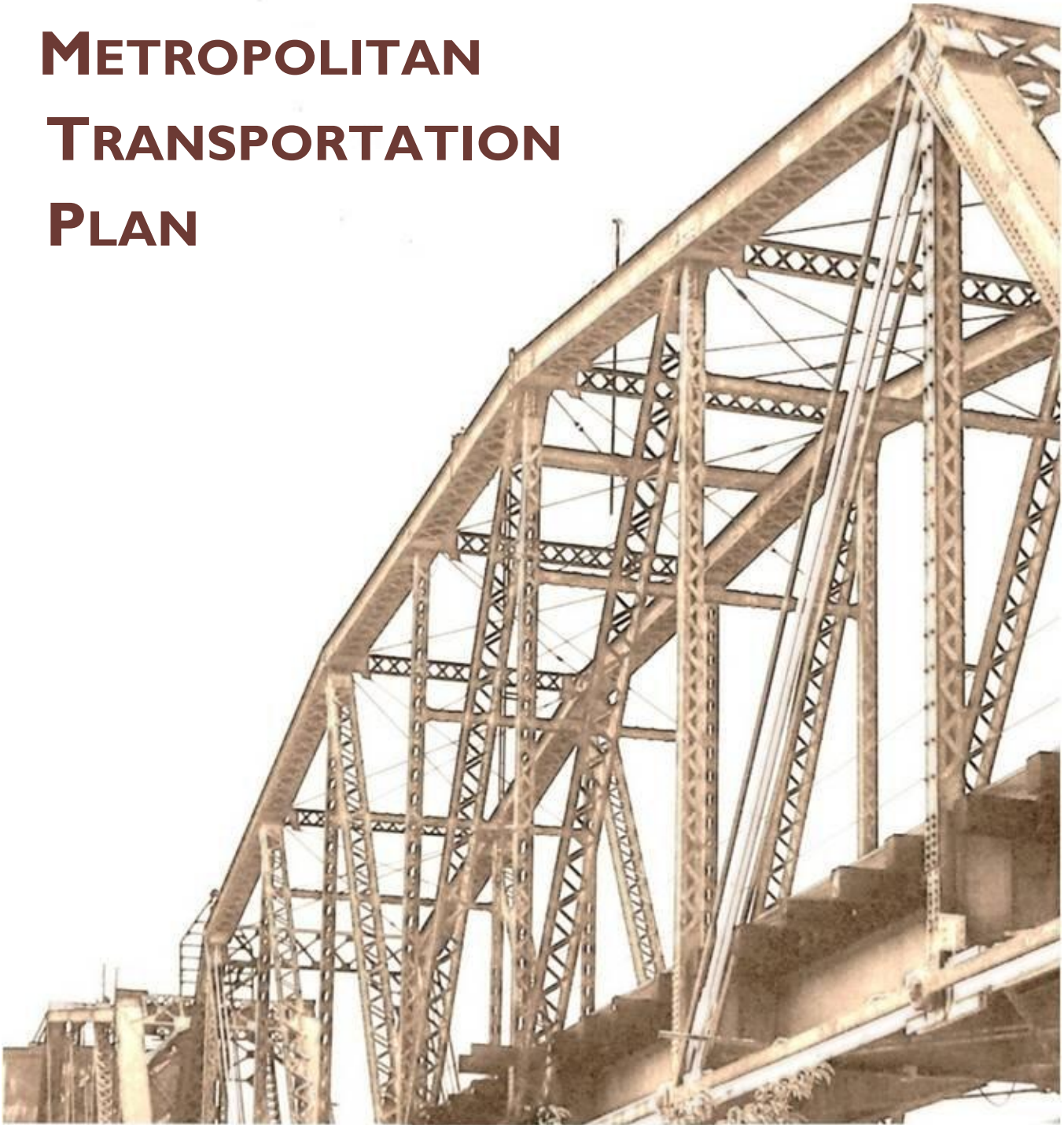


# 2040

## **METROPOLITAN TRANSPORTATION PLAN**



**ADOPTED**  
FEBRUARY 20, 2014

CLARKSVILLE URBANIZED AREA  
METROPOLITAN PLANNING ORGANIZATION

# Table of Contents

List of Tables.....	i
List of Figures.....	iii

## Chapter 1: Introduction

Metropolitan Planning.....	1-2
Legal Requirements of the Plan.....	1-3
Plan Adoption and Amendment Process .....	1-5
Plan Implementation .....	1-5

## Chapter 2: Development Trends

Population Trends and Forecasts .....	2-1
Employment Trends and Forecasts .....	2-6
Summary.....	2-9

## Chapter 3: Goals and Objectives

National Emphasis.....	3-1
Local Emphasis .....	3-2

## Chapter 4: Analysis of the Transportation System

<b>STREETS AND HIGHWAYS</b> .....	<b>4-1</b>
Existing Conditions.....	4-1
Evaluating Roadway Performance: Level of Service Analysis .....	4-5
Existing + Committed Projects.....	4-9
Future Roadway Conditions.....	4-12
Future Roadway Conditions Without Additional Improvements .....	4-12
Proposed Roadway Capacity Enhancement Projects .....	4-20
<b>TRANSIT</b> .....	<b>4-29</b>
Clarksville Transit System .....	4-29
CTS Fixed Route Service.....	4-29
CTS Demand Response Service.....	4-32

<b>MCHRA Public Transit .....</b>	<b>4-33</b>
<b>Pennyrile Allied Community Services (PACS).....</b>	<b>4-33</b>
<b>Other Special Service Providers.....</b>	<b>4-34</b>
<b>Regional Transit Service.....</b>	<b>4-34</b>
<b>Transit Capital Assets.....</b>	<b>4-37</b>
<b>Transit Service Needs.....</b>	<b>4-38</b>
Transit-Dependent Populations.....	4-38
Impact of Infrastructure and Growth Decisions on Transit.....	4-43
General Transit Service and Capital Needs.....	4-43
<b>Additional Recommendations .....</b>	<b>4-45</b>
<b>BICYCLE AND PEDESTRIAN TRANSPORTATION.....</b>	<b>4-46</b>
<b>Classification of Bicycle/Pedestrian Facilities and Users.....</b>	<b>4-46</b>
<b>Existing bicycle &amp; pedestrian facilities .....</b>	<b>4-49</b>
Sidewalks.....	4-49
Multi-Use Paths / Greenways .....	4-50
Bicycle Routes .....	4-50
<b>Bicycle/Pedestrian Needs .....</b>	<b>4-53</b>
<b>FREIGHT MOVEMENT AND INTERMODAL CONNECTIVITY .....</b>	<b>4-56</b>
<b>Regional Commodity Flows .....</b>	<b>4-57</b>
<b>RAIL.....</b>	<b>4-58</b>
<b>Existing Rail.....</b>	<b>4-58</b>
Class I Railroad – CSX Transportation .....	4-58
Class II Shortline Railroad - R.J. Corman Railroad Company (RJCM).....	4-59
Shortline Improvements .....	4-59
<b>Future Rail Transport .....</b>	<b>4-61</b>
Freight Rail .....	4-61
Passenger Rail .....	4-61
<b>WATERWAYS .....</b>	<b>4-62</b>
<b>Current Conditions .....</b>	<b>4-62</b>
<b>Future Waterways Transport.....</b>	<b>4-63</b>
<b>Port Service.....</b>	<b>4-63</b>

<b>AVIATION</b> .....	<b>4-65</b>
<b>Airport Location and Access</b> .....	<b>4-65</b>
<b>Airport Characteristics</b> .....	<b>4-65</b>
<b>Commercial Providers</b> .....	<b>4-66</b>
<b>Aviation Needs</b> .....	<b>4-67</b>
Short-term goals .....	4-68
Medium-term goals .....	4-68
Long-term goals .....	4-69
Commercial air carrier service .....	4-69
<b>SAFETY</b> .....	<b>4-70</b>
<b>Vehicular Crashes</b> .....	<b>4-70</b>
<b>Bicycle and Pedestrian Crashes</b> .....	<b>4-72</b>
<b>Motorcycle Crashes</b> .....	<b>4-73</b>
<b>Railroad Train/Vehicular Crashes</b> .....	<b>4-74</b>
<b>Strategic Highway Safety Plans</b> .....	<b>4-74</b>
<b>Special Safety Issues</b> .....	<b>4-74</b>
<b>SECURITY</b> .....	<b>4-78</b>
<b>Strategic Highway Network (STRAHNET)</b> .....	<b>4-79</b>
<b>Roles In Transportation Security</b> .....	<b>4-79</b>
<b>MANAGEMENT AND OPERATIONS</b> .....	<b>4-81</b>
<b>Travel Demand Management</b> .....	<b>4-81</b>
<b>Systems Management &amp; Operations (M&amp;O)</b> .....	<b>4-82</b>
<b>Incident Management</b> .....	<b>4-82</b>
<b>Intelligent Transportation Systems (ITS)</b> .....	<b>4-83</b>
<b>Access Management</b> .....	<b>4-85</b>
Medians.....	4-85
Driveway Management.....	4-86
Land Development Policies.....	4-87

# Chapter 5: Recommended Plan and Funding

- Sources of Transportation Funding .....5-1**
  - Federal Transportation Funding ..... 5-1
  - State and Local Revenue Sources ..... 5-2
- Transportation Revenue Forecasts.....5-5**
  - Highway Revenue Forecast ..... 5-5
  - Transit Revenue Forecast..... 5-8
- Projected Cost of Recommended Transportation Projects and Services .....5-10**
  - Highway Project Costs..... 5-10
  - Transit Projects and Service Costs ..... 5-15
- Demonstration of Fiscal Constraint .....5-16**
- Unfunded Projects.....5-18**

# Chapter 6: Potential Impacts

- Environmental Consultation Process.....6-1**
- Review of Proposed Transportation Projects .....6-2**
  - Historic Lands Analysis ..... 6-2
  - Wetland and Floodplain Analysis..... 6-5
  - Karst Areas Analysis ..... 6-9
- Environmental Mitigation Strategies .....6-11**
- Climate Change and Extreme Weather Events .....6-12**
  - Climate Change Strategies ..... 6-12
  - Adaptation to Climate Change ..... 6-13
- Environmental Justice and Title VI .....6-14**
- Environmental Justice Analysis.....6-15**
  - Minority Populations ..... 6-15
  - Low-Income Populations..... 6-17
- Allocation of Funds to Communities of Concern .....6-17**
  - Highway Projects..... 6-17
  - Roadway Safety and ITS Projects ..... 6-17
  - Transit Projects ..... 6-17
  - Bicycle and Pedestrian Projects ..... 6-17
- Summary.....6-22**

# Chapter 7: Public Participation

- Public Participation Plan .....7-1**
- Consultation with Local, State, and Federal Agencies .....7-1**
- Metropolitan Transportation Plan .....7-1**
- Public Participation in the 2040 Plan.....7-2**
  - Initial Public Meeting .....7-3
  - Public Comments at CUAMPO Executive Board Meetings .....7-3
  - Public Survey .....7-3
  - Freight Survey .....7-5
- Public Comments.....7-6**

# List of Tables

Table 2-1: Population Change in the Clarksville Region, 2000 to 2040 .....2-2

Table 2-2: CUAMPO Area Total Employment (2008-2035).....2-6

Table 2-3: Top Ten Private Employers in the CUAMPO Area.....2-7

Table 3-1: Relationship of National MAP-21 Planning Factors to 2040 Plan Goals .....3-5

Table 3-2: Performance Measures for the 2040 Metropolitan Transportation Plan .....3-6

Table 4-1: Clarksville Area Roadways with the Highest Traffic Volumes (2011) .....4-3

Table 4-2: Volume/Capacity Ratios Corresponding to Roadway Levels of Service.....4-5

Table 4-3: Existing + Committed Projects for the Clarksville Urbanized Area MPO .....4-10

Table 4-4: Change in Vehicle-Miles Traveled at LOS E or F, 2010 to 2040 (without improvements) ....4-13

Table 4-5: Change in Vehicle-Hours Traveled at LOS E or F, 2010 to 2040 (without improvements) ....4-13

Table 4-6: Total Travel Time Costs by Functional Class, 2010 vs. 2040 (without improvements).....4-14

Table 4-7: Total Vehicle Operating Costs by Functional Class, 2010 vs.2040 (without improvements) 4-14

Table 4-8: Roadway Projects Proposed for Completion in 2017-2025 .....4-23

Table 4-9: Roadway Projects Proposed for Completion in 2026-2035 .....4-23

Table 4-10: Roadway Projects Proposed for Completion in 2036-2040 .....4-24

Table 4-11: Additional Projects Anticipated Throughout the Planning Period.....4-24

Table 4-12: Change in Vehicle-Miles Traveled at LOS E or F, 2010 compared to 2040 Plan .....4-28

Table 4-13: Change in Vehicle-Hours Traveled at LOS E or F, 2010 compared to 2040 Plan .....4-28

Table 4-14: Clarksville Transit System – Vehicle Fleet (July 2012).....4-37 and 4-38

Table 4-15: Proposed Transit Capital Investments, 2014 to 2040 .....4-44

Table 4-16: General Considerations for Bike Facility Types .....4-48

Table 4-17: Bicycle and Pedestrian Facilities recommended in Clarksville Downtown Parking, Streets and Network Study.....4-52

Table 4-18: Sidewalk Priority Indicator, City of Clarksville and Montgomery County .....4-53

Table 4-19: Proposed Sidewalks or Multi-Use Paths .....4-54

Table 4-20: Based Aircraft by Type, 2012 .....4-66

Table 4-21: Average Daily Aircraft Operations, 2012 .....4-66

Table 4-22: Summary of SWOT analysis from 2012-2022 Airport Strategic Plan .....4-67 and 4-68

Table 4-23: Number of Crashes by Type, 2008 to 2011.....4-70

Table 4-24: Number of Fatalities, 2007 to 2011 .....4-71

Table 4-25: Percent of Fatalities Related to Alcohol, 2007 to 2011 .....4-71

Table 4-26: Percent of Fatalities Involving Unrestrained Motorists .....4-72



Table 4-27: Bicycle and Pedestrian Fatalities, 2007 to 2011 .....	4-73
Table 4-28: Montgomery County Ranking for Crash Rates in Certain Categories .....	4-75
Table 4-29: Christian County Ranking for Crash Rates in Certain Categories .....	4-75
Table 4-30: Driving Behaviors Learned During Deployment.....	4-77
Table 4-31: Potential Countermeasures for Risky Driving Behaviors .....	4-78
Table 5-1: Federal Transportation Funding Programs .....	5-1 and 5-2
Table 5-2: Sources of Transportation Funding in Tennessee and Kentucky .....	5-4
Table 5-3: Projected Funding for Highway Capital Projects, 2014-2040 .....	5-6 and 5-7
Table 5-4: Projected Funding Available for Highway Operations & Maintenance, 2014-2040.....	5-8
Table 5-5: Projected Capital Funding Available for Transit, 2014-2040 .....	5-9
Table 5-6: Projected Funding Available for Transit Operations and Maintenance, 2014-2040 .....	5-10
Table 5-7: Roadway Projects Proposed for Completion in 2014-2016 .....	5-12
Table 5-8: Roadway Projects Proposed for Completion in 2017-2026 .....	5-12
Table 5-9: Roadway Projects Proposed for Completion in 2027-2035 .....	5-13
Table 5-10: Roadway Projects Proposed for Completion in 2036-2040.....	5-13
Table 5-11: Additional Projects Anticipated Throughout the Planning Period.....	5-14
Table 5-12: Proposed Transit Capital Projects by Horizon, 2014-2040 .....	5-15
Table 5-13: Operating and Maintenance Costs of Transit Service by Horizon, 2014-2040 .....	5-15
Table 5-14: Projected Revenue Compared to Total Cost of Roadway Projects, by Horizon .....	5-16
Table 5-15: Projected Revenue Compared to Total Cost of Transit Capital Projects, 2014-2040* .....	5-17
Table 5-16: Projected Revenue Compared to Total Cost of Transit Operations, 2014-2040* .....	5-17
Table 5-17: Illustrative Projects (Unfunded).....	5-18
Table 6-1: Projects with Potential Impact on Historic Resources .....	6-3
Table 6-2: Projects with Potential Impact on 100-Year Floodplains.....	6-5
Table 6-3: Projects with Potential Impact to Wetlands .....	6-7
Table 6-4: Percent Minority Population in the MPO Area .....	6-15
Table 6-5: Planned Roadway Projects in Minority and/or Low-Income Areas .....	6-19



# List of Figures

Figure 2-1: Clarksville Urbanized Area MPO Planning Boundaries ..... 2-3

Figure 2-2: Projected Population Change, 2010 to 2040 ..... 2-4

Figure 2-3: Montgomery County Growth Plan..... 2-5

Figure 2-4: Composition of Regional Employment, 2010 and 2040 ..... 2-7

Figure 2-5: Employment Change, 2010 to 2040 ..... 2-8

Figure 4-1: Clarksville MPO Area Roadway Functional Classifications ..... 4-2

Figure 4-2: 2011 Annual Average Daily Traffic, Clarksville MPO Region ..... 4-4

Figure 4-3: Graphic Illustration of Roadway Level of Service ..... 4-6

Figure 4-4: Base Year (2010) Roadway Levels of Service ..... 4-8

Figure 4-5: Existing + Committed Projects ..... 4-11

Figure 4-6: 2016 Roadway Level of Service – Existing + Committed Projects Only ..... 4-15

Figure 4-7: 2026 Roadway Level of Service – Existing + Committed Projects Only ..... 4-16

Figure 4-8: 2035 Roadway Level of Service – Existing + Committed Projects Only ..... 4-17

Figure 4-9: 2040 Roadway Level of Service – Existing + Committed Projects Only ..... 4-18

Figure 4-10: Proposed Roadway Capacity Enhancement Projects ..... 4-22

Figure 4-11: 2026 Roadway Level of Service With Proposed Projects..... 4-23

Figure 4-12: 2035 Roadway Level of Service With Proposed Projects..... 4-24

Figure 4-13: 2040 Roadway Level of Service With Proposed Projects..... 4-25

Figure 4-14: Clarksville Transit System Fixed Routes (2013) ..... 4-30

Figure 4-15: CTS Total Annual Ridership, 2008-2012..... 4-31

Figure 4-16: Annual Ridership on The Lift, 2008-2012 ..... 4-32

Figure 4-17: Long Range Vision for Regional Transit ..... 4-35

Figure 4-18: Transit Routes Compared to Areas with High Senior Citizen Population (MPO Area) ..... 4-39

Figure 4-19: Transit Routes Compared to Areas with High Percentage of Minority Persons..... 4-41

Figure 4-20: Transit Routes Compared to Areas with High Percentage of Low-Income Persons..... 4-42

Figure 4-21: Bicycle and Pedestrian Facilities ..... 4-51

Figure 4-22: Commodities Shipped By Truck From the Clarksville Region, by Weight..... 4-57

Figure 4-23: Commodities Shipped By Truck to the Clarksville Region, by Weight ..... 4-57

Figure 4-24: Rail Lines and Ports in the Region..... 4-60

Figure 4-25: Potential High-Speed Passenger Rail, Atlanta to Chicago ..... 4-61

Figure 4-26: Federal Railroad Administration High-Speed Rail Strategic Plan..... 4-61

Figure 4-27: Mississippi Inland Waterway System..... 4-63

Figure 4-28: Median Crossover Designs..... 4-85

Figure 4-29: Relationship of Crashes and Access Density .....4-86

Figure 6-1: Projects with Potential Impact on Historic Resources.....6-4

Figure 6-2: Projects with Potential Impact on 100-Year Floodplains.....6-6

Figure 6-3: Projects with Potential Impact to Wetlands.....6-8

Figure 6-4: Areas of Potential Karst Topography .....6-10

Figure 6-5: Minority Population by Census Block Group .....6-16

Figure 6-6: Low-Income Population by Census Tract.....6-18

Figure 6-7: Planned Roadway Projects in Minority Areas.....6-20

Figure 6-8: Planned Roadway Projects in Low-Income Areas.....6-21

Figure 7-1: Survey Respondents’ Ranking of Transportation System.....7-4

Figure 7-2: Average Expenditure Rate Proposed by Survey Respondents .....7-4

Figure 7-3: Priority Road Needs Identified by Survey Respondents .....7-5



# Chapter I

## Introduction

The Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) was established in 1977, pursuant to federal requirements, to provide a coordinated, cooperative, and comprehensive approach to transportation planning for the Clarksville metropolitan area. Today that includes the cities of Clarksville, Tennessee and Oak Grove, Kentucky, as well as Montgomery County, Tennessee and portions of the City of Hopkinsville and Christian County, Kentucky.

Since that time, Clarksville has become the fifth-largest city in Tennessee, with a recent rate of population growth that outstripped Nashville's by nearly a factor of 3. In fact, population in 2010 exceeded the projections of the Montgomery County Growth Plan by more than 10,000 people. Much of this growth is associated with the success of various institutions in the region: Clarksville is home to Fort Campbell, one of the nation's largest military installations, as well as Austin-Peay State University, the fastest-growing four-year university in Tennessee. The region also continues to score major business expansions, including new investments by Bridgestone Metalpha and Jostens, and most recently, the decision by Agero to locate 500 new jobs for a driver assistance call and data response center.



Continued success will depend on the region's ability to plan and adapt to the changing demands on its infrastructure and services, including transportation. The system currently in place will not provide the same level of mobility by 2040, with more than 250,000 people and 100,000 employees moving within the region.



The 2040 Metropolitan Transportation Plan provides an opportunity to take stock of regional trends and the effects of various policies. The Clarksville area has a strong tradition of providing city transit service, but urban levels of growth are beginning to escape beyond the geographic area that the Clarksville Transit System can serve without further investment. There are plans for major expansions to the region's road system, including State Route 374, Trenton Road (SR-48), and a new East-West Connector route, but these will not be sufficient to meet growing traffic demand unless the region carefully manages the operation of those roads. In addition, several of these major projects need to be implemented soon to avoid serious congestion, which presents a fiscal challenge given the manner in which the region's road projects have typically been funded.

While these are areas for concern, the region should also celebrate its progress on initiatives identified in the 2035 Plan. The recent launch of regional commuter bus service between Clarksville and Nashville – and its soaring ridership – demonstrates the strengths of a well-conceived transportation plan and a coordinated effort by regional leaders.

The plan presented in this document provides a 25-year blueprint for transportation investments in the region to the year 2040. This plan is multimodal, meaning it addresses travel by all modes on the transportation system -- streets and highways, bikeways and walkways, public transportation, aviation, rail and waterways.



Consideration is given to population and employment trends, land development patterns, travel characteristics, current and future transportation system performance, and other planning factors. The Plan has been developed in coordination with the federal, state and local agencies responsible for transportation, environmental protection, land use management, natural resources, and historic preservation. The recommended Plan is also based on a series of stated community goals, financial capability, environmental considerations, and public guidance.

The Plan is organized into seven sections:

<b>1 Introduction</b>	Legal basis of the plan and planning requirements
<b>2 Development Trends</b>	Current and future demographic and development conditions
<b>3 Goals and Objectives</b>	Guiding goals and objectives of the 2040 Plan
<b>4 Analysis of the Transportation System</b>	Current conditions and future needs of the transportation system
<b>5 Recommended Plan and Funding</b>	Proposed transportation investments for the 25-year period, and projected funding for their implementation
<b>6 Potential Impacts</b>	Assessment of the planned improvements on the physical and social environment
<b>7 Public and Stakeholder Participation</b>	Outreach, involvement and consultation during the planning effort

## METROPOLITAN PLANNING

Federal law requires metropolitan areas (defined as “urbanized areas” with a population of 50,000 or more people, based on the latest decennial U.S. Census) to undertake a continuing, comprehensive, and cooperative transportation planning process under the direction of a designated Metropolitan Planning Organization (MPO). The Clarksville Urbanized Area Metropolitan Planning Organization is the governing entity that is charged with carrying out this process for the Clarksville Urbanized Area. The CUAMPO planning area consists of the Cities of Clarksville and Oak Grove, Montgomery County, and portions of the City of Hopkinsville and Christian County.

