles) will include bike lanes in their reconstruction efforts. With the addition of these bike lanes and the aforementioned shared use paths Kenton County will gain nearly 40 miles of bicycle facilities, or more than twice the current inventory.

Pedestrian Facilities

Another modal option that reduces the need for vehicular transportation and provides an active transportation choice is walking. The ability to walk to amenities is directly related to the interrelationship between land use and transportation. Amenities should be available close to residential areas for walking to be an effective transportation option outside of exercise or recreation. Pedestrians need to feel safe on adequate facilities to encourage walking for shorter transportation needs.

The Kenton County Pedestrian Plan, adopted in 2001, was the last study conducted devoted solely to walkability in the county. This study recommends planning amenities within a five minute walk, or roughly 1/3 of a mile (one-way) of residential areas. If planning is not present at the time of construction then this modal choice as a viable transportation option can often go overlooked. In spring of 2013, PDS embarked on an inventory of all walking facilities in Kenton County. The urban area has good sidewalk connectivity, often on both sides of the street, within its boundaries. Aside from a few missing connections in a variety of locations, the network is very well established. While not as complete as the urban area, the first ring sub area has relatively good connectivity as well. This area of the county experienced development during a time where sidewalks were generally added voluntarily as development occurred. Its older streets are well served by pedestrian facilities although they sometimes might exist only on one side of the road. Residential areas with no sidewalks also exist, however, these neighborhoods are often characterized by low traffic local streets that encourage walking in the roadway. Both the urban and first ring suburban areas encourage walking through their more diverse adjoining land uses and greater variety of amenities within walking distance of residences.

"Amenities should be available close to residential areas for walking to be an effective transportation option outside of exercise and recreation."

The suburban areas of the county developed at a time with varying subdivision regulations that required different sidewalk standards depending on the construction date. While a majority of subdivisions were constructed with sidewalks, there is poor connectivity between the individual sidewalk networks within each subdivision, thus creating a larger issue. Several examples of residential streets with sidewalks which lead to arterials lacking facilities are found in

### Table: Comparable Communities' Bicycle Facilities

<table>
<thead>
<tr>
<th>Community Name</th>
<th>Population Size</th>
<th>Area (in sq. miles)</th>
<th>Dedicated Facilities (in miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenton County</td>
<td>159,720</td>
<td>164</td>
<td>16</td>
</tr>
<tr>
<td>Fort Collins, CO [1]</td>
<td>143,986</td>
<td>47</td>
<td>310</td>
</tr>
<tr>
<td>Portland, OR [2]</td>
<td>533,492</td>
<td>134</td>
<td>327</td>
</tr>
<tr>
<td>Eugene, OR [3]</td>
<td>142,681</td>
<td>40</td>
<td>158</td>
</tr>
</tbody>
</table>

Source: League of American Bicyclists (LAB)
the suburban area. This phenomenon could likely be attributed to sidewalk requirements which entailed the construction of sidewalks along privately owned streets within a subdivision be connected to arterials which may never have had facilities. The suburban areas could be an area where strategic location of sidewalk facilities along public right of way might dramatically improve overall network connectivity.

The rural sub area is nearly devoid of sidewalk facilities, although a very limited number do exist in the northern sections of the area. This area also provides a unique opportunity to expand the county’s network if desired. If sidewalks are considered as needing to be constructed it should be taken to connect amenities as they are constructed particularly in neighborhood commercial centers. This approach might also necessitate the need for connections to be constructed along state, county, and local roadways that currently exist.

Public Transportation

Public transportation refers to a system that charges fares to carry passengers on fixed routes within vehicles available to the public such as busses, subways, and/or trains. This mobility choice helps to reduce single occupancy vehicles within the transportation system, alleviating congestion, reducing delays, and lessening the overall emissions by carrying several passengers in one vehicle. In Kenton County, public transportation is predominantly conducted within a hub and spoke bus system. In other words, several routes originate in the suburban sub area and move northward towards the hub in the historic employment centers located in the urban sub area of downtown Covington and Cincinnati (by extension). While this model has worked sufficiently over the last several decades, changes in employment centers and greater demand for point-to-point travel east to west are placing new demands on a system that has real financial constraints.

Kenton County’s public transportation is provided by the Transit Authority of Northern Kentucky (TANK). TANK is part of the regional transit system that serves Northern Kentucky (also comprised of Metro in Southwestern Ohio). TANK operates eight local routes including the Southbank Shuttle, five express routes, and seven Park & Ride locations in Kenton County. The system also operates two transit hubs inside Kenton County – one urban hub near the Covington riverfront and one suburban hub in Ft. Wright along Madison Pike. Service within Kenton County represents approximately 50 percent of TANK’s regional transit service while the other 50 percent of service is split between Boone and Campbell counties. Additionally 23 routes and the Southbank Shuttle cross the river and connect to the Metro system in downtown Cincinnati. Aside from fixed route operations, TANK provides door-to-door service through the Regional Area Mobility Program (RAMP) for disabled citizens.

Outside of TANK’s system, the Senior Services of Northern Kentucky offers a DayTripper program for senior citizens over age 60. This system is available on a call-ahead basis and accepts donations for its services. As the DayTripper is only available to limited populations, does not operate on fixed routes, and does not charge a set fee it does not meet the typical definition of public transportation but it still provides an important role in the community.

TANK serves the urban, first ring, and suburban sub areas of Kenton County through a hub and spoke route system as evidenced in Figure 6.5. From 2002 to 2012, total ridership on the system has fluctuated between 3 and 4 million riders per year as depicted in Figure 6.4. TANK saw the highest ridership in the last ten years during the 2012 fiscal year, with 3.84 million trips in Northern Kentucky.

Figure 6.4: System Ridership 2001-2012

![Graph showing system ridership from 2001 to 2012](source: TANK)

Figure 6.5 illustrates that transit routes primarily cross the county in a north to south orientation while east to west trips often require transfer at one of the transit hubs. TANK has attempted east to west routes in the past with limited success. Future service expansion plans have examined creation of a network of suburban transit hubs along the I-275 corridor to connect the airport, the City of Florence in Boone County, the Ft. Wright hub, and Northern Kentucky University. These suburban hubs should provide the density of transit passengers necessary to support east-west service. However, adding this service in the short-term does not seem likely as the local fund-
ing required to operate additional transit services is currently unavailable. In the meantime, TANK plans to continue development of the suburban hub network through the addition of strategically located Park-and-Ride facilities. These facilities will allow for added east to west service when operating funds become available.

Figure 6.5 also reveals no TANK service in the rural sub area of southern Kenton County. Ridership density in this area is currently too low to effectively support transit operations. As stated in goal 6 C of the Direction 2030 Goals and Objectives future efforts should “encourage strategic locations that support transit to enhance efficiency.” While this applies to all sub areas, it will be particularly important if future transit operations are desired in the rural sub area.

Lastly, it should be noted that TANK’s operations are dramatically affected by factors often outside of their control. Figure 6.4 shows the interrelationship between gas prices and transit ridership on their system. Analysis shows marked increases in ridership as fuel prices increase. This correlation points to the need for strong mobility options outside of cars and trucks as changes in one modal choice often lead to fluctuations in other modes.

**Flight Facilities**

Physically located approximately 1.5 miles to the west of Kenton County along I-275 in Boone County, CVG is a vital asset to the regional transportation network. Delta, CVG’s primary airline, has reduced operations over the past several years, leading to significant decreases in flights and passenger counts at the airport. In 2005, 22.7 million annual passengers traveled through CVG on 673 daily flights, making it the nation’s 22nd busiest airport. In 2010 passenger counts had declined to 7.9 million, with 191 daily flights in 2011. Most of these flights were shifted to newly acquired hubs when Delta and Northwest Airlines merged in 2008. The facility also faces significant competition in the form of lower fares from regional airports such as Indianapolis, Indiana; Lexington, Kentucky; Louisville, Kentucky; Dayton, Ohio; and even Columbus, Ohio. CVG has, however, bolstered its role in the local economy by adding air freight operations from DHL in 2009 (OKI Regional Council of Governments, 2012).