The CUAMPO is led by an Executive Board, which is the policy board of the MPO; a technical committee that provides recommendations to the Executive Board; and a professional staff. The Executive Board consists of the following nine elected and appointed officials from these state and local governments:

- Mayor, City of Clarksville, TN
- Mayor, Montgomery County, TN
- Mayor, City of Oak Grove, KY
- Mayor, City of Hopkinsville, KY
- County Executive, Christian County, KY
- Director, Clarksville Transit System
- Director, Greater Nashville Regional Council
- Secretary, Kentucky Transportation Cabinet
- Commissioner, Tennessee Department of Transportation



In addition, representatives from the Federal Highway Administration and Federal Transit Administration participate as non-voting members.

The Technical Coordinating Committee (TCC) is comprised of a diverse group of transportation professionals who advise the Executive Board members on all aspects of the planning process. The TCC includes engineers, transportation and land use planners from federal, state, and local agencies, as well as representatives for transit, air, bicycle/pedestrian, and rail. Organizations represented on the TCC include professional staff from:

- Christian County, Kentucky
- City of Clarksville, Tennessee
- City of Oak Grove, Kentucky
- Clarksville Transit System
- Clarksville-Montgomery County Regional Planning Commission
- Fort Campbell Military Installation
- Greater Nashville Regional Council
- Hopkinsville-Christian County Planning Commission
- Clarksville Regional Airport (John F. Outlaw Field)
- Kentucky Department for Environmental Protection
- Kentucky Transportation Cabinet
- Mid-Cumberland Human Resource Agency
- Montgomery County Administration and Development
- Pennyriple Area Development District
- R.J. Corman Railroad Company
- Tennessee Department of Environment and Conservation
- Tennessee Department of Transportation
- U.S. Environmental Protection Agency

As with the Executive Board, the TCC also includes representatives from the Federal Highway Administration and Federal Transit Administration as non-voting members.

The CUAMPO staff is physically housed at the Clarksville-Montgomery County Regional Planning Commission and is responsible for all planning and administrative functions of the MPO. The CUAMPO staff serve as a liaison between the Executive Board and TCC and the Tennessee Department of Transportation, the Kentucky Transportation Cabinet, the Federal Highway Administration, the Federal Transit Authority, local governments, and other groups and individuals interested in transportation issues within the CUAMPO planning area.

## LEGAL REQUIREMENTS OF THE PLAN

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Federal legislation provides the guiding framework that governs the transportation planning process for all MPOs. Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21), the federal transportation legislation passed in 2012, continues the requirement that each MPO develop a long-range transportation plan with at least a 20-year horizon that leads to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand. The plan must be updated every four years to remain consistent with existing conditions and re-evaluate proposed plans, programs and projects.



In past plans, the Clarksville region has also been required to analyze the potential impacts of proposed transportation improvements on regional air quality. This was because Montgomery and Christian counties had been initially designated by the U.S. Environmental Protection Agency (EPA) as “non-attainment” for the 8-hour National Ambient Air Quality Standard (NAAQS) for ozone requiring a demonstration of actions by CUAMPO to achieve the State Implementation Plan for air quality. Having subsequently met the NAAQS for ozone, Montgomery County was redesignated a “maintenance area” for ozone on November 21, 2005, followed by Christian County on February 24, 2006. Thus, CUAMPO was still required to demonstrate that the ozone-causing emissions from the regional transportation system would not exceed the limits approved by the Tennessee Department of Environment & Conservation (TDEC), Kentucky Department for Environmental Protection (KDEP), and EPA as set forth in the State Implementation Plan. This demonstration of compliance with the State Implementation Plan for achievement of the NAAQS is termed “transportation conformity.”

Currently, having achieved the 8-hour NAAQS for ozone in the two counties for several years, TDEC, KDEP and EPA have determined that the CUAMPO is no longer required to demonstrate “transportation conformity” for the 2040 Plan. The CUAMPO has nonetheless chosen to maintain a certain structure for the 2040 Plan that will facilitate performing the analysis if it becomes necessary before the next Plan. Specifically, recommended transportation investments have been organized into the time periods for which the analysis would need to be performed: 2014 to 2016, 2017 to 2026, 2027 to 2035, and 2036 to 2040. This format is somewhat awkward for financial projections, which would typically be done in 5 or 10-year increments, but it will be very helpful if “transportation conformity” requirements are again imposed on the Clarksville region due to more stringent air quality standards or a decline in the region’s air quality.

Other requirements of the MPO planning process include compliance with a number of existing laws and regulations which are described below.

- The Americans with Disabilities Act (ADA) of 1990, which mandates equal opportunity for, and prohibits discrimination against, individuals with disabilities. In particular, Title II of the ADA and Section 504 of the Rehabilitation Act of 1973 requires State, local and regional agencies to provide transportation programs, services and activities that are accessible to all individuals;
- Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color or national origin, and Section 324 of the Federal Aid Highway Act, the enabling legislation of the Federal Highway Administration, which prohibits discrimination based on sex;
- The Uniform Relocation Assistance and Real Property Acquisition Act of 1970, which prohibits unfair and inequitable treatment of persons as a result of projects that are undertaken with federal financial assistance;
- The Civil Rights Restoration Act of 1987, which clarified the intent of Title VI to include all programs and activities of federal aid recipients and contractors whether or not those programs and activities are federally-funded;
- Executive Order #12898, which reaffirms that each federal agency must make Environmental Justice part of its mission. Environmental Justice is a concept founded in the intent of the non-discrimination prohibitions of the federal legislation referenced above. Each agency (including the MPO, as a recipient of federal funds) must identify and address disproportionately high and/or adverse environmental or human health effects that any of its programs, policies and



activities may have on minority and low-income populations. Further, each agency must work to prevent the denial, reduction or delay of benefits received by minority and low-income populations. Most importantly, each agency must develop policies and strategies to ensure full and fair participation by affected populations in transportation decisions.

The 2040 Plan reflects consideration of, and compliance with, the federal requirements of MAP-21 and all of the provisions described above.

## **PLAN ADOPTION AND AMENDMENT PROCESS**

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Developing and updating a metropolitan transportation plan is typically a year-long process, sometimes longer, given the amount of data and information that must be considered. As part of the plan development process, opportunities are provided for public and stakeholder input, which is an important activity in determining transportation needs and priorities, and aiding in the ultimate recommendations of the plan. Chapter 7 provides details on the outreach and involvement processes used in the development of the 2040 Plan and the input received.

Once a draft plan document has been developed, a formal review is required. The document does not become an approved plan until after the formal public review and comment period, which is a minimum of 30 days. After the CUAMPO has initiated the public review process on the draft metropolitan transportation plan, the CUAMPO holds one or more advertised public meetings to review and obtain final comments from the public. At the end of the public comment period and after public comments have been addressed or considered, the CUAMPO endorses/adopts the plan for approval and submits it to the appropriate state and federal agencies so that determination of compliance with various federal transportation planning requirements can be made. Once compliance with federal requirements has been determined, the plan becomes an approved document.

Amendments to the metropolitan transportation plan may occur once a plan has been adopted. These amendments occur for various reasons – changes in project schedules, unknown development changes, or changes in priorities. While the intent is to avoid such mid-cycle changes, amendments do occur. Amendments to the Plan require a 14-day public comment period advertised through local media, during which the proposed amendment is available for review on the CUAMPO website and offices.

## **PLAN IMPLEMENTATION**

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Implementation of projects from the 2040 Plan occurs through the programming of transportation improvements on an annual basis. For projects that are federally or state funded or considered regionally significant, the CUAMPO, in consultation with the appropriate city, county, and state transportation agency, determines which projects are to be advanced from the Metropolitan Transportation Plan into the CUAMPO's short-term Transportation Improvement Program (TIP).

Drawing projects from the Metropolitan Transportation Plan, the TIP is a planning/programming document developed and adopted by the CUAMPO in response to ongoing area transportation needs. The TIP updates and advances a four-year implementation program for all modes of transportation. This document not only addresses major transportation improvements (constructing a new bridge or road), but also contains small-scale transportation improvements (intersection improvements, etc.). All projects included in the TIP for funding and implementation must be consistent with the Metropolitan Transportation Plan.





# Chapter 2

## Development Trends

Situated on the border of northern middle Tennessee and southwestern Kentucky, the Clarksville region is sometimes called the “Gateway to the New South.”

The official planning area for the Clarksville Urbanized Area MPO (**Figure 2-1**) is about 570 square miles, incorporating the cities of Clarksville, Tennessee and Oak Grove, Kentucky, all of Montgomery County, Tennessee, and portions of Hopkinsville and Christian County, Kentucky. The Cumberland River winds across the middle of Montgomery County, forming the southern boundary for most of the area’s urban development, and downtown Clarksville is built at its convergence with the Red River.

Most urban development in the region is driven by the availability of sanitary sewer service and has typically been contained within the area between Fort Campbell and Interstate 24. The development of the Clarksville /Montgomery County business park on the east side of the I-24/Guthrie Highway interchange (Exit 4) marked a major public step across I-24. Residential development is now edging further eastward, particularly near the state line toward Guthrie, Ky. In many northern parts of the MPO planning area, it is common to see clusters of new houses emerging from cornfields.



*New subdivision under development on Tiny Town Road (SR-236)*

### POPULATION TRENDS AND FORECASTS

As noted in the introduction to this Plan, regional population growth has significantly exceeded the projections made when the Montgomery County Growth Plan was adopted in the late 1990s. In fact, the current headcount is nearly 13,000 higher than the 2008 estimate made when the CUAMPO’s 2035 Plan was prepared four years ago.

As shown in **Table 2-1**, the total population of the CUAMPO planning area has grown 44% in the past decade, and by 2040 the number of people living in the planning area is expected to exceed 250,000.





**Table 2-1: Population Change in the Clarksville Region, 2000 to 2040**

	2000 (Census)	2008 (2035 Plan estimate)	2010 (Census)	Pct. Change, 2000-2010	2040 (Projected)*	Pct. Change, 2010-2040
<b>CUAMPO Area</b>	<b>121,189</b>	<b>161,320</b>	<b>174,229</b>	<b>44%</b>	<b>257,161</b>	<b>48%</b>
<b>Christian County</b>	72,265	79,820	73,955	2%	82,947	12%
<b>Montgomery County</b>	134,768	157,955	172,331	28%	254,284	48%
<b>Total Population (2 counties)</b>	207,033	237,775	246,286	19%	337,231	37%

\* Official 2040 projections from the Tennessee and Kentucky State Data Centers.

**Figure 2-2** illustrates the parts of the region that are expected to experience the greatest change in population. The projected distribution of growth shown in this figure was performed by the Clarksville/Montgomery County Regional Planning Commission, using the Montgomery County Growth Plan (**Figure 2-3**) as guidance.



*Recent development along Peachers Mill Road, currently the only multi-lane north-south route serving an area projected to see an additional 25,000 people in the next two decades.*



Figure 2-1: Clarksville Urbanized Area MPO Planning Boundary

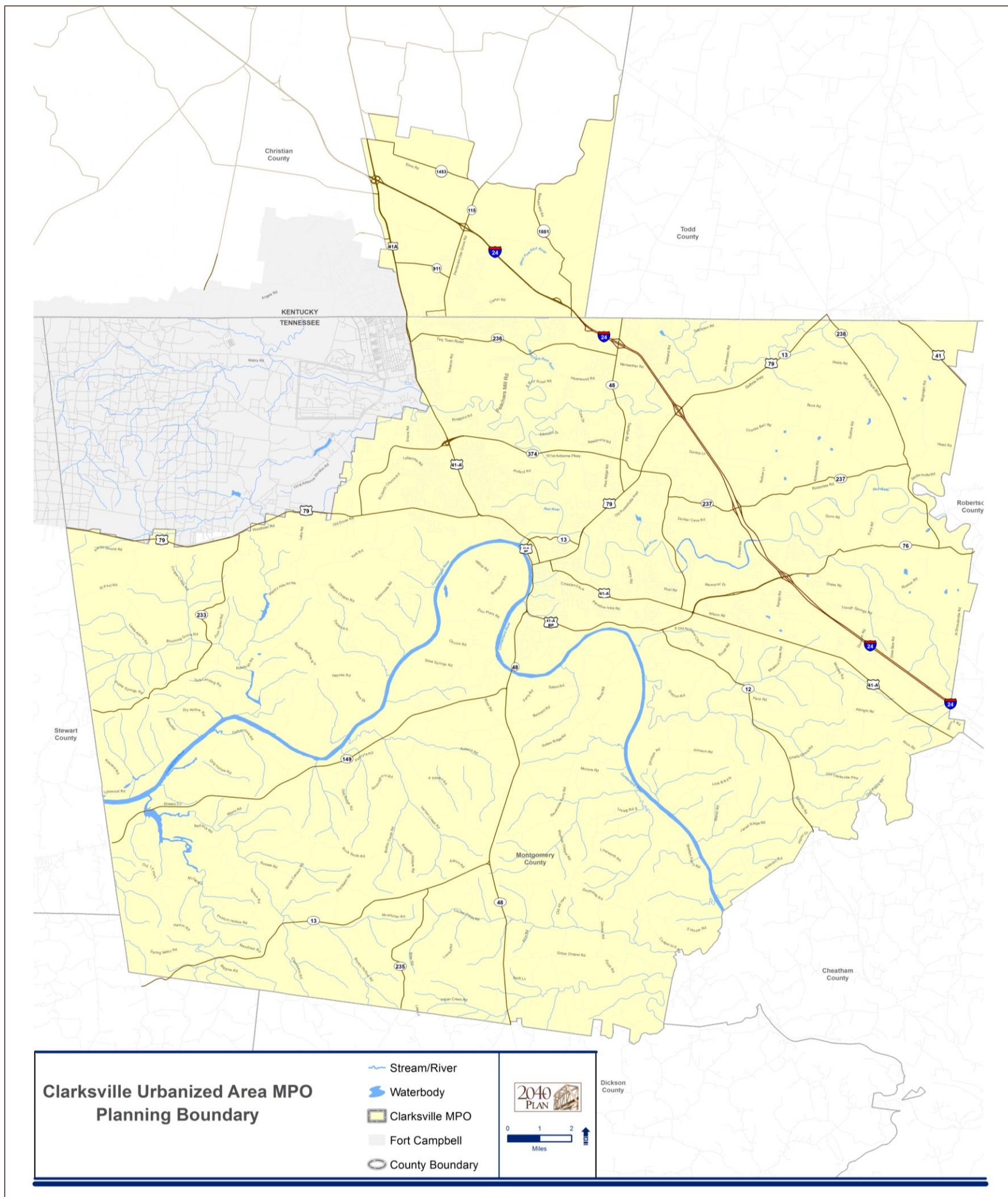


Figure 2-2: Projected Population Change, 2010 to 2040

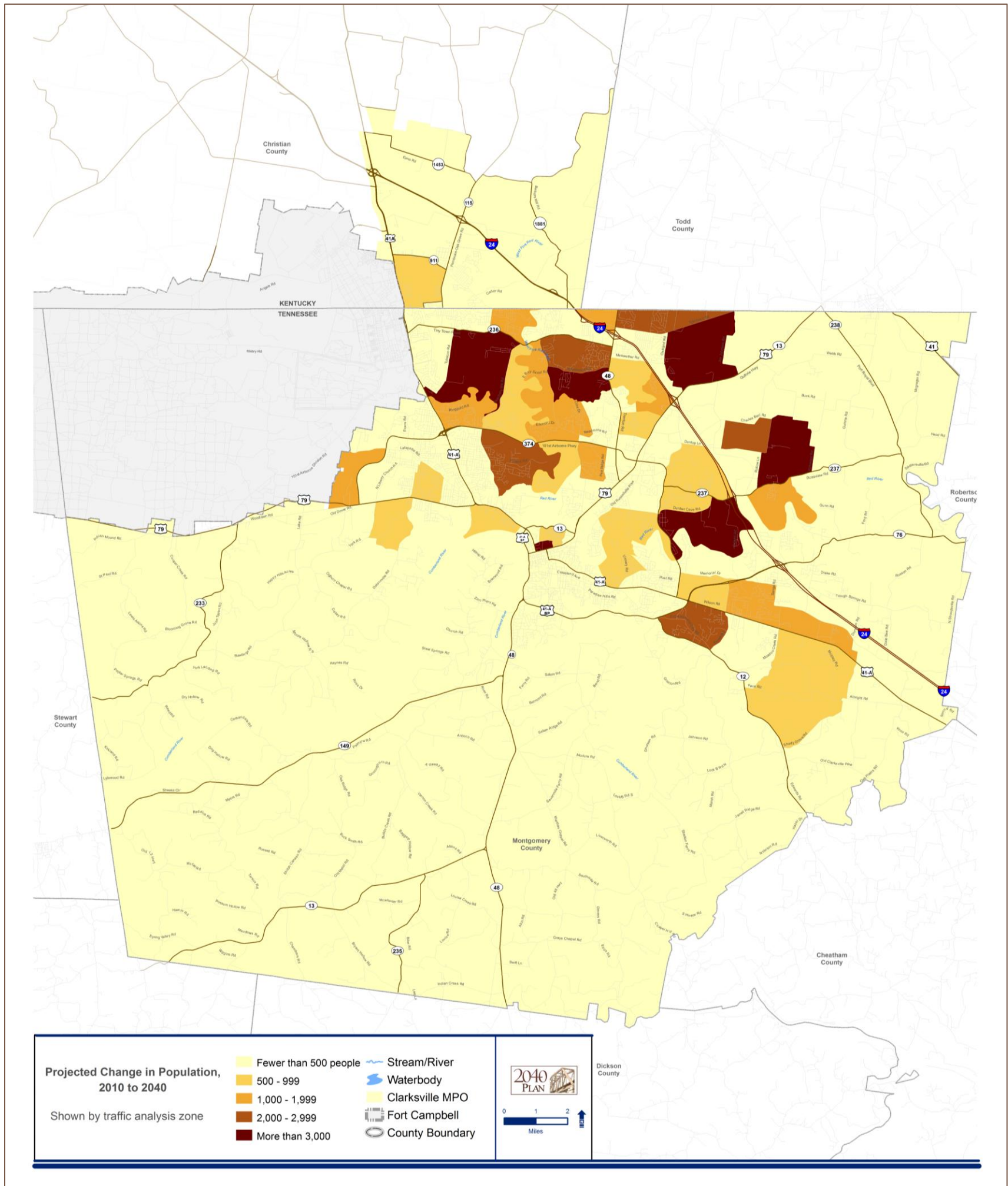
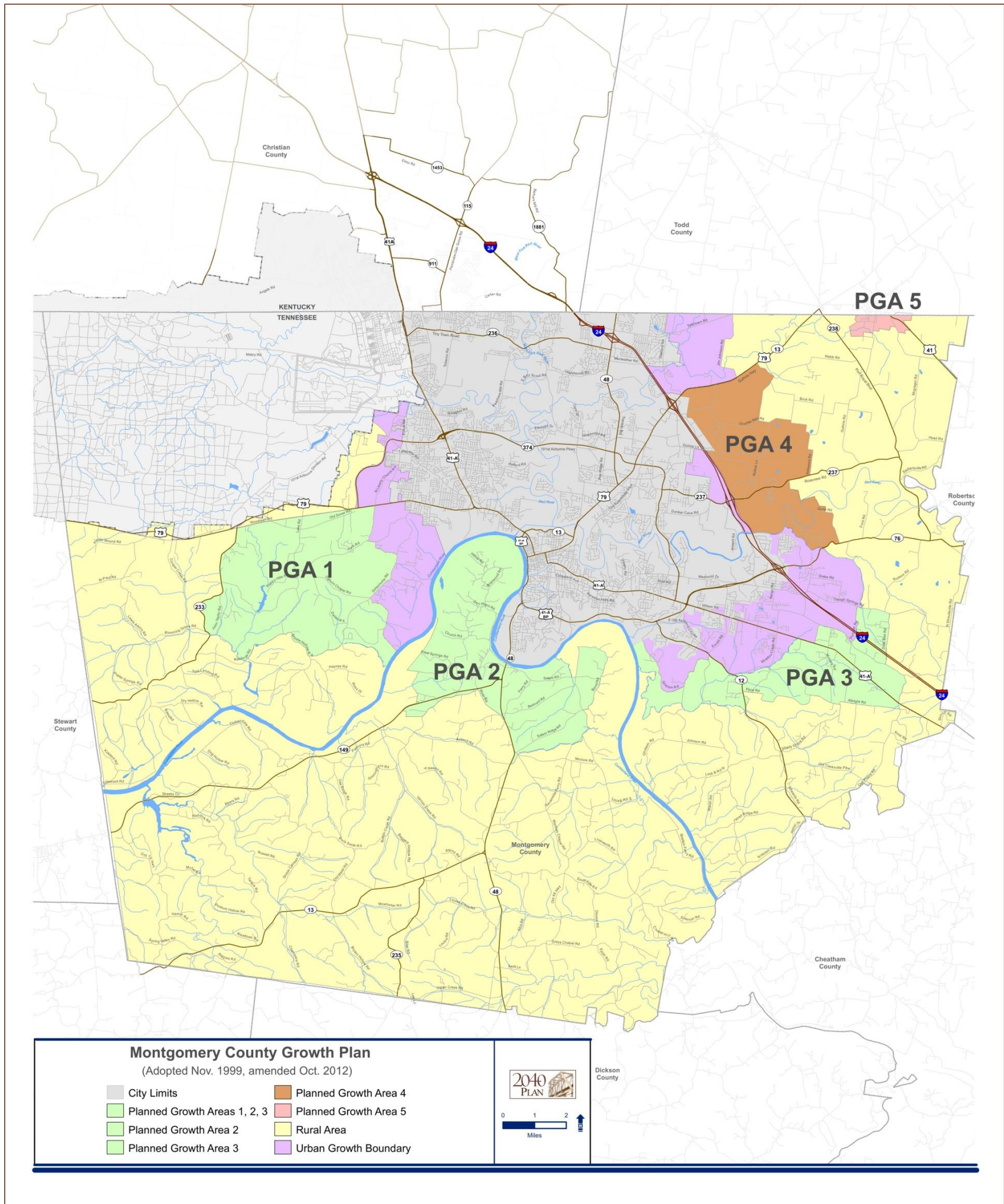


Figure 2-3: Montgomery County Growth Plan



In relation to the Montgomery County Growth Plan (**Figure 2-3**), the majority of the region’s new population is projected to locate either within the Urban Growth Boundary (UGB) or in Planned Growth Area (PGA) 4, where the city/county industrial park is located. Urban growth is largely precluded from the other planned growth areas, at least during the next 25 years, due to the fact that sanitary sewer service is not anticipated to be available.

Within the UGB and PGA 4, considerable new residential growth is expected to occur on the east side of Interstate 24 in areas accessible to the interchanges at Trenton Road (SR-48) and Guthrie Highway (US-79/SR-13). Additional growth is also anticipated south and east of the downtown Clarksville area, along the Rossview Road (SR-237) corridor and along Madison Street (US-41A).

Perhaps most notable from a transportation perspective is the growth poised to occur within the existing Clarksville city limits in the area bounded by Tiny Town Road (SR-236), downtown Clarksville, Fort Campbell Boulevard (US-41A) and Trenton Road (SR-48). This area is expected to gain more than 25,000 additional people over the next 25 years. As discussed in the next chapter, the road network in this area is not yet ready to meet those demands.

## EMPLOYMENT TRENDS AND FORECASTS

Regional employment growth has been strong even in the face of a national economic recession. Given the region’s successful track record and its youthful workforce (the Clarksville region has a median age of 29), continued robust growth in jobs is anticipated. The number of people employed in the CUAMPO area is expected to double, as shown in **Table 2-2**.