Flight facilities refer to flight operations, either passenger or freight, originating from a specific geographic area. Air operations can be vital to a community’s access to the globe and can dramatically affect economic development within a region. Kenton County contains no publicly-owned airports within its boundaries. The county does, however, operate the Kenton County Airport Board, which oversees the Cincinnati/Northern Kentucky International (CVG) Airport. The Airport Board sets the policies by which the airport is operated and implements strategies to ensure CVG remains a first-class facility for the region. This board is a key component of Kenton County and the overall region’s economic success as a thriving international airport helps drive business and the local economy.

**Rail Facilities**

Rail operations can provide a vibrant transportation option for residents in areas where it is available. This mode supplements other transit options and works to alleviate issues associated with congestion, delay, and emissions that are related to high single occupancy vehicle usage that is prevalent in Kenton County. There are currently, no passenger commuter rail facilities within the county, nor are any new facilities planned within the foreseeable future. The only passenger service that operates on a scheduled basis within the Greater Cincinnati region is the
Cardinal line that operates out of Cincinnati’s Union Terminal. This route operates between New York and Chicago on Sunday, Wednesday and Friday and stops in Cincinnati in the early morning hours.

The most recent study of passenger rail took place in 2002 through a regional study called MetroMoves, conducted by the Southwestern Ohio Regional Transit Authority (SORTA) and OKI. The study has never been implemented and is currently considered not to be fiscally constrained by OKI, meaning it cannot receive funding. OKI does, however, recommend preserving rights-of-way in the event funding does become available at a future date. Right-of-way in Kenton County consists of the I-71/75 corridor from the Ohio River to the Boone County line.

While passenger facilities do not currently exist, rail comprises an important part of the overall transportation network in the form of freight operations. 157.78 miles of railroad track are identified within the county on three main lines that traverse the county north to south. Specific information for Kenton County is proprietary and could not be obtained from the private companies. Information for the eight-county Ohio, Kentucky and Indiana (OKI) region indicates approximately 18 million tons of freight flowed through the region in 2009, predominantly as inbound freight. In fact, the OKI region receives over twice the amount freight as it produces for outbound flow. Coal, primary metal products, and metallic ores represent approximately 60 percent of the volume of materials entering the region. Primary metal products, chemicals or allied products, and miscellaneous mixed shipments represent approximately 70 percent of outbound rail freight by volume. Rail traverses all sub areas across long-established routes. There are no new rail alignments, nor are any lines anticipated to be abandoned within the planning horizon.

**River Crossings**

Kenton County experiences two physical boundaries (the Ohio River to the north and the Licking River to the east) that necessitate the use of bridges within the transportation network. To cross the Ohio River, bridges are primarily concentrated in the urban area in the vicinity of Covington. Travel across the Licking River farther south is limited to the I-275 Bridge and KY-536 Bridge. There are seven vehicular bridges in Kenton County and three rail-only bridges for a total of ten river crossings. Aside from the KY-536 Bridge in the Visalia area and the I-275 Bridge in the suburban sub area, all bridges are located in the urban sub area.

The Brent Spence Bridge carries I-71/75 traffic and was the crossing most frequently mentioned in public involvement sessions. This bridge is currently described as “functionally obsolete,” or built to standards that are not used today but still structurally safe for use. Multiple efforts are underway to define funding options for the bridge in an endeavor to begin construction within the next few years. As the project has already entered the design phase, it is no longer within the specific realm of this planning study. However, impacts associated with the bridge on the urban and first ring suburban sub areas should be considered.

**Roadways**

Kenton County is challenging from a planning standpoint as it has rolling topography and physical borders in the form of rivers to the north and east. The challenges associated with the physical landscape of the county that affects each sub area in some way.

**Topography**

The county’s physical landscape is made up of beautiful hills offering scenic views of the valleys below. This topography, while scenic, often limits connectivity because of gaps that naturally occur between the ridges. Bridging these valleys to connect roadways would be incredibly costly and is not a realistic option to increase connectivity. Increased connections are only realistic in areas where topographic constraints would not be cost prohibitive. Topography has also played a major role in directional mobility in the county. The next sub section discusses the county’s natural tendency to orient major travel routes in north/south configurations and examines the need for increased east/west mobility options.

Hills and valleys also pose tangible challenges to cyclists and pedestrians in the form of obstacles that must be traversed to get from point to point. The Urban sub area is predominantly flat and is located in the river valley. The First Ring Suburban area is also flat, although it lies on a natural plateau at higher elevations than the urban area. Both of these flatter areas lend themselves to increased chances for walking and bicycling as people choosing those modes do not have to constantly climb and descend hills of 400 feet or more. It should be noted, however, that limited connections in the network force cyclists and pedestrians onto main thoroughfares and limit options for secondary and tertiary route choices. Topography is a major constraint and should be considered as a real factor in mobility recommendations as the plan is drafted.
Figure 6.6: Major Routes, Kenton County

Legend
- Rural Principal Arterial Interstate
- Rural Major Collector
- Urban Principal Arterial Interstate
- Urban Principal Arterial Other
- Urban Minor Arterial
- Urban Collector

The information in this product is accurate for planning purposes only

Source: Planning and Development Services of Kenton County
Direction 2030: Research Report

Chapter 6: Mobility

Directional Mobility

Kenton County has historically had reliable north to south mobility and has faced challenges when moving east to west connectivity. This trend remains evident in 2013 as well. Review of Figure 6.6 indicates several routes that traverse the county primarily in north to south alignments such as KY 16, KY 17, Turkeyfoot Road, US 25, US 42, US 127, and even I-71/75.

Conversely, the movement of people and goods east to west is accomplished on I-275 in the northern portion of the county, KY 536 near the county’s middle area, and KY 14 farther south in the county. I-275 was constructed in the 1970s and is a major interstate loop that traverses the landscape with less concern about terrain. Major cuts in the landscape, necessary to route the roadway, are visible alongside the roadway in the form of exposed rock faces. While KY 536 carries traffic across the county, it is a winding two-lane road fraught with numerous stop signs and necessary turns to avoid topographic challenges in the landscape. To a lesser extent, KY 14 moves east to west across a majority of the county in the far southern rural sub area of the county but it both begins and ends within the borders of the county. Even KY 536 and KY 14 tend to orient themselves with natural ridge and valley alignments and avoid constant topographic changes associated with straighter alignments experienced in newer roadways like I-275.

Major Trip Areas

Traffic Analysis Zones (TAZ) are small geographic areas that help forecast future demand on the transportation network via OKI’s Travel Demand Model. These areas attempt to keep a similar number of people (either residents or employees) with homogeneous land uses. TAZs are defined by transportation barriers like major roads, rivers, or railroad tracks.

Examination of TAZs in Kenton County reveals some specific areas that experience high traffic volumes during both peak and off-peak travel times. Peak times generally include the hours of 6:30 to 9:00 a.m. and 3:30 to 6:30 p.m., whereas off-peak times encompass all other hours of the day. Figures 6.7 and 6.8 provides a visual representation of higher traffic volumes in specific zones throughout the county.

Assessing these maps indicates some of the following amenities are included amongst the highest trip generators in Kenton County for both peak and off-peak times:

- Independence Towne Center and residential areas in western Independence
- Manufacturing along Industrial Road
- Residential areas in Taylor Mill along KY 16
- Medical complexes in Crestview Hills
- Crestview Hills Town Center and residential areas immediately north
- Businesses and homes immediately south of the I-71/75 and I-275 interchange in Erlanger
- Residential areas in Crescent Springs and Villa Hills
- Residential areas in Park Hills between Dixie Highway and I-71/75
- The Austinburg area of Covington
- The Botany Hills area of Covington
- Covington central business district

Figure 6.7: Peak Trip Generation

The information in this product is accurate for planning purposes only.
The areas outlined in Figures 6.7 and 6.8 are important to note because they describe the most heavily utilized TAZs in Kenton County. Amenities inside these areas (whether work, residential, or retail) produce the highest traffic volumes in the county. Strengthening network connections between these nodes could be a strategy to help improve traffic flow in the county on a larger scale.

**Crash Concentrations**

Analyzing crash concentrations is another way of reviewing parts of the transportation network that need to be addressed from a safety standpoint. Crash information is tracked by OKI on crashes per million vehicle mile (MVM) scale. Rates of 5-7 or 7 or more crashes per MVM are considered high by technical standards.