**Table 2-2: CUAMPO Area Total Employment (2008-2040)**

	2008 (2035 Plan estimate)	2010*	2040 (Projected)*	Pct. Change, 2010-2040
<b>CUAMPO Area</b>	<b>50,214</b>	<b>65,192</b>	<b>100,373</b>	<b>54%</b>
Christian County	N/A	70,829	84,203	19%
Montgomery County	N/A	64,817	98,790	52%
Total Employment (2 counties)	N/A	135,646	182,993	35%

\* 2010 employment data and 2040 projections both from Woods & Poole.

**Table 2-3** identifies the ten largest non-government employers (in terms of number of employees) within the CUAMPO area. Although five of the top ten employers are in manufacturing, the overall regional employment market is dominated by the service sector, which includes government. Fort Campbell, the City of Clarksville and Montgomery County governments, and Austin Peay State University fall into this category and are among the very largest employers.



**Table 2-3: Top Ten Private Employers in the CUAMPO Area**

Employer	Sector	Employees
Trane Company	Manufacturing	1400
Gateway Medical Center	Services (Health Care)	1165
Walmart Supercenter	Retail	1363
Jostens Printing & Publishing	Manufacturing	700
Convergys Corp.	Retail and Wholesale	800
Akebono	Manufacturing	650
Bridgestone Metalpha USA	Manufacturing	415
Premier Medical Group	Services (Health Care)	275
Florim USA	Manufacturing	260
Lowe's	Retail	250

Source: Data from Clarksville/Montgomery County Economic Development Council, 2013

Figure 2-4 illustrates the breakdown of job types for the region for 2010 and what the market is expected to look like in 2040. As shown, it is anticipated that the labor force will continue to evolve toward services, with modest growth in retail jobs.

**Figure 2-4: Composition of Regional Employment, 2010 and 2040**

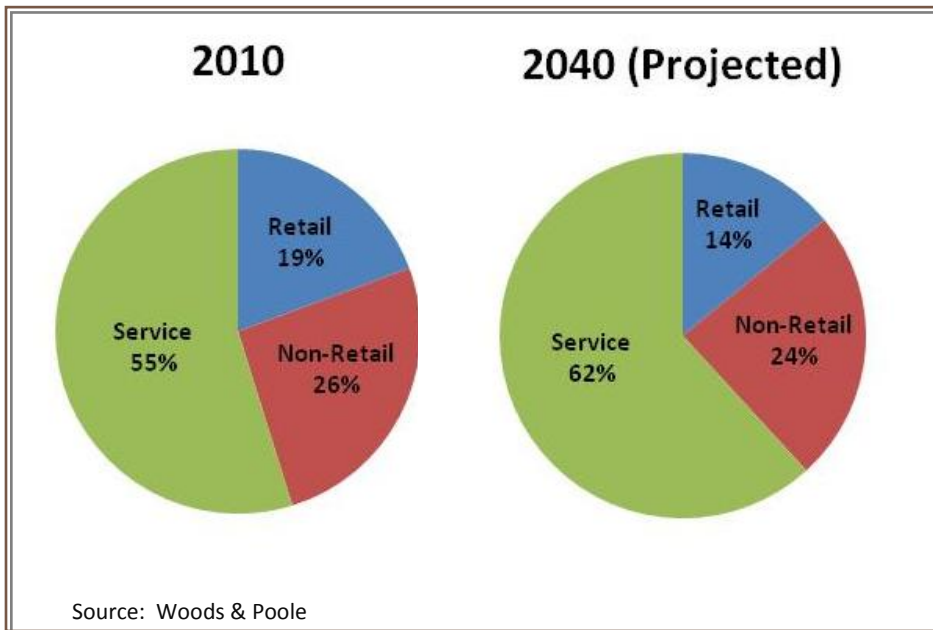
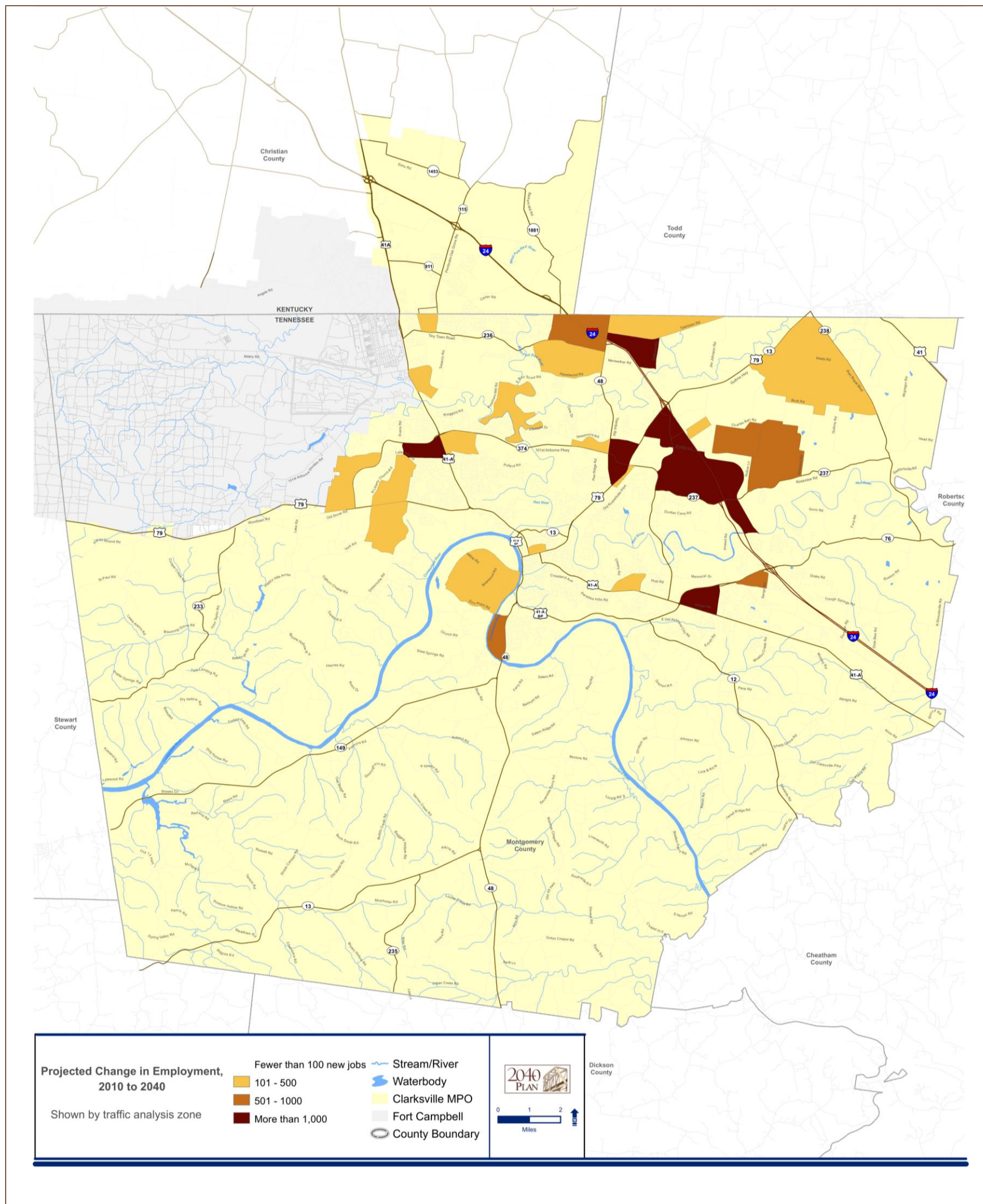


Figure 2-5: Employment Change, 2010 to 2040



With the relocation of Gateway Medical Center and the early success of the Clarksville/Montgomery County Industrial Park, it is anticipated that many of the new jobs will be located on either side of the I-24 corridor between Guthrie Highway (US-79/SR-13) and Rossvie Road (SR-237). Another projected area of high job growth, primarily retail and service jobs, will be focused around the Trenton Road (SR-48) interchange. **Figure 2-5** maps the areas where the greatest number of new jobs are expected to be located.

## SUMMARY

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As described in this chapter, population and employment for the Clarksville region is expected to continue to grow rapidly over the next 25 years. The development trend toward the north and eastern portions of the planning area is expected to accelerate, with extensive new residential, retail and service employment emerging on both sides of I-24, and a surge in growth in the area south of Tiny Town Road (SR-236) between Fort Campbell Boulevard (US-41A) and Trenton Road (SR-48).

This projected increase in population and employment will not only require additional roadway capacity (both in terms of new roads and improvements to existing roads) but will also create greater demand for public transportation services and bicycle and pedestrian facilities, which may not currently exist in certain areas of the region. One of the region's challenges during the next 25 years is to implement additional infrastructure and services before regional mobility is significantly impaired.







# Chapter 3

## Goals and Objectives

The initial steps in the development of the Plan are to establish its purpose and identify regional needs. Establishing a clear and well-defined purpose for the Plan ensures that the overall goals and objectives, as well as the transportation projects identified to address needs, are the result of a comprehensive, cooperative, and continuing transportation planning program and process. Chapter 4 provides an underpinning for transportation needs.

The purpose of the 2040 Clarksville Metropolitan Transportation Plan is:

- To formally identify and coordinate the investments of the various public agencies that provide transportation facilities and services in the Clarksville region, including local governments, Tennessee Department of Transportation, Kentucky Transportation Cabinet, Clarksville Transit System, Mid-Cumberland Human Resources Agency, Pennyriple Allied Community Services, Regional Transportation Authority, and Clarksville Regional Airport;
- To identify the projects and programs needed to provide an efficient, effective and functional transportation system to serve all persons in the greater Clarksville area;
- To coordinate land use and transportation activities to ensure functional efficiency and a compatible and integrated relationship; and
- To support and encourage private enterprise participation in the development and maintenance of an efficient, effective regional transportation system, in part by providing a proposed schedule for transportation improvements with which private entities can coordinate their own investments.

### GOALS AND OBJECTIVES

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The goals and objectives outlined here for the 2040 Plan are intended to facilitate the development, management, and operation of an integrated, intermodal transportation system that enables the safe, efficient, and economical movement of people and goods.

#### National Emphasis

Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21), which was signed into law in 2012, is the current national transportation legislation providing the guiding principles for transportation decision-making throughout the United States in metropolitan areas.

Like the preceding transportation legislation, MAP-21 lists these eight planning factors as the primary principles that should guide transportation decisions:

- I. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.



2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase the accessibility and mobility options available to people and for freight.
5. 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.
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
7. Promote efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.

These factors provide the framework for the greater Clarksville region's more specific goals and objectives.

### Local Emphasis

Building from the MAP-21 planning factors above, the Clarksville MPO has established a set of goals to guide future transportation decisions in the region. A corresponding set of objectives has been established to help the region move closer to the intended goals.

**Table 3-1** illustrates how the 2040 Plan goals address each of the planning factors set forth in MAP-21.

### Goal 1 - Enhance and Maintain an Efficient, Safe, and Secure Highway and Street Network

- Cooperate with local and state police agencies to continue and improve management of crash records through consistent reporting, record keeping and analysis.
- Where crashes are primarily related to behavioral causes, work with appropriate authorities to provide safety and educational programs that target those behaviors.
- Pursue state and federal funding for improving crash locations that are above the statewide average crash rate.
- Mitigate functional capacity deficiencies of congested roadways and intersections.
- Promote and implement an interconnected roadway network that allows efficient through travel so that drivers do not contribute to unsafe conditions by making unnecessary and inappropriate use of residential streets.
- Cooperate with school officials and Clarksville Transit System to improve accessibility, roadway efficiency, safety, and security along transit routes and in school zones.



## **Goal 2 - Manage the Local Thoroughfare System to Minimize Congestion**

- Promote an interconnected roadway network that minimizes the number of miles needed to complete a trip, and provides multiple routes to reach the same destination.
- Encourage new development to locate in areas where existing or planned infrastructure is adequate to serve the travel demand that will be generated.
- Utilize the appropriate Intelligent Transportation Systems (ITS) along major corridors to help maintain design capacity and overall level of service.
- Encourage greater use and acceptance of access management policies to maintain adequate transportation system capacity as new development occurs and as transportation investments are made in existing and new facilities.
- Encourage local businesses to adopt travel demand management techniques such as carpooling/vanpooling, telecommuting, and alternate work hours to help mitigate traffic congestion during peak hours.

## **Goal 3 - Promote Use of Alternative Transportation Modes**

- Review proposed roadway work during the early development phase to ensure the inclusion of alternative transportation modes (e.g., sidewalks, bicycle routes, park and ride lots, bus stops and bus pullouts) whenever possible. This includes new road projects, road reconstruction, or private development projects.
- Improve park-and-ride lots' accessibility and security to encourage ridesharing and transit trips within the region.
- Pursue funding mechanisms and public-private partnerships to develop integrated pedestrian facilities and a bicycle network in accordance with the Greenway Master Plan, Clarksville Urbanized Area Sidewalk Plan, and elements of this Plan.
- Incorporate bicycle and pedestrian facilities into public rights-of-way and easements and preserve abandoned railways and utility easements for bicycle and pedestrian trails.

## **Goal 4 - Improve Transit Service and Accessibility for All Citizens**

- Increase local transit service to encompass a greater percentage of the community population.
- Increase transit accessibility to large employers, including job centers located in suburban areas.
- Provide more convenient transit service by reducing wait times and providing amenities at major stops.
- Promote incentives and programs that help local businesses encourage transit use for their employees.
- Provide transit between the Clarksville and Nashville metropolitan areas, including commuter service, and upgrade to higher-capacity service as demand warrants.
- Identify and preserve corridors for future high-speed public transportation between the Clarksville and Nashville metropolitan areas.
- Participate in state planning activities for future high-speed interstate rail.



## **Goal 5 - Develop an Integrated Multi-Modal Transportation System that Serves the Needs of Both Passenger and Freight Traffic**

- Improve or maintain travel times on major freight corridors.
- Emphasize improvements to travel time reliability on major freight corridors.
- Design future roadways and bridges to accommodate the anticipated level of truck traffic, including consideration of traffic volume, cargo weight, with respect to both functional and geometric design adequacy.
- Improve capacity, pavement maintenance, and design of roadways and bridges that connect Cumberland River ports, John F. Outlaw Field and I-24 with local thoroughfares to accommodate higher traffic flows, especially for shippers and haulers.
- Develop public intermodal facilities to complement, not compete with, existing private intermodal facilities.
- Improve the interface between rail and truck transportation at intermodal facilities.

## **Goal 6 - Develop a Transportation System that Preserves the Natural and Cultural Environment**

- Coordinate roadway and infrastructure projects with guidelines established by federal, state, and local historic preservation planning, community landscape plans, and the principles of context sensitive solutions (CSS) in design and construction.
- Ensure that transportation decisions in the region are made with full consideration of the requirements of Title VI and Environmental Justice provisions.
- Avoid transportation capacity improvements that adversely affect specially designated environmentally sensitive areas, including historic and archeological structures, flood plains, steep slopes, karst areas, natural or scenic vistas, natural wildlife areas, parks and managed lands, prime agricultural and forested areas. However, where transportation capacity improvements have no prudent and feasible alternative, minimize and mitigate adverse impacts on sensitive environmental areas.
- Pursue public transportation projects, signal coordination and other transportation related technologies that result in positive benefits to air quality in the region.
- Ensure the appropriate design of new and reconstructed transportation facilities to protect water quality in the region.

## **Goal 7 - Maintain and Enhance the Region's Economic Vitality**

- Identify current and potential deficiencies and threats to the economic vitality of the MPO area that relate to transportation and work to mitigate those threats.
- Encourage the coordination of land use and transportation planning to ensure that existing and future industrial, commercial, and service centers and housing concentrations have adequate transportation connections and are appropriately located to preserve the quality of life in surrounding areas.



**Table 3-1: Relationship of National MAP-21 Planning Factors to 2040 Plan Goals**

MAP-21 Planning Factor	2040 Plan Goal
Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.	7
Increase the safety of the transportation system for motorized and non-motorized users.	1
Increase the security of the transportation system for motorized and non-motorized users.	1, 3
Increase the accessibility and mobility options available to people and for freight.	3, 4, 5
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.	2, 4, 6
Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	5
Promote efficient system management and operation.	2
Emphasize the preservation of the existing transportation system.	1, 2

Each of the transportation investments recommended in Chapter 5 contributes to the achievement of the goals and objectives outlined above. In many cases a proposed project or service will accomplish multiple goals and objectives. For example, improving transit service expands the transportation choices and improves mobility for many citizens of the Clarksville region, it has environmental benefits, and it enhances the region’s economic vitality by providing access to jobs for a greater number of people.

## PERFORMANCE MEASURES

The MPO Executive Board has adopted the performance measures shown below in **Table 3-2** to be used in determining the region’s progress toward meeting its goals and objectives. These measures emphasize conditions that can be quantified with data and tools currently available to CUAMPO, including the regional travel demand model. CUAMPO has targeted “D” as the minimum roadway level of service, which is the same performance standard used by TDOT for urban areas. (See Chapter 4 for further discussion of how roadway level of service is measured.) Each measure is currently observed in terms of whether the proposed actions cause an increase or decrease in its value. Decreasing values are clearly the desired outcome for the measures in Table 3-2, except for the percentage of roads operating at or above level of service “D.”

The measures will likely be updated prior to the next Metropolitan Transportation Plan since U.S. DOT is in the process of working with TDOT, KYTC, and other states to establish uniform performance measures for congestion, safety, transit “state of good repair,” and other factors as directed by MAP-21. After the official performance measures are determined, TDOT and KYTC will work in cooperation with CUAMPO and the Clarksville Transit System to select target values that are appropriate for the region.



**Table 3-2: Performance Measures for the 2040 Plan**

Category	Performance Measure	Corresponding 2040 Plan Goal(s)
<b>MOBILITY</b>	<ul style="list-style-type: none"> <li>Percentage of roadway miles that operate at LOS D or better</li> <li>Total vehicle-miles and vehicle-hours traveled, by functional class, at LOS D or better</li> <li>Total travel time and operating costs, by functional class</li> </ul>	<p><i>Enhance and Maintain an Efficient, Safe, and Secure Highway and Street Network</i></p> <p><i>Manage the Local Thoroughfare System to Minimize Congestion</i></p>
<b>SAFETY</b>	<ul style="list-style-type: none"> <li>Annual crashes per million vehicle-miles traveled, by functional class</li> </ul>	<p><i>Enhance and Maintain an Efficient, Safe, and Secure Highway and Street Network</i></p>
<b>FREIGHT</b>	<ul style="list-style-type: none"> <li>Vehicle-hours traveled by trucks (interstates and major arterials)</li> <li>Total travel time and operating costs for trucks</li> </ul>	<p><i>Develop an Integrated Multi-Modal Transportation System that Serves the Needs of Both Passenger and Freight Traffic</i></p> <p><i>Maintain and Enhance the Region's Economic Vitality</i></p>
<b>ENVIRONMENT</b>	<ul style="list-style-type: none"> <li>Percent change in regional NOx and VOC levels, as projected in the regional air quality conformity analysis</li> </ul> <p>(NOx and VOCs are substances that contribute to unhealthy levels of ozone in the air)</p>	<p><i>Develop a Transportation System that Preserves the Natural and Cultural Environment</i></p>





# Chapter 4

## Analysis of the Transportation System

This chapter provides an overview of the existing regional transportation system in terms of its current condition and performance, and identifies future needs. All modes are addressed, including roads, transit, bicycle/pedestrian facilities, air, rail and waterways. This chapter also discusses the transportation issues that cut across multiple modes: freight movement, systems operations and management, safety and security.

### Streets and Highways

This section describes the regional road network and the process used to model future roadway conditions based on the forecasted changes in population and employment discussed in Chapter 2. Roadways that are currently congested, or are projected to be congested in future years, are identified here in a series of maps. Proposed roadway improvements to address the anticipated congestion have been developed and tested to determine the best scenario to address future traffic growth, and are outlined in this section. These projects, along with proposed timeframes for their implementation, form the basis for the roadway portion of this Plan.

#### EXISTING CONDITIONS - STREETS AND HIGHWAYS

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As in all urbanized areas, the system of streets and highways in the Clarksville Urbanized Area MPO follows a hierarchy of functionality, also known as a functional classification system. At the top of the hierarchy is Interstate 24, which passes east-west through the MPO area. The second level in the hierarchy is arterial routes, which often are designed with limited or no access in order to more effectively move thru-traffic. Examples of arterial routes in Clarksville and Oak Grove include US-41A (SR-12/Ft. Campbell Boulevard), SR-12 (Ashland City Road), and SR-374, which creates a northern loop around the core of Clarksville and is known in various sections as Richview Road, Warfield Boulevard, 101<sup>st</sup> Airborne Parkway, Purple Heart Parkway, and Paul Huff Memorial Parkway. Next are collector streets, which serve an intermediate function of collecting trips to and from the arterials and distributing them among local streets. Examples of collectors include Needmore Road, Dunbar Cave Road and KY-911 (Thompsonville Lane/Hugh Hunter Road). The primary function of local streets, which are at the bottom of the hierarchy, is to provide access to individual properties. As one moves up the hierarchy from local to collector to arterial to Interstate, speeds generally increase and there is a corresponding decrease in access provided to adjoining properties.

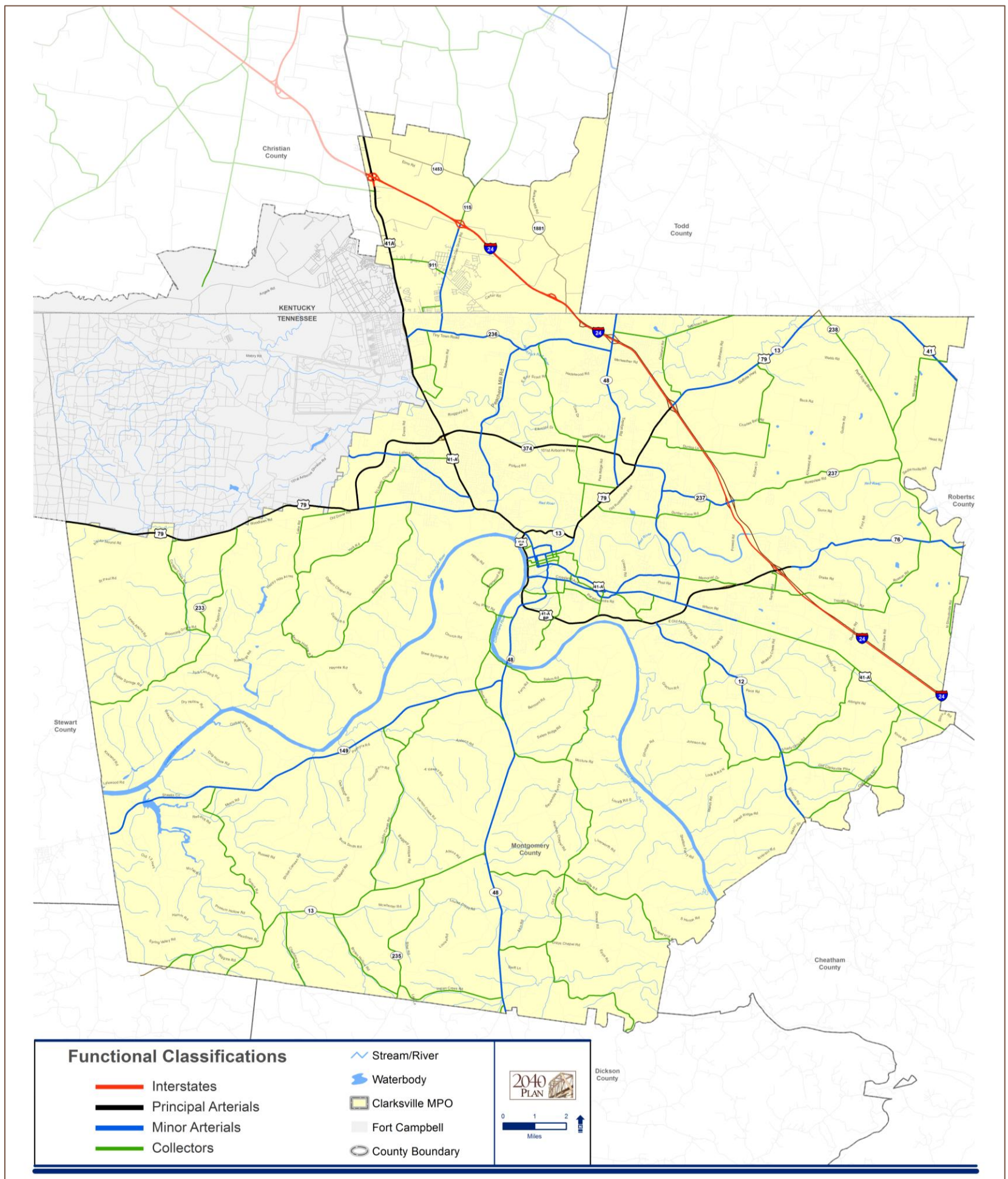
#### Existing Conditions

Figure 4-1 shows the road network for the Clarksville Urbanized Area MPO, categorized by functional classification. As mentioned in Chapter 2, most of the urban development in the Clarksville region lies between Fort Campbell Boulevard (US-41A) and Interstate 24. A third national highway, US-79, crosses east-west across the area. A number of Tennessee state routes act as “spokes” connecting downtown Clarksville to surrounding counties, including:

- SR-48 to Dickson County,
- SR-149 to Stewart County,
- SR-12 to Cheatham County,
- SR-76 to Robertson County, and
- SR-13 to Houston County.