Figure 6.9 displays crash concentrations along major routes in Kenton County. Some of the most dangerous road segments for crashes are in the rural area on narrow and winding country roads. The segment with the highest crash volumes is Klette Road (KY 2047) in the vicinity of the border of Covington, Independence, Ryland Heights, and Independence in eastern Kenton County. This segment experiences 11.96 crashes per MVM, nearly two more than the next highest road, Hempfling Road (KY 3072) at the intersection with Rich Road (KY 14).

While the highest concentrations of MVM crashes are found in rural Kenton County they experience relative low crash numbers. Klette Road only experienced 8 crashes between 2007 and 2009. The highest number of crashes in the county, 319 unique incidents, occurred on two segments of roadway – 5th Street in Covington (KY 8) between Philadelphia Street and the Licking River, and I-71/75 between the Boone County line and I-275. While the number of specific crashes was higher, these segments do not rank as high as the more rural roads due to their average annual daily traffic (AADT) counts. These counts were 12,266 and 191,938 respectively. Normalizing these segments through the MVM metric indicate they experience 5.93 and 1.24 crashes per MVM.

The number of injuries and fatalities occurring on a segment also provides insight into problematic areas.
of the county. The highest number of injuries (87) was recorded on two stretches of interstate in Kenton County. The aforementioned segment of I-71/75 immediately south of I-275 and I-275 near the Dixie Highway (US 25) and Turkeyfoot Road (KY 1303) interchanges both recorded nearly 90 injuries between 2007 and 2009. I-71/75 south of I-275 also experiences one of the county’s highest occurrence rates for fatalities with two being recorded between 2007 and 2009. Two other roads, Donaldson Road (KY 2975) in between the Boone County line and Baker Street at the I-71/75 interchange and Madison Pike (KY 17) in the vicinity of Hempfling Road (KY 3072), recorded two fatalities each. Nineteen other roadway segments experienced one fatality each and seemed to be dispersed randomly throughout the county.

**Planned Roadway Network Improvements**

Several projects are currently planned to improve vehicular traffic within Kenton County. Figure 6.10 and Figure 6.11 show projects that are currently funded through the Transportation Improvement Program (TIP) or recommended by the OKI 2040 Transportation Plan. TIP projects are those that currently have funding allocated through FY 2017. Projects listed in the 2040 plan do not have funding allocated at this time but could become active any time funding becomes available.

**Summary**

Mobility is comprised of a complex network of interconnected pieces that make up the overall system. Goal six of the Direction 2030 Goals and Objectives states that Kenton County should “enhance and expand the effectiveness of the transportation system by promoting multimodal approaches that address the needs of all users.” Addressing the needs of all system users in the form of motorists, cyclists, pedestrians, transit users, aviation, and freight will require a comprehensive approach. This approach should be focused on actions that improve all parts of the network when an individual component is addressed. It should also examine how needs change across the unique sub areas within the county. The Direction 2030 plan, combined with the upcoming Kenton County Transportation Plan will work towards exhaustively examining mobility needs in the county for years to come.
Figure 6.10: Kenton County Recommended and Programmed Roadway Projects

Source: OKI Regional Council of Governments, 2012
### Figure 6.11: Kenton County Recommended and Programmed Roadway Projects

<table>
<thead>
<tr>
<th>TIP or 2040 Plan Identification Number</th>
<th>Facility</th>
<th>Description</th>
<th>Cost (in year of construction dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-344.11</td>
<td>KY 16</td>
<td>Reconstruct from I-275 to Old Taylor Mill Rd south intersection</td>
<td>$17,858,000</td>
</tr>
<tr>
<td>6-162.00</td>
<td>KY 536</td>
<td>Widen to five lane urban typical with raised median from Boone County Line to KY 17</td>
<td>$31,410,000</td>
</tr>
<tr>
<td>6-17.03</td>
<td>I-75 (Brent Spence Bridge)</td>
<td>Transportation improvements milepost 191.277 to 191.777</td>
<td>$3,958,787</td>
</tr>
<tr>
<td>6-17.04</td>
<td>I-75 (Brent Spence Bridge)</td>
<td>Transportation improvements milepost 191.277 to 191.777</td>
<td>$33,177,213</td>
</tr>
<tr>
<td>6-344.30</td>
<td>KY 16</td>
<td>Sunbright Dr to Old Taylor Mill Connector</td>
<td>$10,300,000</td>
</tr>
<tr>
<td>6-344.40</td>
<td>KY 16</td>
<td>Old Taylor Mill Connector to Blackstone</td>
<td>$11,760,000</td>
</tr>
</tbody>
</table>

#### Recommended 2040 Plan Projects

<table>
<thead>
<tr>
<th>TIP or 2040 Plan Identification Number</th>
<th>Facility</th>
<th>Description</th>
<th>Cost (in year of construction dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>Brent Spence Bridge</td>
<td>Kentucky portion to reconstruct existing and add new I-71/75 bridge over Ohio River</td>
<td>$1,485,322,220</td>
</tr>
<tr>
<td>705</td>
<td>Buttermilk Pike/I-71/75 Interchange</td>
<td>Auxiliary lane extension and interchange improvements</td>
<td>$10,221,000</td>
</tr>
<tr>
<td>706</td>
<td>I-75</td>
<td>Widen to six northbound lanes from I-275 to US 25</td>
<td>$225,209,700</td>
</tr>
<tr>
<td>707</td>
<td>KY 1072</td>
<td>Widen to three lanes from I-75 to Henry Clay Ave</td>
<td>$2,345,900</td>
</tr>
<tr>
<td>708</td>
<td>KY 1303 (Turkeyfoot Rd)</td>
<td>Reconstruct and widen to five lanes from KY 536 to Richardson Rd West</td>
<td>$40,662,900</td>
</tr>
<tr>
<td>709</td>
<td>KY 1303 (Turkeyfoot Rd)</td>
<td>Reconstruct with bike lane from Dudley Rd to I-275 and widen to four lanes north from I-275 to US 25</td>
<td>$49,264,600</td>
</tr>
<tr>
<td>710</td>
<td>KY 16</td>
<td>Widen to five lanes from KY 1501 (Hands Pike) to KY 536</td>
<td>$25,023,300</td>
</tr>
<tr>
<td>711</td>
<td>KY 16</td>
<td>Widen to five lanes KY 536 to KY 17</td>
<td>$17,203,500</td>
</tr>
<tr>
<td>712</td>
<td>KY 1829/KY 1486</td>
<td>Widen to three lanes on partial new alignment from KY 1303 (Turkeyfoot Rd) to KY 3035 and KY 3035 to KY 17</td>
<td>$84,453,600</td>
</tr>
<tr>
<td>713</td>
<td>KY 236 (Stevenson Rd)</td>
<td>Reconstruct from railroad crossing to KY 1303 (Turkeyfoot Rd)</td>
<td>$34,798,000</td>
</tr>
<tr>
<td>714</td>
<td>KY 371</td>
<td>Add two lanes with sidewalk from Avon Drive to I-71/75</td>
<td>$35,297,800</td>
</tr>
<tr>
<td>715</td>
<td>KY 536</td>
<td>Widen to five lanes from Boone County line to KY 17</td>
<td>$81,605,900</td>
</tr>
<tr>
<td>716</td>
<td>KY 536</td>
<td>Reconstruct and widen to five lanes from KY 17 to KY 16</td>
<td>$30,888,100</td>
</tr>
<tr>
<td>717</td>
<td>KY 8</td>
<td>Reconstruct existing lane widths from I-75 to Main St</td>
<td>$36,180,300</td>
</tr>
<tr>
<td>719</td>
<td>NEW KY 177/KY 16 Connection</td>
<td>Construct new two lane connection between KY 177 and KY 16</td>
<td>$25,370,300</td>
</tr>
<tr>
<td>724</td>
<td>KY 16</td>
<td>Reconstruct from KY 177 to KY 1732 (Grand Ave)</td>
<td>$25,811,500</td>
</tr>
<tr>
<td>725</td>
<td>KY 8</td>
<td>Replace the Fourth Street Bridge and improve for bike/pedestrian</td>
<td>$24,267,300</td>
</tr>
</tbody>
</table>

Source: OKI Regional Council of Governments, 2012
Endnotes