Figure 4-1: Clarksville MPO Area Roadway Functional Classifications





In the northern portion of the MPO planning region, the City of Oak Grove is linked to the greater Clarksville area by two national highways: US-41A (Fort Campbell Boulevard), which essentially forms the boundary between Oak Grove and Fort Campbell, and I-24, which runs about 8 miles through the Kentucky portion of the MPO. Three state routes cross the area and become collector roads which connect to SR-236 (Tiny Town Road) in Tennessee:

- KY-115 (Pembroke-Oak Grove Road), a north-south route which forms Oak Grove’s main street,
- KY-1881 (Barkers Mill Road), which crosses the state line near I-24, and
- KY-911 (Thompsonville Road/Hugh Hunter Road), which runs parallel to I-24.

Among these highways, the most heavily traveled routes include the I-24 corridor from State Route 76 (Exit 11) north to Trenton Road (SR-48, Exit 1), Providence Boulevard from Kraft Street to Fort Campbell Boulevard (US-41A), and Fort Campbell Boulevard from Providence Boulevard to State Line Road (KY-400). **Table 4-1** illustrates the routes in the Clarksville MPO area whose Annual Average Daily Traffic (AADT) exceeds 30,000 according to the most recent counts. **Figure 4-2** shows all traffic counts available for the Clarksville MPO area.

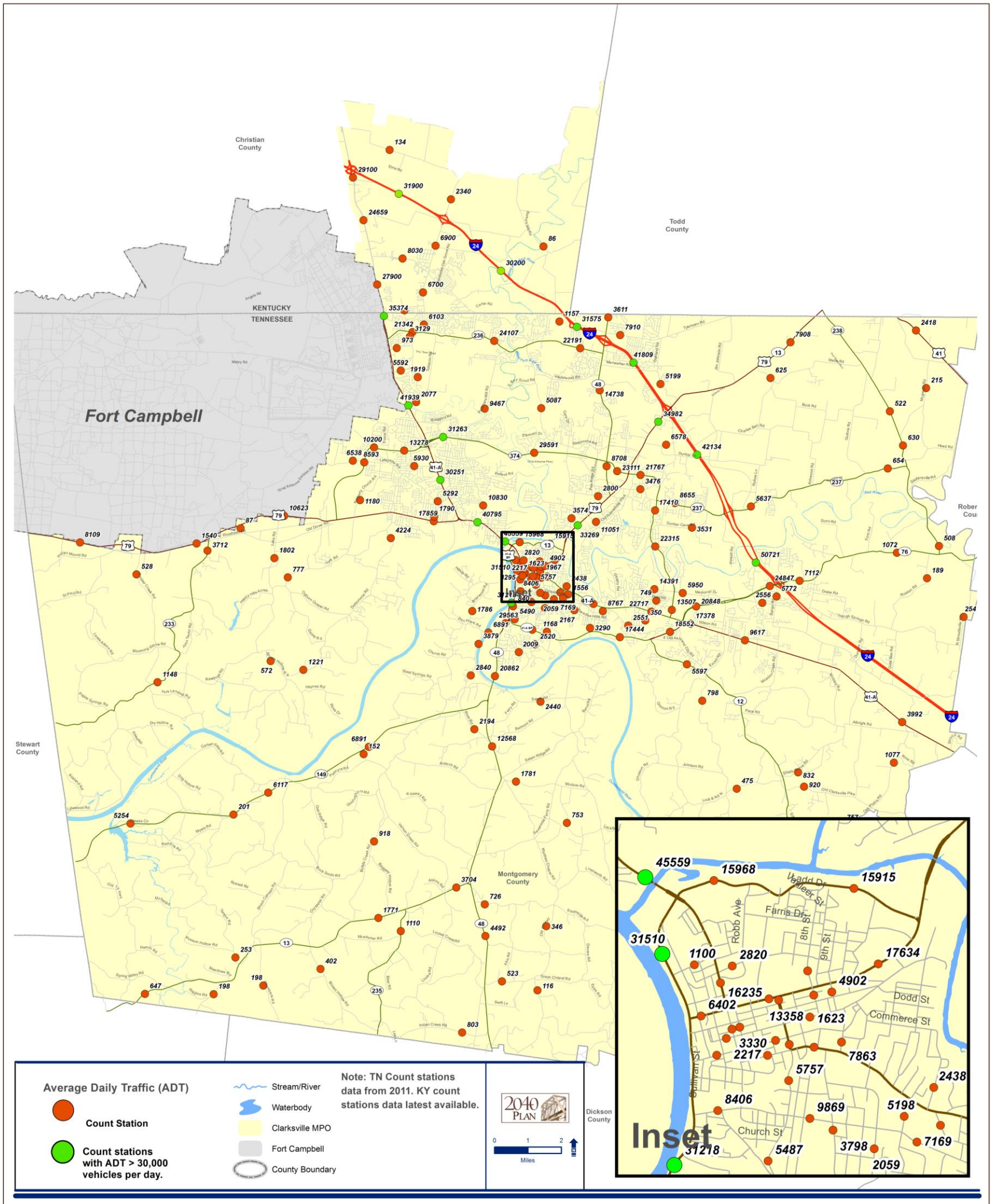
**Table 4-1: Clarksville Area Roadways with the Highest Traffic Volumes (2011)**

	Route	Begin Segment	End Segment	2011 Traffic (AADT)
<b>1</b>	I-24	SR-76	Rossview Rd. (SR-237)	50,721
<b>2</b>	Providence Blvd.	Kraft St. (US-79/SR-13)	Just east of Red River Bridge	45,559
<b>3</b>	I-24	Rossview Rd. (SR-237)	Guthrie Hwy. (US-79, SR-13)	42,134
<b>4</b>	Fort Campbell Blvd. (US-41A)	101 <sup>st</sup> Airborne (SR-374)	Tiny Town Rd. (SR-236)	41,939
<b>5</b>	Fort Campbell Blvd. (US-41A)	Tiny Town Rd. (SR-236)	State Line Rd. (KY-400)	35,374
<b>6</b>	Wilma Rudolph Blvd. (US-79/SR-13)	I-24	Holiday Dr.	34,982
<b>7</b>	Wilma Rudolph Blvd. (US-79/SR-13)	Dunbar Cave Rd.	Old Trenton Rd.	33,269
<b>8</b>	I-24	Pembroke-Oak Grove Rd. (KY-115)	Fort Campbell Blvd. (US-41A)	31,900
<b>9</b>	I-24	Trenton Rd. (SR-48)	KY/TN state line	31,575
<b>10</b>	Riverside Dr. (SR-12/SR-13/SR-48)	College St. (SR-48)	Providence Blvd.	31,510
<b>11</b>	101st Airborne Div. Pkwy (SR-374)	Peachers Mill Rd.	Fort Campbell Blvd. (US-41A)	31,263
<b>12</b>	Riverside Dr. (SR-12/SR-13/SR-48)	Crossland Ave.	Cumberland Dr.	31,218
<b>13</b>	I-24	KY-TN state line	Pembroke-Oak Grove Rd. (KY-115)	30,200

\* Traffic estimate based on TDOT/KYTC count stations along route segments noted. All TDOT counts are from 2011; KYTC counts vary, and are the most recent year available.



Figure 4-2: 2011 Annual Average Daily Traffic, Clarksville MPO Region



## EVALUATING ROADWAY PERFORMANCE: LEVEL OF SERVICE ANALYSIS

Level of service, or LOS, is a term used to describe how well traffic flows along a given roadway. It is presented in terms of grades A through F, similar to a school report card, where A is the best possible traffic flow and F represents the worst conditions.

**Figure 4-3** shows graphically how the level of service changes as the number of cars on the road increases. General traffic engineering standards set the minimum acceptable level of service as D for urban areas and C for rural areas. The Clarksville MPO’s Executive Board has affirmed this by establishing a performance goal for roadways to function at, or above, Level of Service D.

Level of service is based on volume-to-capacity ratio, or V/C. In other words, it indicates what volume of traffic the road is carrying compared to its maximum capacity. A roadway’s capacity is based on its functional classification, number of lanes, posted speed limit, percent of truck traffic, and geometric characteristics. Volume-to-capacity thresholds vary by the functional class of the facility and whether it is classified as urban or rural.

For purposes of identifying future highway capacity deficiencies for the 2040 Plan, **Table 4-2** shows the V/C ranges that were assigned to various levels of service.

**Table 4-2: Volume/Capacity Ratios Corresponding to Roadway Levels of Service**







Urban					
Level of Service	FC 11 Interstates	FC 14 Principal Arterial	FC 16 Minor Arterial	FC 17 Collector	FC 19 Local
A	0.30	0.30	0.30	0.30	0.30
B	0.50	0.50	0.50	0.50	0.50
C	0.70	0.70	0.70	0.65	0.65
D	0.90	0.85	0.85	0.80	0.80
E	1.00	1.00	1.00	1.00	1.00
F	>1.00	> 1.00	> 1.00	> 1.00	> 1.00

Rural						
Level of Service	FC 1 Interstates	FC 2 Other Expressways	FC 6 Collectors	FC 7 Major Collector	FC 8 Minor Collector	FC 9 Local
A	0.30	0.30	0.30	0.35	0.35	0.35
B	0.45	0.50	0.50	0.55	0.55	0.55
C	0.70	0.70	0.70	0.75	0.75	0.75
D	0.90	0.85	0.85	0.85	0.85	0.85
E	1.00	1.00	1.00	1.00	1.00	1.00
F	> 1.00	> 1.00	> 1.00	> 1.00	> 1.00	> 1.00

As noted above, LOS A is considered the ideal operating conditions for traffic, and LOS D is typically defined as the minimum acceptable conditions for roadways in urban areas. Many urban drivers are also familiar with LOS E and F through their experience in conditions during morning or afternoon rush hours.



Figure 4-3: Graphic Illustration of Roadway Level of Service

	<h1>A</h1>	<p>Free flow operations. Vehicles are almost completely unimpeded in their ability to maneuver with the traffic stream. The general level of physical and psychological comfort provided to the driver is high.</p>
	<h1>B</h1>	<p>Reasonable free flow operations. The ability to maneuver with the traffic stream is only slightly restricted and the general level of physical and psychological comfort provided to the driver is high.</p>
	<h1>C</h1>	<p>Flow with speeds at or near free flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted and lane changes require more vigilance on the part of the driver. The driver notices an increase in tension.</p>
	<h1>D</h1>	<p>Speeds decline with increasing traffic. Freedom to maneuver within the traffic stream is more noticeably limited. The driver experiences reduced physical and psychological comfort levels.</p>
	<h1>E</h1>	<p>At lower boundary, the facility is at capacity. Operations are volatile because there are virtually no gaps in the traffic stream. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.</p>
	<h1>F</h1>	<p>Breakdowns in traffic flow. The number of vehicles entering the highway section exceeds the capacity or ability of the highway to accommodate that number of vehicles. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.</p>



The 2010 base year levels of service for roadways in the Clarksville Urbanized Area MPO are shown in **Figure 4-3**. Segments shown in orange and red represent areas where roadway level of service is beginning to fall below minimum acceptable conditions.

**Figure 4-4** indicates that in 2010 the region's roads were generally performing to standards. A total of 3.3 million miles were driven by autos that year, and only 8% of those miles were driven at LOS E or F. Likewise, trucks drove about a half-million miles in 2010 and drove 4% of those miles at LOS E or F.

Current congestion is largely related to the limited number of river crossings, particularly in downtown Clarksville on Providence Boulevard, where multiple state and U.S. routes converge to use a single bridge across the Red River. As Clarksville grows eastward toward I-24, traffic pressure is also building on the routes that lead from the urban core to the interstate, including Wilma Rudolph Boulevard (US-79/SR-13).

On I-24 itself, traffic congestion is still mostly limited to peak hours and backups related to incidents such as crashes, bad weather, or special events. However, as the Clarksville region grows, I-24 will see an increase in traffic volumes from local use as well as thru-traffic using the interstate. Clarksville sometimes refers to itself as the "Gateway to the New South," reflecting the role of Interstate 24 as a major corridor that links the midwestern states to the southeast. To keep the gateway operating smoothly, the state and the region must work cooperatively to manage future traffic volumes and non-recurring congestion.

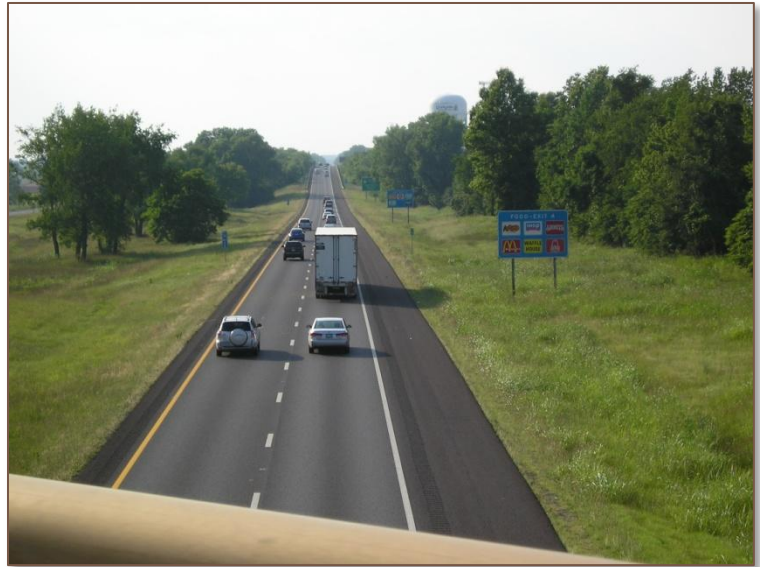
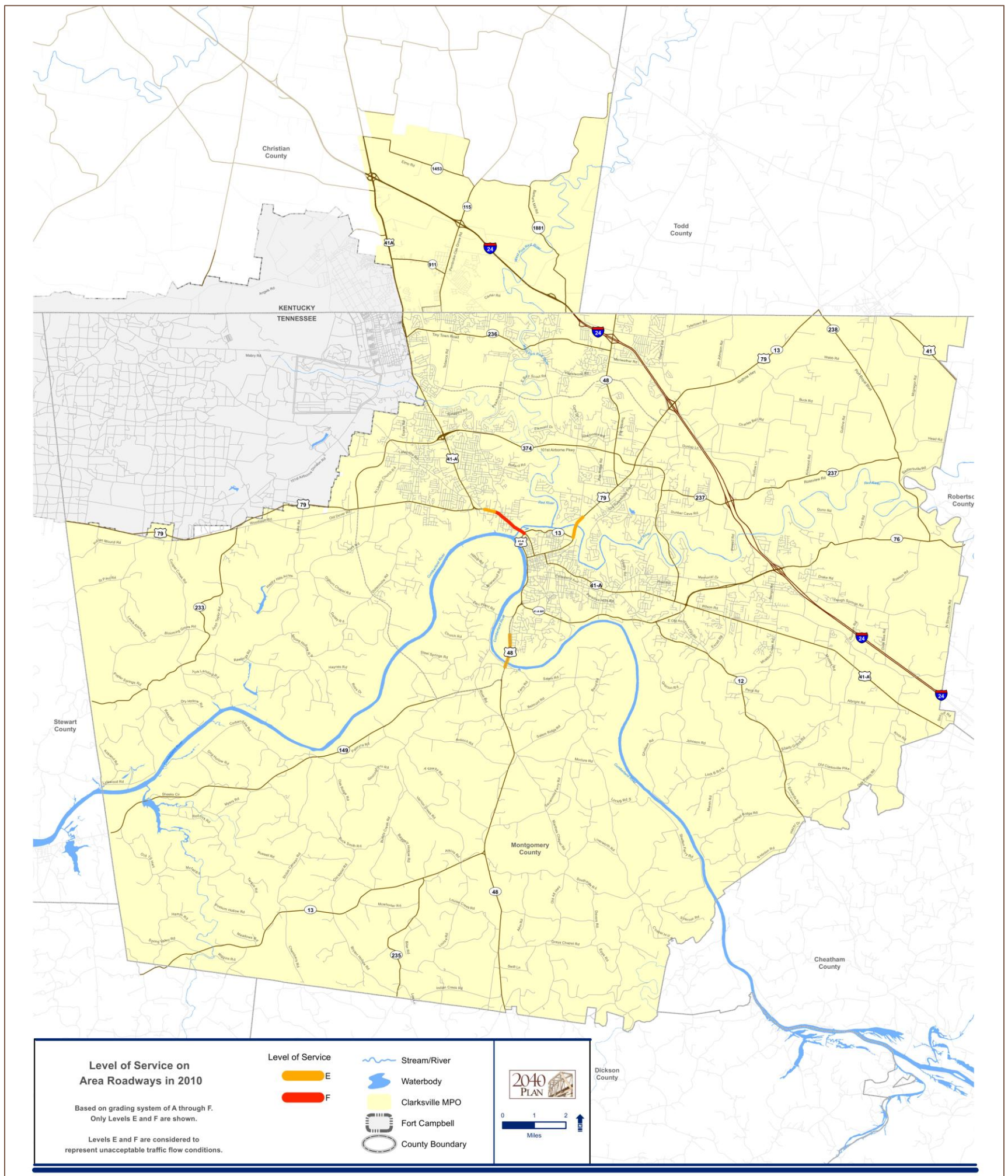


Figure 4-4: Base Year (2010) Roadway Levels of Service



## FUTURE ROADWAY PERFORMANCE

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The Clarksville Urbanized Area MPO's travel demand model is the tool used to identify and analyze future roadway congestion problems. The model essentially divides the region up into various traffic analysis zones for purposes of forecasting. As discussed in Appendix A, forecasts were developed for future population and employment for each traffic analysis zone, then used as key inputs into the model. The model's outputs are an approximation of travel demand between zones, or how many people are expected to travel between home, work or school, shopping, doctor's office, and other destinations.

Zones will generate varying levels of traffic based on the numbers of jobs and/or homes they contain. Future traffic projections are also affected by the types of development in a zone. For example, a major regional shopping center will attract several types of trips, including shoppers, the employees who work at the stores, trucks who bring in the food and goods that are sold there, and even the trucks that take away the trash.

Once the level of travel demand is predicted for each zone, the model "loads" the appropriate number of trips onto the existing roadway network. Zones with high travel demand require roadways that have higher capacity, which would typically be an interstate, arterial street or collector street. In zones where population or employment has grown rapidly, a roadway may not be able to meet the additional travel demand without capacity improvements – a term which generally includes the addition of new travel lanes, new and modified interchanges, new roadways and roadway extensions. By using the travel demand model, the MPO can make better predictions about which roadways will need capacity improvements, and how soon.

More information about the travel demand model can be found in **Appendix A**, which provides a very detailed explanation of the process and data used to update and calibrate the MPO's model.

## EXISTING + COMMITTED PROJECTS

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Even when a new transportation plan is developed, there are always some roadway improvements that are already in some stage of being constructed, or are far enough along in development that they are essentially "committed" to be completed. When a travel demand model is being used, the first step in analyzing future roadway conditions is to identify the "Existing + Committed" (E+C) transportation network. This establishes a no-build condition which serves as the benchmark for identifying future roadway capacity needs and for evaluating the performance of planned projects. In this case, the model's base year is 2010, so the E+C network consists of all roads that already existed at that point, new or modified roads completed since 2010, plus projects that are funded for construction in the MPO's FY2014-2017 Transportation Improvement Program and/or in the Kentucky Transportation Cabinet's Six-Year Highway Plan.

**Table 4-3** and **Figure 4-5** show the list of "committed" projects that are part of the E+C network. The majority are anticipated to be complete by 2016. Construction is scheduled to start on the remaining projects by FY2017, with completion within the 2017 to 2026 timeframe.

Based on the assumption that the projects in Table 4-3 will be completed, and based on the forecasted population and employment growth, anticipated roadway system deficiencies were identified for 2026, 2035 and 2040. These deficiencies serve as a starting point for identifying transportation improvements beyond



those currently programmed for completion, and constitute a future transportation needs plan prior to the consideration of fiscal constraint, physical constraints, and potential impacts.

**Table 4-3: Existing + Committed Projects for the Clarksville Urbanized Area MPO**

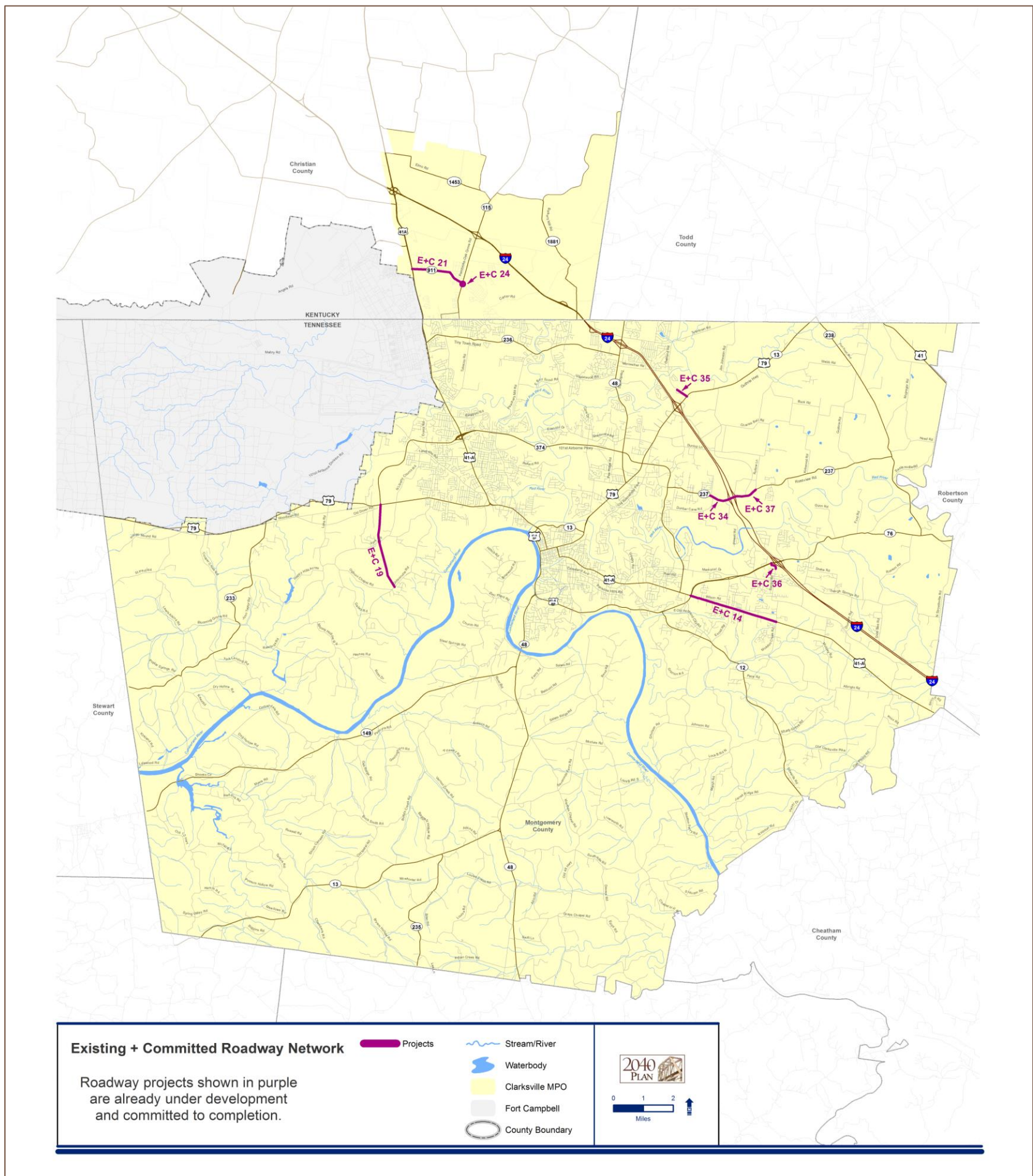
2040 Plan Project Number	Route	Termini	Miles	Horizon	Description
E+C 14	US-41A/SR-112 (Madison St.)	SR-76 to McAdoo Creek Rd./Sango Rd.	3	2016	Widen from 2 to 5 lanes; TIP project 1
E+C 19	SR-374 Extension	Dotsonville Rd. to US-79/SR-76 (Dover Rd.)	2.9	2016	Construct new 2-lane road; TIP project 6
E+C 35	Oakland Rd.	US-79/SR-13 to Oakland Rd.	0.5	2016	Realignment; TIP project 65
E+C 36	Sango Rd.	SR-76 to Sango Rd.	0.25	2016	Reconstruct, add right turn lane; TIP project 67
E+C 24	KY-115	at KY-911 (Thompsonville Rd.)	0.1	2016	Intersection improvements; TIP project 18
E+C 37	SR-237 (Rossvie Rd.)	International Blvd. to west of I-24	0.8	2016	Widen from 2 to 5 lanes, incl. ramp modifications at I-24 interchange; TIP project 9
E+C 34	SR-237 (Rossvie Rd.)	I-24 to 400' west of Keysburg Rd.	1.5	2026	Widen from 2 to 5 lanes; TIP project 66
E+C 21	KY-911 (Thompsonville Ln.)	US-41A to KY-115 (Pembroke Rd.)	1.8	2026	Widen from 2 to 5 lanes; TIP project 13

Even after the projects have been completed, the location of new residences and job creation in the Clarksville region area will continue to drive traffic growth and create new transportation needs. **Figure 4-6** shows the roadway sections that have begun to experience congestion since 2010, and projects their level of service for the year 2016. No roadway expansion is planned for Providence Boulevard downtown due to physical constraints, so traffic flow will continue to be challenging in this area. Drivers will also experience noticeable slow-downs on Peachers Mill Road near Kenwood High School, just south of 101<sup>st</sup> Airborne Division Parkway (SR-374).





Figure 4-5: Existing + Committed Projects



## FUTURE ROADWAY CONDITIONS

### Future Roadway Conditions Without Additional Improvements

Reflecting future transportation capacity needs, **Figures 4-7** through **4-9** depict the deteriorating conditions anticipated in future years if the region does not make any roadway capacity improvements after completing the projects in Table 4-2. By 2026, with limited routes for traveling east-west, 101<sup>st</sup> Airborne Division Parkway (SR-374) will reach LOS E on the section between Peachers Mill Road and Trenton Road (SR-48). Trenton Road itself will be heavily congested around the I-24 interchange in the section between Tylertown Road and Tiny Town Road (SR-236). In the downtown Clarksville area, significant sections of Providence Boulevard (US-79/US-41A) and Wilma Rudolph Boulevard (US-79/SR-13/SR-48) will experience failing levels of service from Kraft Street outward. Warfield Boulevard (SR-374) between Memorial Drive and Dunbar Cave Road will be at LOS E. Traffic operations will also become an issue at the I-24 interchanges for Guthrie Highway (US-79), Trenton Road (SR-48), and Rossview Road (SR-237).



Conditions worsen further by the year 2035 if no transportation improvements are made. Levels of service on 101<sup>st</sup> Airborne Division Parkway (SR-374) will deteriorate to LOS F. Previously congested sections of Warfield Boulevard, Peachers Mill Road, and Trenton Road will also reach failing conditions. In fact, the majority of Trenton Road will operate at unacceptable levels of congestion throughout the day.

By the year 2040, if no further action is taken beyond implementing the roadway projects in the E+C list, more than 30 percent of the daily vehicle-miles driven on urban highways and streets in the region will occur at unacceptable levels of service. Congestion will increase most dramatically on urban arterial routes such as 101<sup>st</sup> Airborne Parkway, Warfield Boulevard, Trenton Road and the US-41A Bypass.



**Tables 4-4** through **4-7** show the measures associated with the roadway system's performance in the base year (2010), compared with its performance in 2040 if no further improvements are made.

**Tables 4-4** and **4-5** show that few of the vehicle-miles driven on the base year roadway system are in congested conditions, but by 2040, the number of vehicle-miles driven at level of service E or F will increase by 450 percent on urban arterials and more than double on rural freeways. Drivers in 2040 will spend more than four times the number of hours sitting in traffic on urban arterial highways.



**Table 4-6** shows that by 2040, the total regional travel time cost for urban freeways has more than doubled for autos, and increased 80 percent for trucks. The combined value of time spent on urban arterials is more than \$1.7 million annually. Likewise, operating costs (shown in **Table 4-7**) have gone up by 2040, partly as a function of the additional time spent on the roads. The region is literally paying the high cost of congestion. The increase in travel time and vehicle operating costs translates into greater travel costs for the movement of people and goods, resulting in a greater cost to conduct business and discouraging business investment. This can ultimately slow the growth of population and employment.

**Table 4-4: Change in Vehicle-Miles Traveled at LOS E or F, 2010 to 2040 (without improvements)**

	2010		2040 (No Improvements)		Pct Change	
	Autos	Trucks	Autos	Trucks	Autos	Trucks
<b>Urban Freeways</b>	3,828	484	5,970	532	56%	10%
<b>Urban Arterials</b>	120,968	9,640	664,900	49,019	450%	408%
<b>Urban Collectors</b>	-	-	5,266	1,191	100%	100%
<b>Rural Freeways</b>	33,932	7,397	102,390	28,258	202%	282%
<b>Rural Arterials</b>	-	-	-	-	-	-
<b>Rural Collectors</b>	-	-	-	-	-	-

**Table 4-5: Change in Vehicle-Hours Traveled at LOS E or F, 2010 to 2040 (without improvements)**

	2010		2040 (No Improvements)		Pct Change	
	Autos	Trucks	Autos	Trucks	Autos	Trucks
<b>Urban Freeways</b>	122	15	224	20	84%	33%
<b>Urban Arterials</b>	4,205	327	23,770	1,676	465%	413%
<b>Urban Collectors</b>	-	-	371	84	100%	100%
<b>Rural Freeways</b>	1,573	338	5,479	1,165	248%	245%
<b>Rural Arterials</b>	-	-	-	-	-	-
<b>Rural Collectors</b>	-	-	-	-	-	-



**Table 4-6: Total Travel Time Costs by Functional Class, 2010 vs. 2040 (without improvements)**

	2010		2040 (No Improvements)		Pct Change	
	Autos	Trucks	Autos	Trucks	Autos	Trucks
<b>Urban Freeways</b>	\$90,461	\$123,948	\$184,691	\$222,438	104%	79%
<b>Urban Arterials</b>	\$785,727	\$298,521	\$1,303,671	\$406,431	66%	36%
<b>Urban Collectors</b>	\$108,868	\$29,559	\$215,725	\$59,290	98%	101%
<b>Rural Freeways</b>	\$122,943	\$206,380	\$288,762	\$377,575	135%	83%
<b>Rural Arterials</b>	\$97,221	\$50,160	\$134,434	\$70,407	38%	40%
<b>Rural Collectors</b>	\$93,596	\$33,506	\$172,168	\$65,941	84%	97%

Assumed travel time costs: Autos - \$16.79 per hour; Trucks - \$68.21 per hour.

**Table 4-7: Total Vehicle Operating Costs by Functional Class, 2010 vs. 2040 (without improvements)**

	2010		2040 (No Improvements)		Pct Change	
	Autos	Trucks	Autos	Trucks	Autos	Trucks
<b>Urban Freeways</b>	\$207,928	\$202,331	\$372,470	\$318,703	79%	58%
<b>Urban Arterials</b>	\$1,075,374	\$285,978	\$1,520,371	\$342,110	41%	20%
<b>Urban Collectors</b>	\$113,612	\$21,810	\$189,734	\$36,482	67%	67%
<b>Rural Freeways</b>	\$247,185	\$315,811	\$472,918	\$487,489	91%	54%
<b>Rural Arterials</b>	\$171,004	\$57,033	\$230,278	\$79,897	35%	40%
<b>Rural Collectors</b>	\$139,557	\$33,785	\$236,385	\$60,370	69%	79%

Operating costs for autos include gas, maintenance, tires, insurance, license/registration, and finance charges, based on driving 10,000 miles per year. Operating costs for trucks include gas, lease amounts, maintenance, insurance, tires, permits, tolls, and driver wages.



Figure 4-6: 2016 Roadway Level of Service – Existing + Committed Projects Only

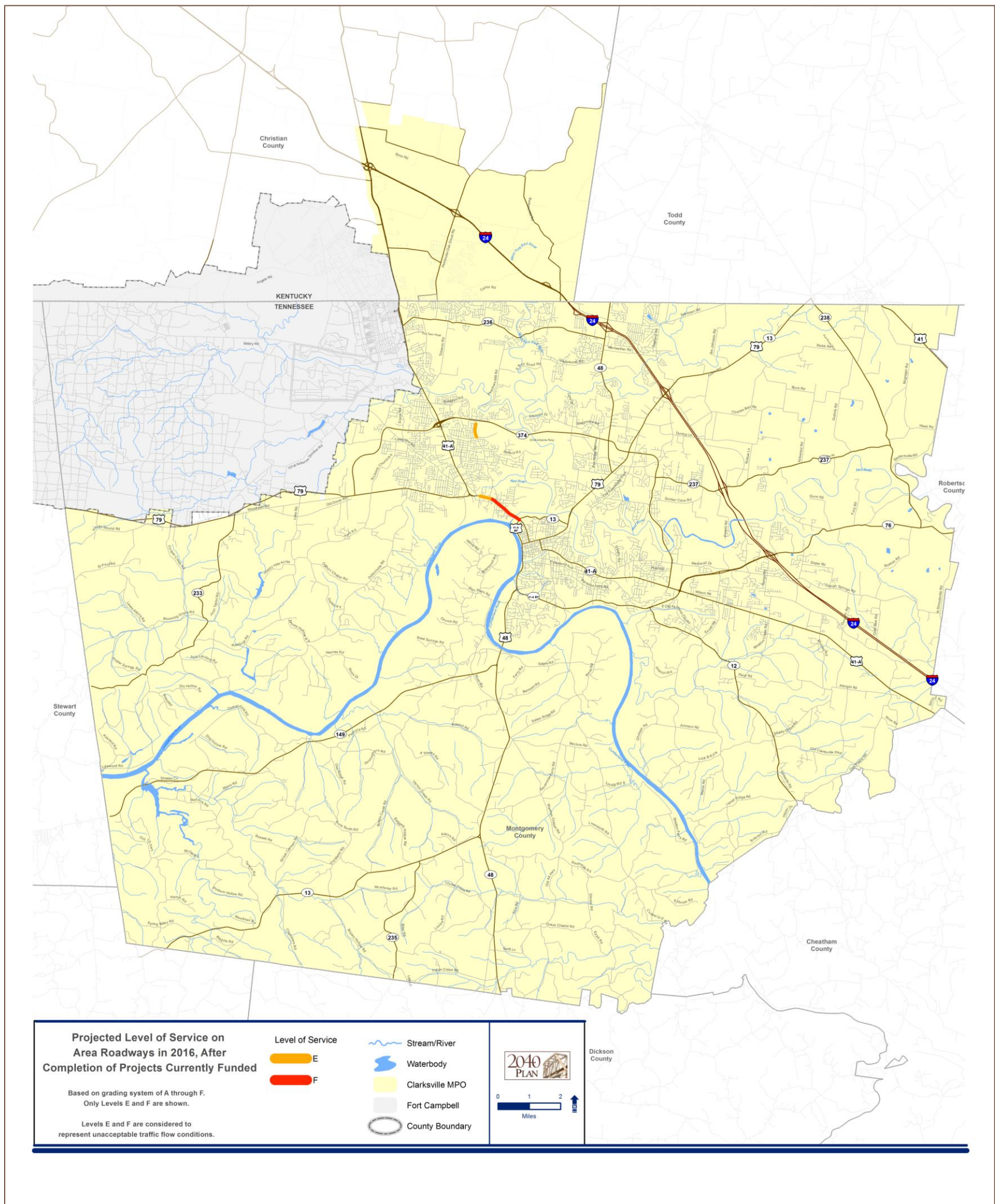


Figure 4-7: 2026 Roadway Level of Service – Existing + Committed Projects Only

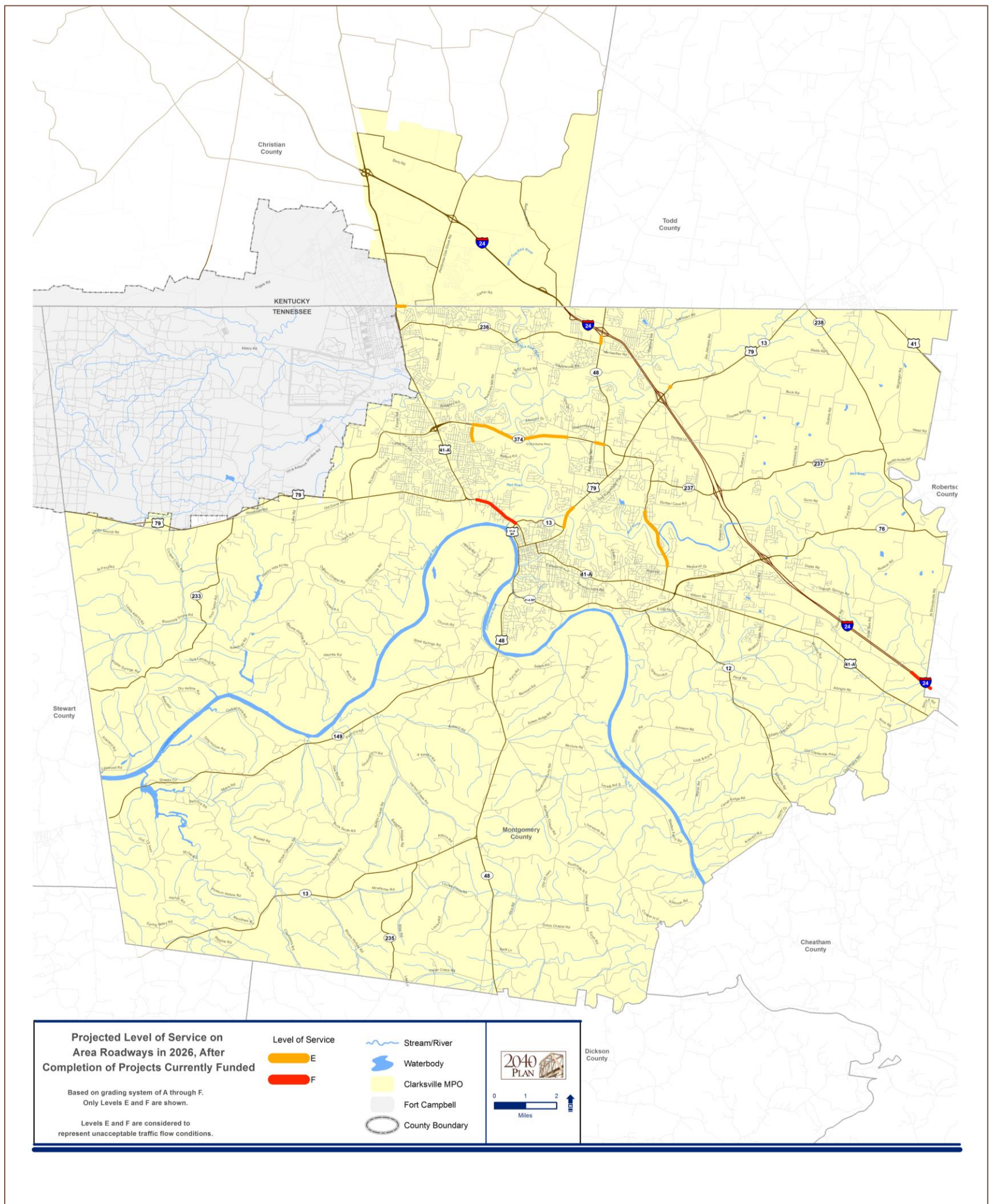


Figure 4-8: 2035 Roadway Level of Service – Existing + Committed Projects Only

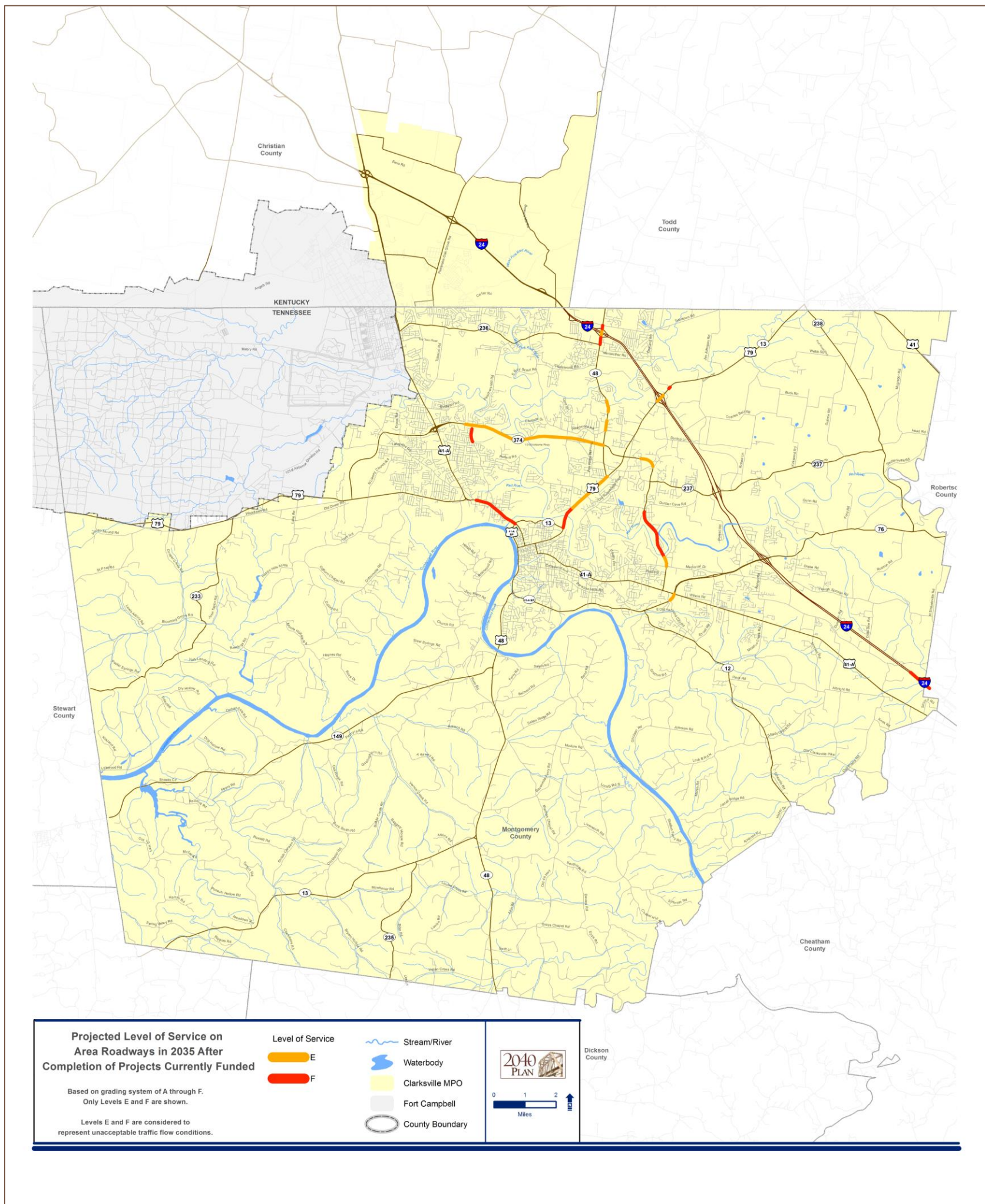
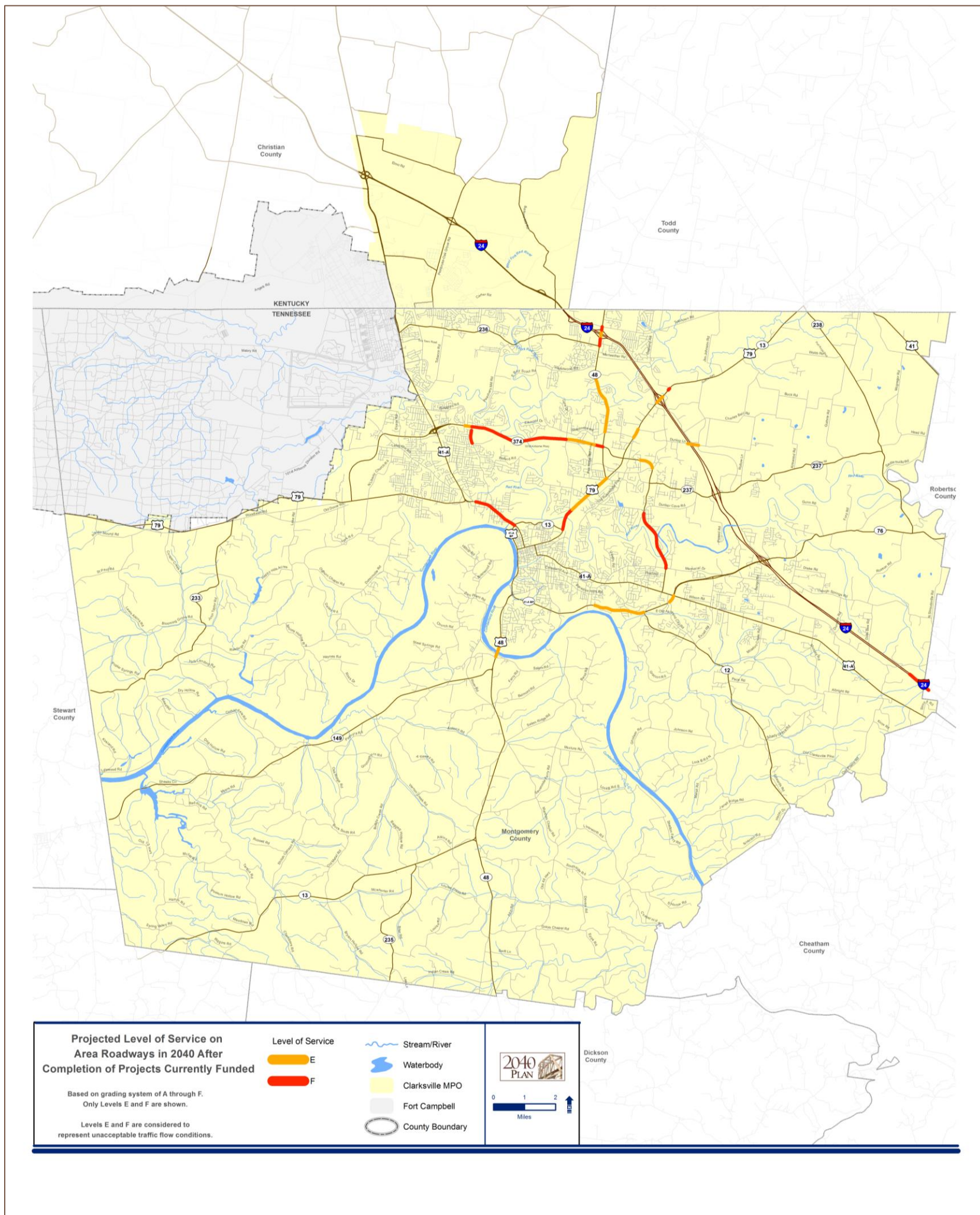


Figure 4-9: 2040 Roadway Level of Service – Existing + Committed Projects Only





Most of the roadway deficiencies (i.e., future transportation needs) identified through the travel demand model analysis are the same congested locations identified when forecasts were done for the 2035 Long Range Transportation Plan. The list of recommended projects from the 2035 Plan was therefore the starting point for this Plan update. As mentioned in the discussion of E+C projects, some of the 2035 Plan projects are already under development. It was also recognized that fiscal resources have continued to shrink over the last two decades, and that not all recommended projects of the 2035 Plan could be carried forward if they failed to address a significant capacity deficiency. (Thus, most minor widening projects proposed in the 2035 Plan have been dropped from consideration for federal funding because of poor cost-effectiveness.) The remaining capacity projects from the 2035 Plan were evaluated against the Regional Goals and Objectives (see **Chapter 2**) to determine their consistency.

After reviewing each project, the following additional deficiency issues were identified for further evaluation.

- *Jack Miller Boulevard Extension*: The 2035 Plan included this project to extend Jack Miller Boulevard from Tobacco Road to Peachers Mill Road as a 3-lane facility. Modeling with 2040 demographics indicated that 4 through lanes are necessary to maintain an acceptable level of service in future years.
- *Peachers Mill Road*: With the dramatic increase in growth that is projected for the area, the portion of Peachers Mill Road from Stonecrossing Drive to Pine Mountain Road will require four lanes to serve future demand. This is a new project recommended in the 2040 Plan.
- *East-West Connector, Phase 2*: Although the City of Clarksville has conducted two studies to evaluate a new east-west route between Peachers Mill Road and Wilma Rudolph Boulevard (US-79/SR-13), the 2035 Plan included only the section from Wilma Rudolph Boulevard to Trenton Road (SR-48). Modeling for the 2040 Plan has re-affirmed the conclusion of previous studies: without an additional east-west connection, 101<sup>st</sup> Airborne Division Parkway (SR-374) will be gridlocked by 2040, along with its entry points from Trenton Road and Peachers Mill Road. To meet the roadway level of service goals established by the CUAMPO Executive Board, it will be necessary to implement Phase 2 of the East-West Connector from Trenton Road to Peachers Mill Road.
- *Guthrie Highway (US-79/SR-13)*: Significant residential and employment growth are projected for the area along Guthrie Highway just east of International Boulevard. To maintain adequate traffic flow in the area of the I-24 interchange, particularly for tenants of the Clarksville/Montgomery County business park, Guthrie Highway should be widened from I-24 to International Boulevard. This is a new project recommended in the 2040 Plan.
- *Wilma Rudolph Boulevard (US-79/SR-13)*: The 2035 Plan included projects to widen Wilma Rudolph Boulevard from 101<sup>st</sup> Airborne Division Parkway (SR-374) to Kraft Street in downtown Clarksville. Modeling indicates that widening this section of roadway would improve traffic conditions from LOS E to LOS D. Although LOS D would bring the road up to minimum acceptable traffic conditions, the costs and impacts of widening in this commercial corridor are likely greater than the benefit. For that reason, these projects are not recommended in the 2040 Plan.



## PROPOSED ROADWAY PROJECTS

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The metropolitan transportation plan recommends roadway improvement projects that fall into two major categories – “capacity enhancement” projects and “capacity preservation” projects. Capacity enhancement projects are major capital investments to expand the through-lane capacity of the roadway network, and include:

- Major roadway widenings (adding through lanes)
- Major new roadways or extensions of existing facilities
- Major realignments of existing facilities
- Major modifications to interchanges to add through movement capacity
- New interchanges

Capacity preservation projects are intended to maintain (not enhance) the capacity of the existing roadway network, and include:

- Repaving, pavement reconstruction and rehabilitation projects
- Bridge reconstruction and rehabilitation projects
- Intersection improvements
- Safety improvements (such as signage, guardrails, minor realignments)
- Bicycle and pedestrian improvements
- Other low capital cost roadway improvements.

The performance of capacity enhancement projects can be examined through the CUAMPO travel demand model, but evaluating the performance of capacity preservation projects requires micro-level analysis tools or other methods. Thus, capacity enhancement projects are listed in the long range transportation plan as individual major capital investment projects, but capacity preservation projects are more likely to be grouped in the plan.

After a review of recommended projects in the 2035 Plan to determine those still addressing major capacity deficiencies and an identification of additional transportation improvements (new projects since the 2035 Plan) needed to address capacity deficiencies through the year 2040, a list of proposed roadway projects was developed for evaluation.

The capacity enhancement projects shown on the following pages (**Figure 4-10** and **Tables 4-8** through **4-11**) are proposed to address the future roadway capacity deficiencies identified through the modeling and performance evaluation process. (This list does not include the existing + committed projects already listed in Table 4-3.) The projects have been organized by horizon according to the timeframe by which they should be completed in order to maintain satisfactory mobility on the region’s major roadways, or if the projects are already under development, the earliest timeframe by which they may be completed and open to traffic.

Note that capacity enhancement projects may be initiated earlier than the period for which they are listed to be completed. For example, design work is beginning for the SR-374 Extension, but given the size of the project and number of parcels to be acquired, the most likely schedule for the project would have construction ending sometime after 2027.

- **Table 4-8** lists projects for completion during 2017-2026.
- **Table 4-9** lists projects for completion during 2027-2035.



- **Table 4-10** lists projects for completion during 2036-2040.

**Table 4-11** lists capacity preservation (lower capital investment) project types that are expected to be implemented throughout the life of the Plan, such as bridge work, safety projects, sidewalks and greenways, etc.

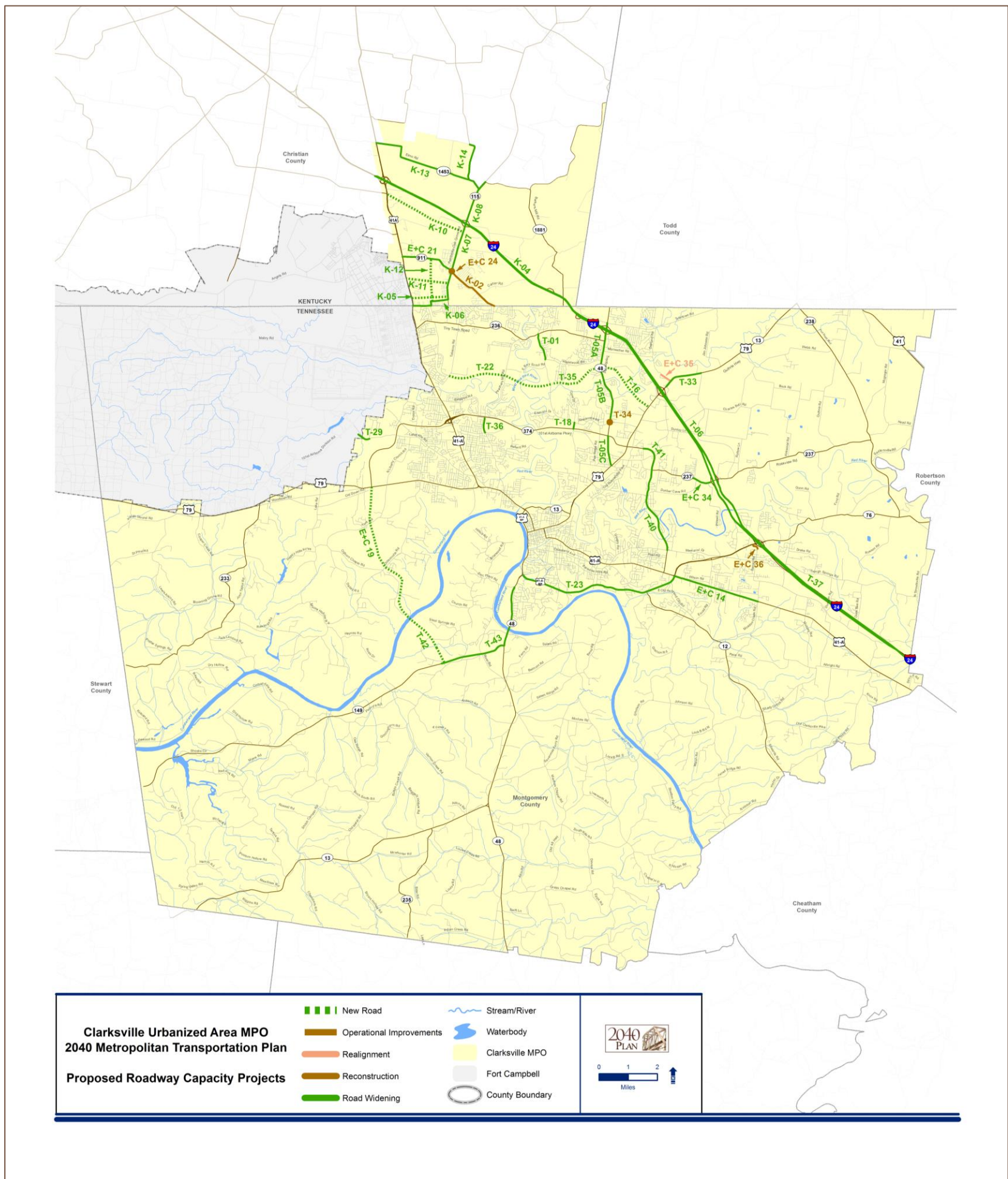
**Figures 4-11** through **4-13** show the resulting LOS for the MPO's roadway network in 2026, 2035 and 2040, reflecting conditions after various capacity enhancement projects have been implemented in the horizon years shown. No additional projects are proposed for 2016 other than the existing + committed projects shown earlier in Figure 4-5.

As shown in Figure 4-13, by the year 2040 there are only a few remaining areas that show levels of service below the regional goal. Providence Boulevard and Wilma Rudolph Boulevard (US-79/SR-13) are physically constrained corridors, as previously noted, where additional road capacity would not generate sufficient benefit to justify the cost of major widening to add through travel lanes under this Plan. However, improvement options may be re-examined in subsequent Metropolitan Transportation Plan updates, and operational solutions may be evaluated in the interim. The deficiencies on Wilma Rudolph Boulevard (US-79/SR-13) between Needmore Road and Dunlop Lane and on Dunlop Lane between Ted Crozier Sr. Boulevard and International Boulevard (observed in Figure 4-8) are no longer readily apparent. Most of the other areas of congestion are at intersections or interchanges where operational solutions should be evaluated.

**Tables 4-12** and **4-13** compare the performance of the regional transportation system in the base year (2010) and 2040 after the implementation of the proposed roadway projects in the Plan. The improved roadway system is able to accommodate many more vehicle-miles traveled (and vehicle-hours traveled) while still maintaining LOS D or better for a large proportion of those miles. In fact, the number of vehicle-miles and vehicle-hours traveled in poor conditions on urban freeways actually decreases for trucks. The number of vehicle-miles traveled in poor conditions on urban arterials, which increased more than 500 percent under the scenario with no improvements, increases slightly more than double under the 2040 Plan.



Figure 4-10: Proposed Roadway Capacity Enhancement Projects



**Table 4-8: Roadway Projects Proposed for Completion in 2017-2026**

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes
T-43, TIP #4 and 5	SR-149/SR-13	Proposed SR-374	Zinc Plant Rd	3.8	Clarksville, Montgomery Co.	Minor Arterial	Widening	2	5
T-41, TIP #2	SR-374 (North Pkwy)	Dunbar Cave Rd	Stokes Rd. (US-79/SR-13)	1.7	Clarksville	Minor Arterial	Widening	2	4/5
T-05A	SR-48 (Trenton Rd.)	Hazelwood Rd.	Tylertown Rd. (SR-236)	2.0	Clarksville	Minor Arterial	Widening	2	5
T-16	East-West Connector Phase 1	US-79 (Wilma Rudolph Blvd.)	Trenton Rd. (SR-48)	2.5	Clarksville	Minor Arterial	New Road	0	4
T-22	Jack Miller Blvd. Extension	Tobacco Rd.	Peachers Mill Rd.	2.0	Clarksville	Minor Arterial	New Road	0	4
T-29	Lafayette Rd	Walnut Grove Rd	Gate – Fort Campbell	0.4	Clarksville, Fort Campbell	Minor Arterial	Widening	2	5
T-33	US-79/SR-13/Guthrie Hwy.	I-24	Solar Way / International Blvd.	1.1	Clarksville, Montgomery Co.	Minor Arterial	Widening	2/3	5
T-34	SR-48/Trenton Rd. at Needmore Rd.	-	-	-	Clarksville	Urban Collector	Intersection improvements	-	-
K-06	KY-400 (State Line Rd)	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.4	Oak Grove	Urban Collector	Reconstruct /Add Turn Lane	2	3
K-07	KY-115 (Pembroke-Oak Grove Rd)	KY-400 (State Line Rd.)	I-24	2.9	Oak Grove	Urban Minor Arterial	Reconstruct/Add Turn Lane	2	3
K-08	KY-115 (Pembroke Rd.)	I-24	KY-1453 (Barker’s Mill Rd.)	1.9	Oak Grove	Rural Minor Arterial	Reconstruct /Add Turn Lane	2	3
K-12	Oatts-Riggins Rd (New Roadway)	KY-400 (State Line Rd)	KY-911 (Thompsonville Ln)	1.5	Oak Grove	Urban Collector	New Road	0	3
K-13	KY-1453 (Elmo Rd) Rehabilitation	US-41A (Ft. Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	4.1	Christian Co.	Local	Reconstruct /Add Turn Lane	2	3

**Table 4-9: Roadway Projects Proposed for Completion in 2027-2035**

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes
T-40	SR-374/Richview Rd/Warfield Blvd	Memorial Dr.	Dunbar Cave Rd	2.1	Clarksville	Principal Arterial	Widening	2	4
T-42	SR-374 Extension (Alternate C)	SR-149	Dotsonville Rd	4.3	Montgomery Co.	Principal Arterial	New Road	0	2
T-05B	SR-48 (Trenton Rd.)	Hazelwood Rd.	Needmore Rd	2.2	Clarksville	Minor Arterial	Widening	2	5
T-23	US41A Bypass (Ashland City Rd.)	US41A/SR-112	SR-13	5.5	Clarksville	Principal Arterial	Widening	2/3	5
T-35	East-West Connector Phase 2	SR-48 (Trenton Rd)	Peachers Mill Rd.	3.7	Clarksville	Minor Arterial	New Road	0	4
T-36	Peachers Mill Rd.	Pine Mountain Rd.	Stonecrossing Dr.	0.4	Clarksville	Minor Arterial	Widening	3	4
K-02	Hugh Hunter\Gritton Church Rd.	KY 911 (Thompsonville Ln)	Allen Rd.	1.9	Oak Grove, Christian Co.	Local	Reconstruction	2	2
K-05	Gate 4 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.2	Oak Grove	Urban Collector	New Road	0	2
K-10	KY-117 (New Roadway)	US-41A (Ft. Campbell Blvd.)	KY-115 (Pembroke-Oak Grove Rd)	3.0	Oak Grove	Urban Collector	New Road	0	5
K-11	Gate 5 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.5	Oak Grove	Urban Collector	New Road	0	2
K-14	KY-109 (Bradshaw Rd) Rehabilitation	KY-1453 (Elmo Rd)	Bradshaw-Fidelio Rd.	1.0	Christian Co.	Rural Minor Collector	Reconstruct/Add Turn Lane	2	3



**Table 4-10: Roadway Projects Proposed for Completion in 2036-2040**

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes
T-06	I-24	Eastern terminus of Project K-04 (KY/TN State Line)	SR-76	10.7	Montgomery Co.	Interstate	Widening	4	6
T-37	I-24	SR-76	SR-256 (Robertson County)	8.6	Montgomery Co., Robertson Co.	Interstate	Widening	4	6
T-01	Needmore Rd.	Hazelwood Rd.	SR-236 (Tiny Town Rd.)	0.9	Clarksville	Urban Collector	Reconstruct/Add Turn Lane	2	3
T-05C	SR-48 (Trenton Rd.)	SR-13/US 79 (Wilma Rudolph Blvd.)	SR-374/101st Airborne Division Pkwy.	1	Clarksville	Minor Arterial	Widening	2	5
T-18	Whitfield Rd./Old Trenton Rd.	Needmore Rd.	SR-374/101st Airborne Division Pkwy	0.2	Clarksville	Urban Collector	Reconstruct/Add Turn Lane	2	3
K-04	I-24	US-41A (Fort Campbell Blvd)	TN State Line	7.8	Oak Grove, Christian Co.	Interstate	Widening	4	6

**Table 4-11: Additional Projects Anticipated throughout the Planning Period**

2040 Plan Number	Route	Sponsor	Jurisdiction	Description
-	Various Transportation Systems Management (TSM), Intelligent Transportation Systems (ITS) and safety improvements	TDOT, KYTC, MPO member agencies	All	Projects may include intersection improvements (e.g. additional turn lanes and/or signals); signage and lighting; other operational improvements such as signal timing, access management; and projects based on the MPO's Regional ITS Architecture.
-	Various bridges	TDOT, KYTC, MPO member agencies	All	Bridge Replacement / Bridge Rehabilitation (some work will also occur as part of scheduled roadway capacity projects)
-	Various routes	TDOT, KYTC, MPO member agencies	All	Enhancements to various routes and locations throughout the MPO planning area. Includes projects such as improvements to the bicycle/pedestrian network, trails, scenic byways, landscaping and beautification, mitigation of environmental impacts caused by transportation projects.
-	Various routes	TDOT, KYTC, CUAMPO member agencies	All	Pavement reconstruction, rehabilitation and resurfacing



Figure 4-11: 2026 Roadway Level of Service With Proposed Projects

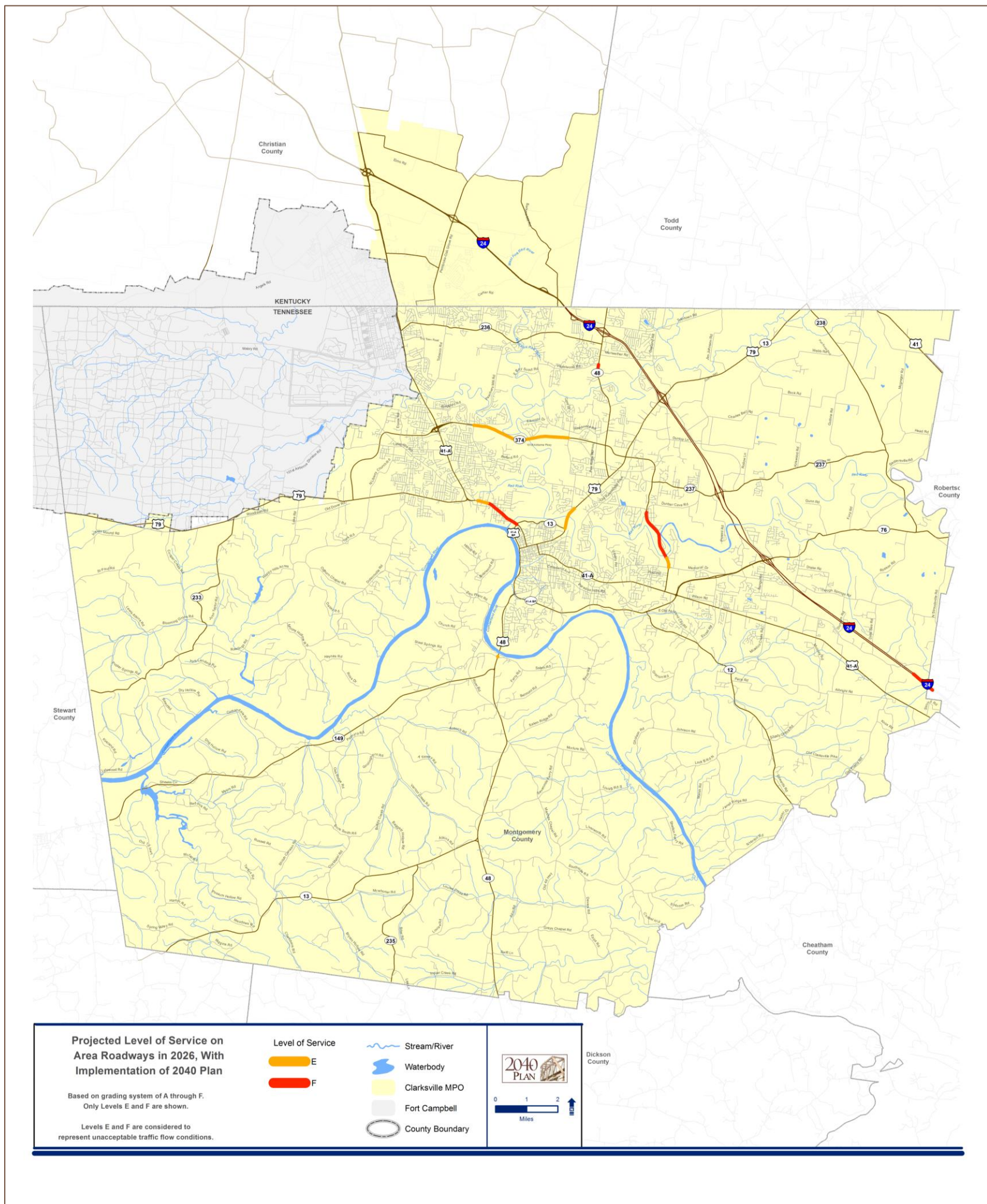


Figure 4-12: 2035 Roadway Level of Service With Proposed Projects

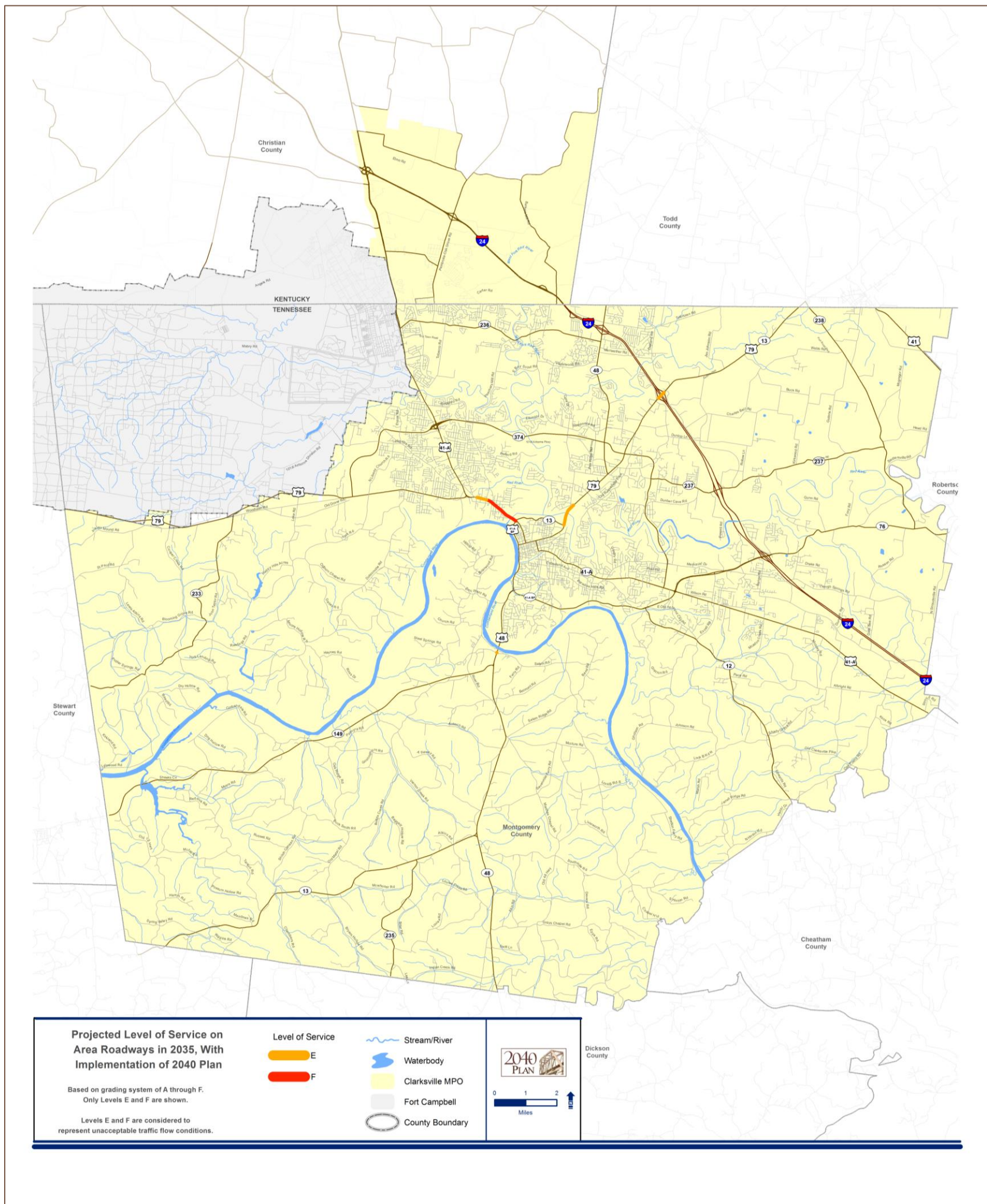




Figure 4-13: 2040 Roadway Level of Service With Proposed Projects

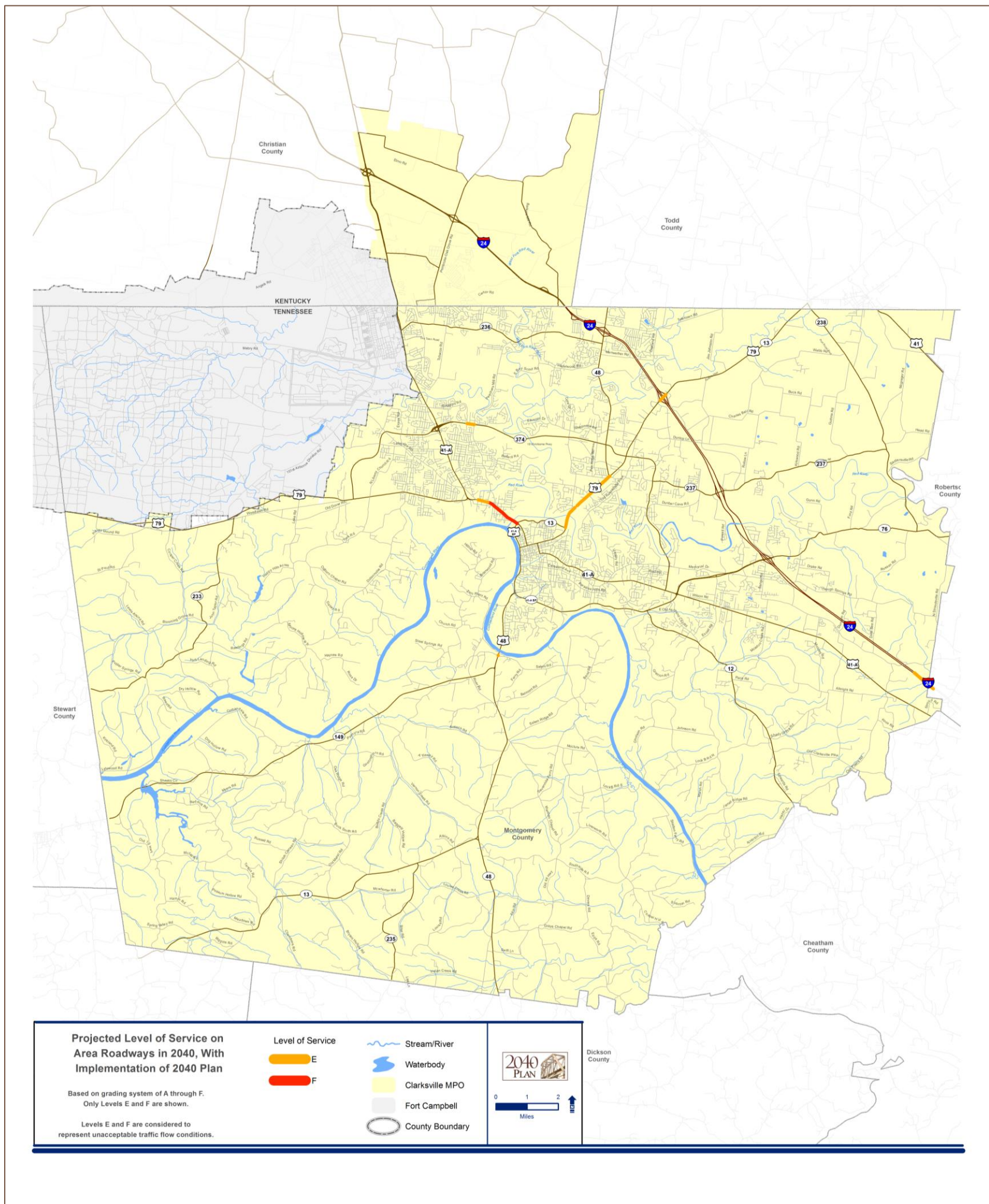


Table 4-12: Change in Vehicle-Miles Traveled at LOS E or F, 2010 compared to 2040 Plan

	2010		2040 Plan		Pct Change	
	Autos	Trucks	Autos	Trucks	Autos	Trucks
<b>Urban Freeways</b>	3,828	484	5,170	432	35%	- 11%
<b>Urban Arterials</b>	120,968	9,640	189,589	17,105	57%	77%
<b>Urban Collectors</b>	-	-	-	-	-	-
<b>Rural Freeways</b>	33,932	7,397	96,978	28,144	186%	280%
<b>Rural Arterials</b>	-	-	-	-	-	-
<b>Rural Collectors</b>	-	-	-	-	-	-

Table 4-13: Change in Vehicle-Hours Traveled at LOS E or F, 2010 compared to 2040 Plan

	2010		2040 Plan		Pct Change	
	Autos	Trucks	Autos	Trucks	Autos	Trucks
<b>Urban Freeways</b>	122	15	173	14	42%	- 7%
<b>Urban Arterials</b>	4,205	327	6,796	596	62%	82%
<b>Urban Collectors</b>	-	-	-	-	-	-
<b>Rural Freeways</b>	1,573	338	4,085	996	160%	195%
<b>Rural Arterials</b>	-	-	-	-	-	-
<b>Rural Collectors</b>	-	-	-	-	-	-



## Public Transit

The Clarksville region is served by several public transportation agencies that provide mobility within the City of Clarksville as well as connections to the larger region. Both fixed-route and demand responsive service are provided by the Clarksville Transit System (CTS) for a large portion of the urban area, including a route that serves Fort Campbell and Oak Grove, Kentucky. Demand response services are also available through the Mid-Cumberland Human Resource Agency (MCHRA) in Tennessee, and through Pennyryle Allied Community Services (PACS) in southwest Kentucky, both of whom provide trips to and from counties adjoining Montgomery County. A Greyhound station in downtown Clarksville provides access to national intercity bus service, and regional commuter bus service has recently been launched by CTS through the Regional Transit Authority between Clarksville and Nashville.

### CLARKSVILLE TRANSIT SYSTEM

Clarksville Transit System celebrated its 25<sup>th</sup> anniversary of service in 2012. Its stated mission is to plan, implement, maintain and manage a public transportation system that allows for maximum mobility for the community with emphasis on safety, quality, and efficiency.

#### CTS Fixed Route Service

CTS is the only fixed-route bus service offered in the CUAMPO region. It operates eight regular routes that operate Monday through Friday from 4:40 a.m. to 9 p.m. and on Saturday from 6:40 a.m. to 9 p.m. **Table 4-13** shows the current headways for each of the eight regular routes, and **Figure 4-14** shows the corridors that are served.

**Table 4-13: Current Headways for Fixed-Route Bus Service in the Clarksville Area**

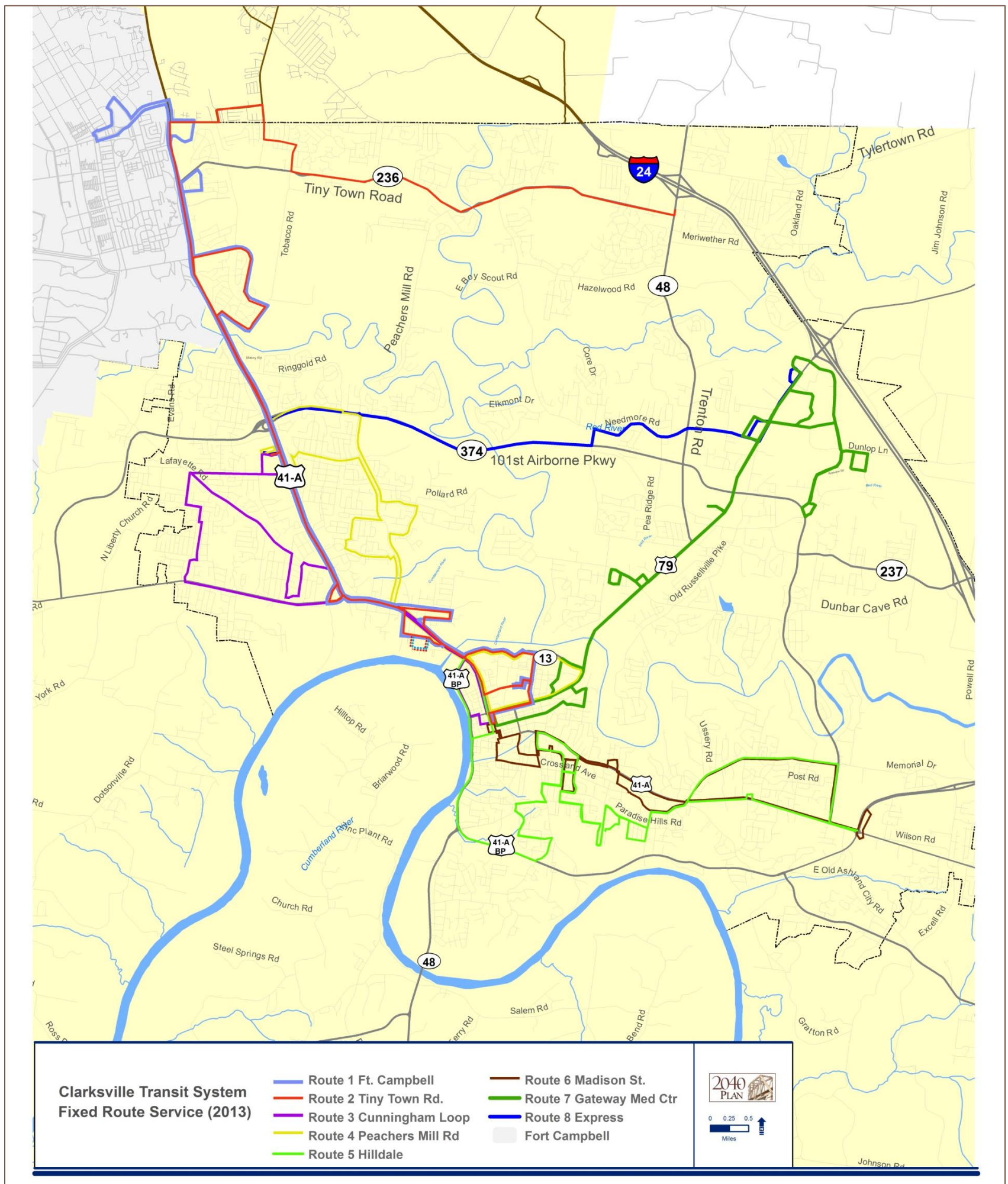
Number	Route	Headway	Avg. Annual Riders, FY2010-2012
1	Ft. Campbell	60 minutes	141,426
2	Tiny Town Rd.		90,435
4	Peachers Mill Rd.		48,325
5	Hilldale		98,629
8	Express (101 <sup>st</sup> Airborne Division Pkwy.)		27,790
3	Cunningham Loop	30 minutes	97,778
6	Madison St.		135,051
7	Gateway Medical Center		132,169

Source: CTS Transit Guide, June 2013

In addition to the eight regular routes, CTS started a weekday circulator route in 2009 for Austin Peay State University, which by 2012 was serving about 5,000 riders annually. In June 2012, CTS also added weekday connecting service to the I-24/Rossvie Rd. interchange for riders to access the new regional commuter bus service to/from Nashville.



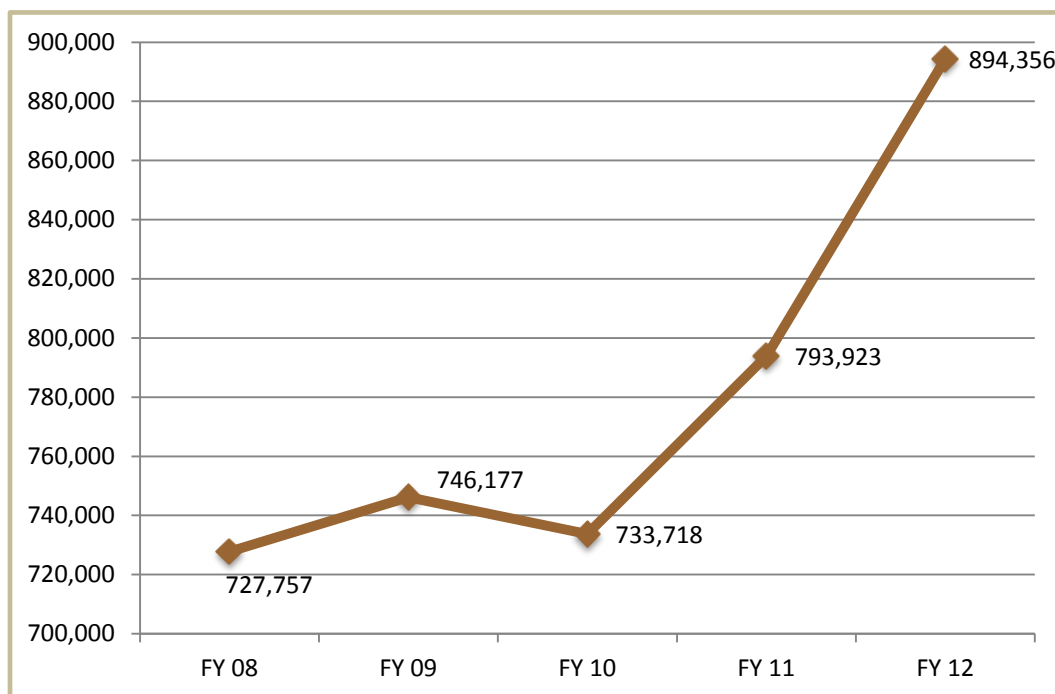
Figure 4-14: Clarksville Transit System Fixed Routes (2013)



Currently, the full bus fare is \$1.50. Student fares are \$1.00, and fares are 75 cents for City of Clarksville employees, seniors, disabled citizens and Medicare Card Holders with a CTS ID. Children under four may ride for free. CTS also offers a variety of pre-paid fare incentives for citizens who meet certain criteria and who schedule a reservation in advance.

Fixed-route ridership in Clarksville has increased 23% over the past five years, as shown in **Figure 4-15**, reaching a high of nearly 900,000 riders. Routes with the highest ridership include Route 1 (Fort Campbell), Route 3 (Cunningham Loop), Route 6 (Madison Street) and Route 7 (Gateway Medical Center). Route 1 includes service to Oak Grove, Kentucky, which attracts ridership from many military families.

**Figure 4-15: CTS Total Annual Ridership, 2008-2012**



Source: CTS data, FY08-FY12

Some of the increase in CTS’s ridership reflects a larger national trend in which transit agencies across the U.S. saw their ridership grow after gasoline prices spiked from 2006 to 2008, and retained some of those new riders. More people in Tennessee and the U.S. also started using transit during the economic downturn that started in 2008, as citizens sought ways to conserve on fuel costs.

However, recent growth in Clarksville transit ridership also results from successful adaptation to community changes, such as route changes that CTS made after the relocation of Gateway Medical Center. Saturday ridership has increased since its inception in 2007. As the region’s employment base has changed, so has its transportation needs. Although Clarksville continues to have a strong manufacturing base, much of the region’s job growth is related to retail and other services. Service employees’ work schedules often differ from the standard manufacturing shift or “office hours,” so the extended evening hours offered by CTS bus routes are important to the local economy.



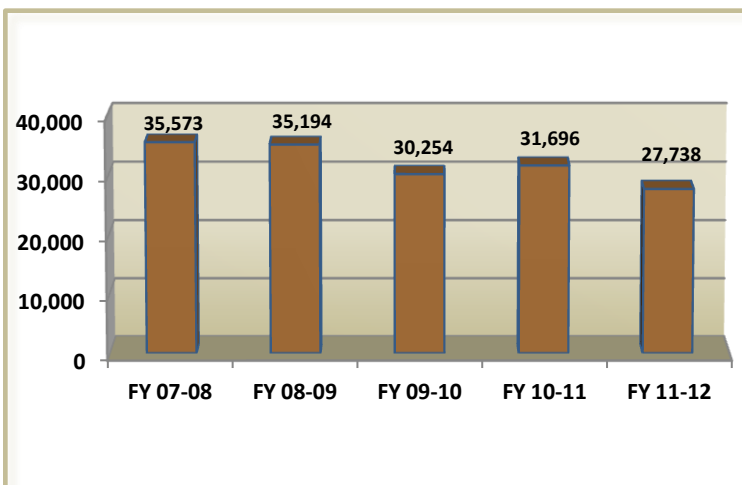
### CTS Demand Response Service

Within the Clarksville city limits and Fort Campbell, CTS operates the “Lift,” a demand-response paratransit service for persons with a certified disability that makes them unable to use the fixed-route service. The Lift provides origin to destination service for a \$3.00 round trip fare. Reservations are required, and must be made at least 24 hours in advance.

Ridership on The Lift has been declining over the past several years, as shown in **Figure 4-16**. CTS staff attributes this to the success of their “Travel Trainer” program, in which a CTS employee provides personal assistance on how to use the fixed-route service. Many people who were using the paratransit service have learned that their needs can be met by regular bus service. This creates a cost savings for the rider, since bus fares cost half as much as The Lift. It also generates significant cost savings for CTS by reducing the number of requests for demand-response trips. According to the most recent data reported to the National Transit Database (NTD), demand-response service cost CTS more than \$5 per passenger mile and \$36 per unlinked passenger trip. By comparison, its fixed-route bus service operated at a cost of 94 cents per passenger mile and \$5.22 per unlinked passenger trip.



**Figure 4-16: Annual Ridership on The Lift, 2008-2012**



Source: CTS data, FY08-FY12

Annual operating expenses for CTS are approximately \$5 million with a farebox recovery of 12% according to the NTD. Other funding for operations comes primarily from federal program funds (40%), state assistance (19%) and local funds (29%).



## MCHRA PUBLIC TRANSIT

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Mid-Cumberland Human Resource Agency (MCHRA) serves as the rural public transportation system for a 12-county service area in Tennessee that includes Montgomery County as well as Cheatham, Dickson, Houston, Humphreys, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson, and Wilson counties. MCHRA provides demand response services to elderly, low-income, and disabled persons, as well as the general public at large, although medical trips are given priority. The service operates from 6 a.m. to 6 p.m., Monday through Friday. Reservations must be made 24 hours in advance for local trips, and 72 hours in advance for out-of-county trips.



Service is provided by 126 vehicles (primarily vans) and a staff of 140 in the 12-county area. MCHRA Public Transit operations in Montgomery County consist of 10 vehicles and 12 drivers.



MCHRA Public Transit provided about 215,000 trips in 2012, running nearly 4 million miles. Within Montgomery County, MCHRA Public Transit provided 27,945 trips in 2012 and ran more than 475,000 miles.

## PENNYRILE ALLIED COMMUNITY SERVICES (PACS)

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Pennyrile Allied Community Services (PACS) provides rural public transportation for a nine-county area in Kentucky that includes Christian County as well as Caldwell, Crittenden, Hopkins, Livingston, Lyon, Muhlenberg, Todd and Trigg counties.

The service operates Monday through Friday. Like the other demand-response services available in the greater Clarksville region, reservations must be made 24 hours in advance. Medicaid-eligible persons ride for free, and senior citizens in general are not charged although a \$1 donation is encouraged. Current fares for other riders are based on the number of miles (measured as a radius) from each county's senior center, or from PACS' local transportation office in that county.

Current fares for in-county trips are \$2 for a trip up to 5.4 miles from the senior center/local transportation office. Trips outside the 5.4-mile radius cost \$4 for one-way fare.

For out-of-county trips, the general public is charged 50 cents per mile. Special fares are available for persons accompanying a Medicaid rider, ranging from \$4 to \$10 for a one-way trip depending on the distance.



## OTHER SPECIAL SERVICE PROVIDERS

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The region has a range of other public, private and non-profit organizations that each offer transportation to clients of human services programs such as seniors, students and other youth, the disabled, veterans and low-income persons, as well as to medical and long-term care services and facilities.

The CUAMPO periodically hosts meetings among these organizations to discuss public transportation issues and needs as part of the Coordinated Human Services-Public Transportation Plan. The Coordinated Plan was originally required by the Federal Transit Administration in order for a region to receive special federal transit grants for expanded service to the elderly and disabled, as well as those needing transportation to jobs. Although those particular federal programs were not re-authorized under MAP-21, the Coordinated Plan continues to be of value by promoting cooperation and efficiency among public transit agencies and the other private and non-profit entities who also provide services. Participants work together to identify the region's unmet transportation needs, and develop a prioritized set of strategies to fill those gaps. The "travel trainer" program now offered by CTS and MCHRA was one of the strategies in the region's first Coordinated Plan.

## REGIONAL TRANSIT SERVICE

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The Clarksville area has taken significant steps in providing regional transit service to its citizens. Clarksville and Montgomery County recently became a member of the Regional Transportation Authority (RTA), which operates regional commuter bus service and vanpools.

In June 2012, regional commuter bus service was initiated between Clarksville and Nashville. CTS established local bus connecting service to the park and ride lot at the I-24/Rossvie Rd. interchange (Exit 8), where regional riders depart and return. Less than a year later, ridership on this route was among the highest in the region, and additional buses were introduced to accommodate the demand. RTA now operates three daily buses in both the mornings and afternoons, and is working with CTS and TDOT to expand the park and ride lot.

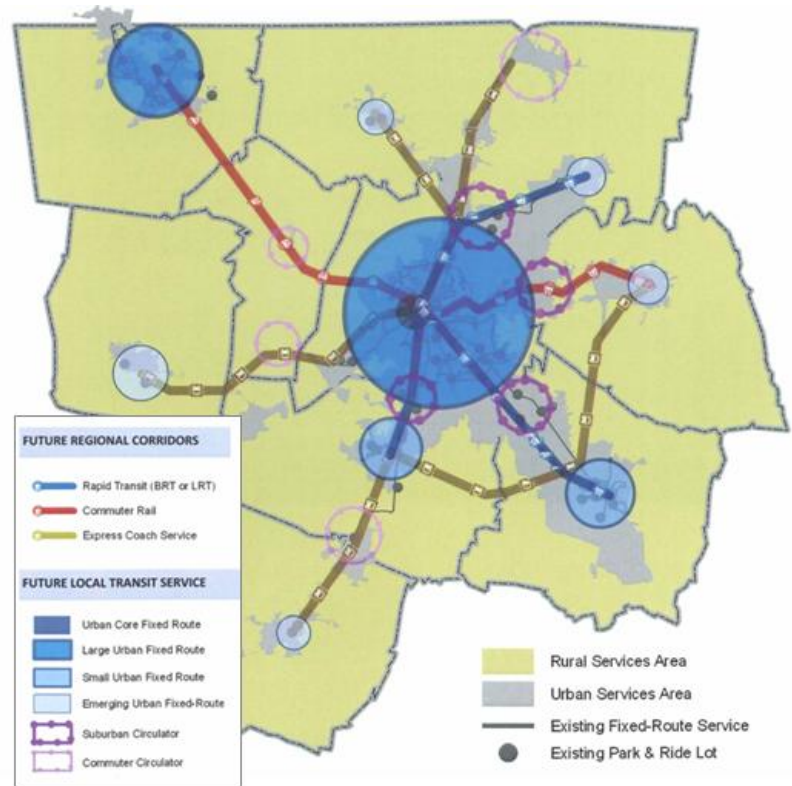
A successful regional bus route is the first step to development of a high-capacity service such as commuter rail, a concept that the CUAMPO has previously studied.





**Figure 4-17:  
Long Range Vision for Regional Transit**

*The 2035 Regional Transportation Plan adopted by the Nashville Area MPO recommended future commuter rail service between Clarksville and Nashville. Express commuter bus service was recommended as a first step, and was initiated by RTA in 2012.*



The 2035 Regional Transportation Plan adopted by the Nashville Area MPO includes a long range vision for transit service within the 10-county region served by RTA (Figure 4-17). This vision encompasses an array of new and expanded services for regional corridors, urban and suburban centers, and rural communities. The recommendations range from high-frequency rapid transit service to the continued provision of demand-response service provided to rural areas by MCHRA.



As shown in the figure, the regional transit vision calls for the development of a new Northwest Corridor commuter rail line corridor to connect Clarksville and Nashville. An initial study of this concept was conducted by the CUAMPO in partnership with the Nashville Area MPO, TDOT, the Cheatham County Rail Authority, and the Nashville & Western Railroad (NWR) Corporation, which operates a shortline freight rail service between downtown Nashville and Ashland City.

Three different alignments were evaluated, including I-24, the existing CSXT tracks through Springfield, and the old Tennessee Central Railroad through Cheatham County. The preliminary recommendation is to use the old Tennessee Central Railroad, which follows the Cumberland River and passes through Ashland City. Most of the old railroad bed is still in place, and the NWR now operates on the line from the downtown Nashville Farmer's Market to the Ashland City Industrial Park. Due to the increasing freight traffic on the CSXT line (discussed later in the Rail section), that alignment is not considered feasible. The preliminary findings also indicate the I-24 alignment is less preferable since the cost



estimates for constructing new rail along the I-24 corridor are considerably higher than the scenario that uses the Tennessee Central Railroad.

The study proposes passenger stations in midtown Nashville, downtown Ashland City, and the Old Hospital/Madison Street area of Clarksville. Two train sets each would make the full Clarksville/Nashville trip, operating two times in the morning and two times in the afternoon. Speeds would be up to 79 miles per hour over long sections, for an overall 50-minute trip between Clarksville and Nashville.

Using the Tennessee Central Railroad alignment would cost an estimated \$114.8 million to rehabilitate 16 miles of existing track, construct 27 miles of new track, upgrade 54 bridges/overpasses, build three stations, develop support and maintenance facilities, acquire new rights-of-way, and purchase locomotives and train cars. This capital cost estimate is in 2008 dollars and includes contingency.

Annual operating cost would be \$5.7 million to operate the service during peak commuting times, according to the preliminary study.

Given the highly successful result of the Clarksville-Nashville express bus service, the CUAMPO is about to initiate the next phase of analysis, once again partnering with the RTA and the Nashville Area MPO. This next step will further refine projects for ridership and costs to allow decision-makers to better understand the benefits and costs of moving forward with commuter rail in the Northwest Corridor. Data collected and analyzed through this study will be needed if the region decides to seek funds for the project from the Federal Transit Administration (FTA). Once a preferred alignment is known, the study will also provide a basis for agencies to begin efforts to preserve and protect potential right-of-way located along the corridor. Such action now can help significantly reduce the cost of implementation by preventing unnecessary land acquisitions or business relocations to make way for the construction of tracks or stations.

Since funding sources have not yet been identified to build the line and support ongoing operation of commuter rail service, this project is not included in the CUAMPO's fiscally constrained 2040 Plan. However, the topic of dedicated funding for a regional transit system has been discussed among numerous regional groups in Middle Tennessee, including the Middle Tennessee Mayors' Caucus. This group includes the mayors of the same 10 counties that form the RTA, the MCHRA, and the majority of counties in the Greater Nashville Regional Council (charged with regional economic development and other programs and services). Several of the cities operate their own fixed-route transit systems, including Clarksville. It will be critical to identify funding sources that do not compete with the growing financial needs of local transit agencies while enabling the region to realize its vision of a larger rapid transit system.



## TRANSIT CAPITAL ASSETS

Since MCHRA and PACS are primarily rural systems whose capital needs are addressed outside the metropolitan planning process, this section focuses on the Clarksville Transit System.

CTS currently maintains the following vehicle fleet: (see **Table 4-14** for the full vehicle inventory.)

Fixed-route bus system:

- 21 buses, each equipped with wheelchair lifts and bicycle racks
- Total seating capacity of 591 seats system-wide (26 to 29 seats per vehicle)
- Average age of the fleet: 8 years old.

Demand response system (The Lift):

- 10 mini-buses, each equipped with wheelchair lifts
- Total seating capacity of 85 seats system-wide (7 to 12 seats per vehicle)
- Average age of the fleet: 3.5 years old.

CTS also has two rubber tired, non-electric trolleys that are equipped with wheelchair lifts and have a combined seating capacity of 60. The average age of these vehicles is 8 years old.

The annual average mileage for a full-size CTS bus is 50,000 miles. They are replaced on a 10-year cycle. Beyond that point the bus requires a level of maintenance that, over the long run, is considerably more expensive than purchasing a new bus. For a demand-response van, the useful life is only 4 years. Funds from the American Recovery and Reinvestment Act of 2008 (ARRA) provided a one-time surplus of capital funds that CTS used for vehicle replacement, but it is now time for those vans to be replaced.

The CTS fleet currently includes 3 hybrid buses, which are cleaner, quieter, and offer as much as 40% in fuel savings. However, the initial capital cost of a hybrid bus can be up to twice as much as a standard diesel-fueled vehicle. Hybrid models are preferable; however, in cases where capital funds are limited, CTS may have to choose to purchase standard diesel buses rather than postpone its purchase if it means maintaining older, inefficient vehicles.

**Table 4-14: Clarksville Transit System – Vehicle Fleet (July 2012)**

BUSES						
Vehicle Description	Year	No. of Vehicles	Fuel	Seats	Wheelchair Lift	Condition
Gillig	2001	5	Diesel	29	Yes	Poor
Gillig	2003	3	Diesel	29	Yes	Fair
Gillig	2005	4	Diesel	29	Yes	Fair
Gillig	2006	3	Diesel	29	Yes	Good
Gillig	2010	3	Diesel	26	Yes	Excellent
Gillig	2010	3	Hybrid	26	Yes	Excellent
<b>TOTAL</b>		<b>21</b>		<b>591</b>		



**Table 4-14: Clarksville Transit System – Vehicle Fleet (July 2012) [continued]**

DEMAND RESPONSE (MINI-BUSES)						
Vehicle Description	Year	No. of Vehicles	Fuel	Seats	Wheelchair Lift	Condition
Ford E150 Conv Van	2009	7	Unleaded Gas	7	Yes	Good
Ford / Goshen Coach	2009	2	Unleaded Gas	12	Yes	Section 5310
Ford / Goshen Coach	2010	1	Unleaded Gas	12	Yes	Good
<b>TOTAL</b>		<b>10</b>		<b>85</b>		
TROLLEYS						
Vehicle Description	Year	No. of Vehicles	Fuel	Seats	Wheelchair Lift	Condition
Supreme Trolley	2005	2	Diesel	30	Yes	Good

Source: Clarksville Transit System, 2012

## TRANSIT SERVICE NEEDS

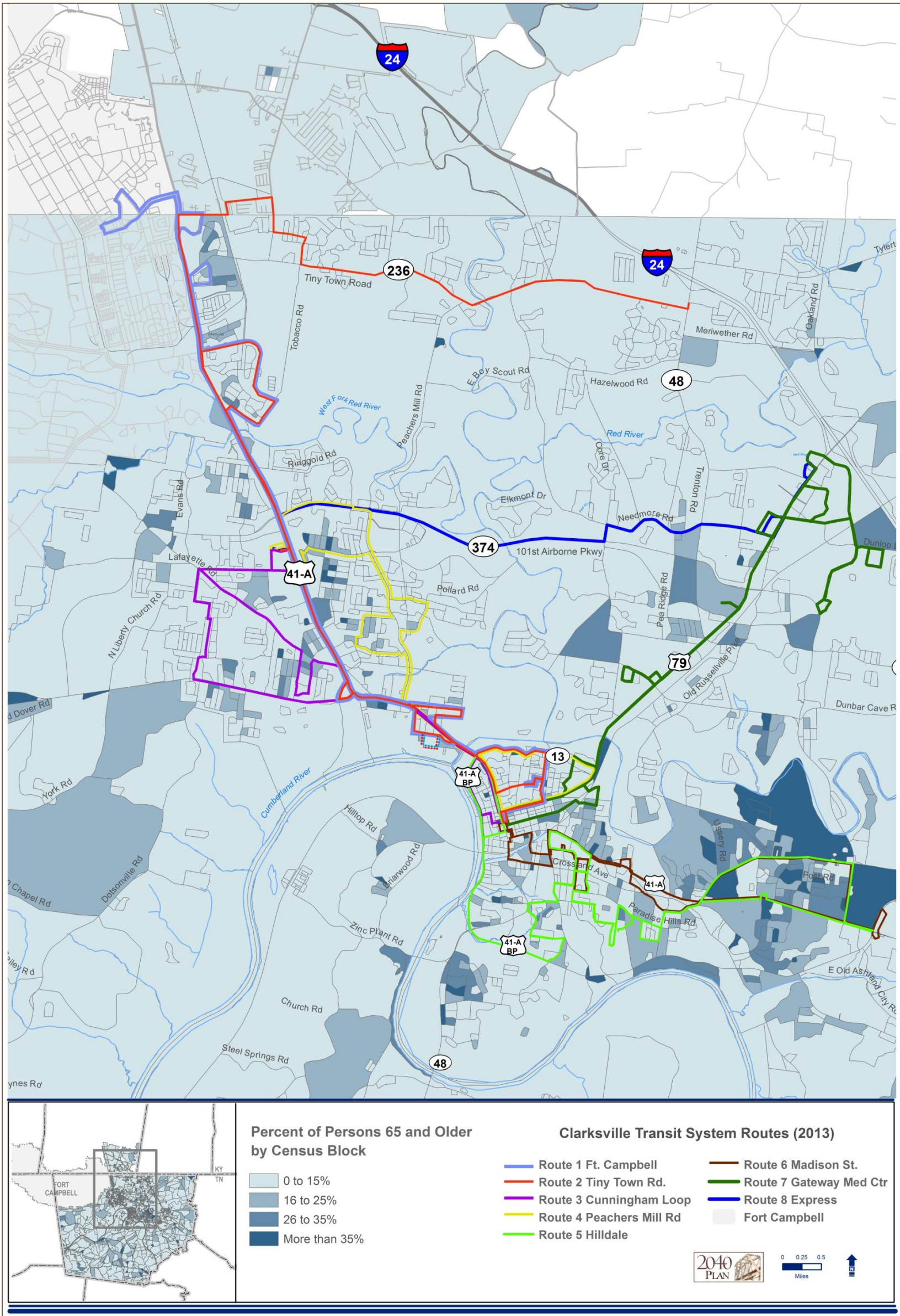
### *Transit-Dependent Populations*

Demographics are often considered when identifying areas of transit demand, since national data indicates that some groups traditionally use transit in greater numbers than the population at large, including senior citizens, low-income persons, and minorities. (In the case of minority and low-income persons, particular attention is also given to areas where they reside in higher numbers, to ensure these areas benefit equally and do not experience a disproportionate share of negative impacts from the transportation system. For more, see the Environmental Justice section of Chapter 6.)

Senior citizens, defined as persons 65 years of age or greater, make up only 8% of the Clarksville region’s population. As noted in Chapter 2, the overall region has a relatively low median age (29) due in part to the presence of Fort Campbell. **Figure 4-18** shows where transit routes currently operate in relation to areas where the proportion of seniors is higher than the countywide average. Within the CTS service area, there are observable clusters along Fort Campbell Boulevard and Wilma Rudolph Boulevard, which are served by Routes 1 and 7, and along the Madison Street corridor served by Route 5 (Hilldale). Apart from those locations, Figure 4-18 indicates that persons 65 and older are fairly scattered throughout the region, and that many senior citizens live outside the CTS service area. Continuing coordination among CTS, MCHRA, PACS, and other private/nonprofit transit providers is essential to ensure that senior citizens who live outside the urban area can continue to make trips for routine shopping, doctor’s visits, and leisure activities even if they become physically unable to drive.



Figure 4-18: Transit Routes Compared to Areas with a High Percentage of Senior Citizens



**Figure 4-19** shows areas where a relatively high percentage of residents are minorities, defined by the U.S. Census as non-white persons. As seen in the figure, most areas with high minority populations are located generally within the Clarksville Transit System service area, with the exception of the residential development occurring east of Trenton Road (SR-48) near I-24 Exit 1. However, not all areas with minority concentrations are particularly well-served by bus routes within one-half mile. The larger downtown area of Clarksville, where multiple bus routes converge, has excellent service, as do areas off Fort Campbell Boulevard. Service is available for the southern half of the Peachers Mill Road corridor, but considerable new growth is occurring between Tiny Town Road (SR-236) and SR-374 that is not currently served. Transit service is a need for all residents of this area, including minority persons.

Concentrated areas of low-income persons are shown in **Figure 4-20**. The highest concentration of people whose income is below the poverty level are living, as one might expect, in the core area of downtown Clarksville, where bus routes and other human services are accessible. Bus service is also generally available to the area southwest of Madison Street (although lacking in southern Clarksville) and in the New Providence area west of downtown, where there are larger proportions of low-income households.

Transit service to low-income persons, particularly those between 16 and 65 years old, is essential to their ability to participate in the workforce. Reliable and affordable transportation enables these citizens to get and keep a job, and therefore helps preserve the region's economic health.



Figure 4-19: Transit Routes Compared to Areas with a High Percentage of Minority Persons

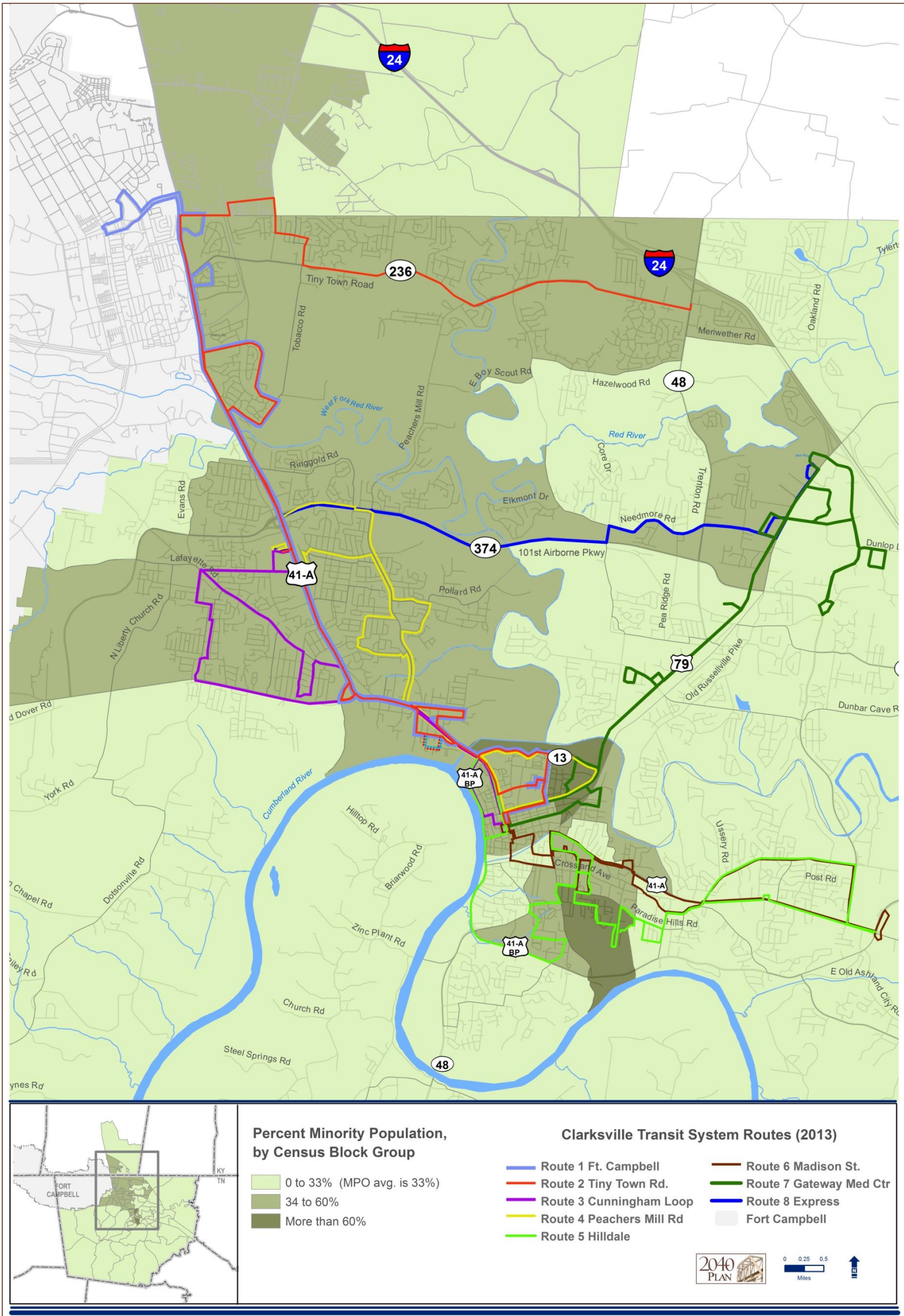
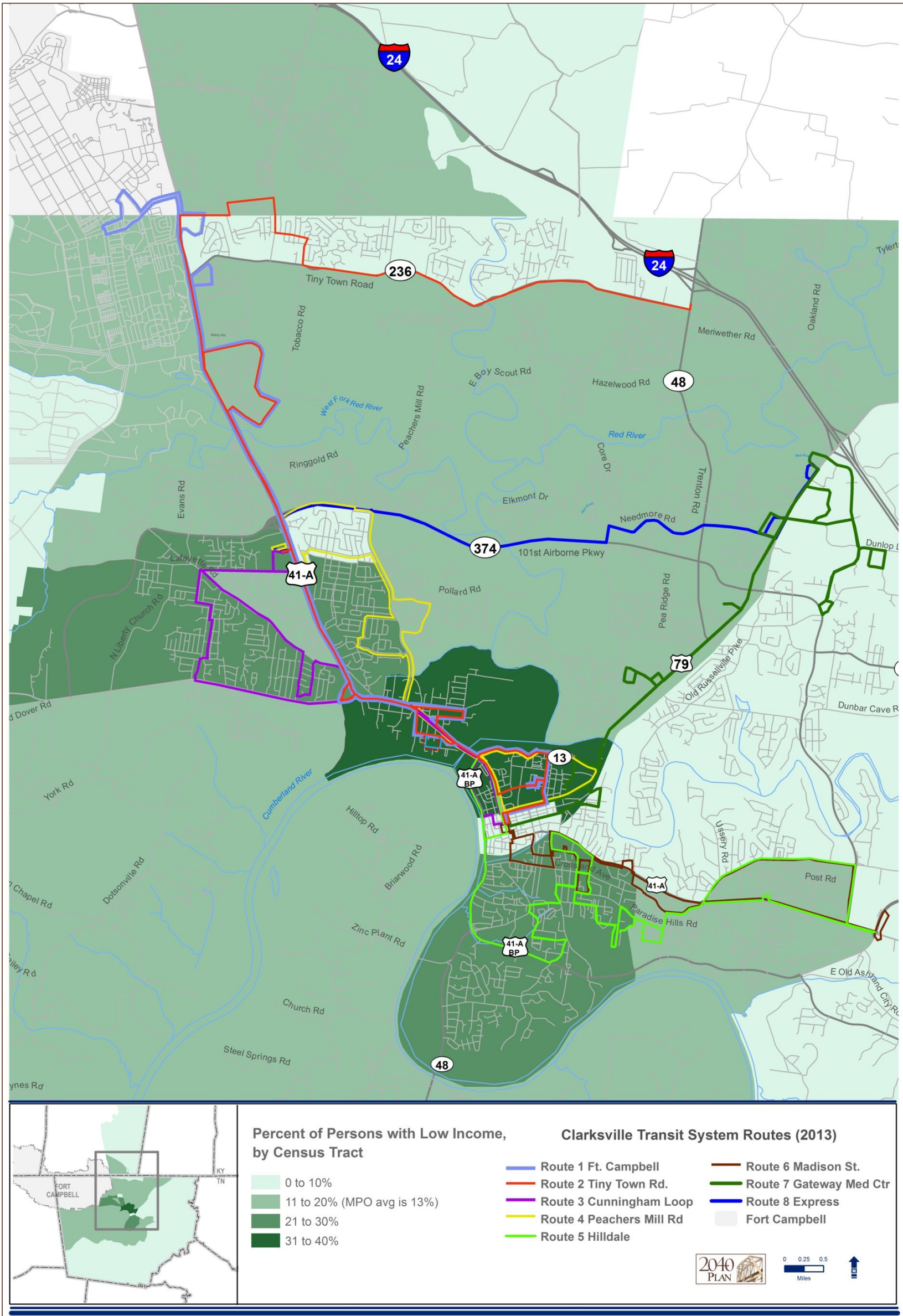


Figure 4-20: Transit Routes Compared to Areas with a High Percentage of Low Income Persons





### ***Impact of Infrastructure and Growth Decisions on Transit***

Geographic changes and infrastructure in the Clarksville area also affect the future demand for transit services, and the ability to provide service in a cost-effective manner. CTS' most recent Strategic Plan (2010) identifies several challenges that the agency faces in providing efficient service:

- Limited sidewalks along transit routes. Sidewalks are important for passengers to safely access bus routes. Although the City of Clarksville requires sidewalks to be installed when new streets are built, there are many areas where development occurred before the ordinance was in place. Also note that the ordinance does not require the addition of sidewalks when new development occurs along existing streets. Substantial development has thus occurred along existing principal arterials (which are also major transit corridors) without the addition of pedestrian facilities.
- Subdivisions with limited entrances. Many residential subdivisions are designed so that only one road provides vehicular access in and out of the subdivision. This makes it difficult to get the bus close to where people live.
- Few crossings of the Red River. As the Strategic Plan notes, there are only four bridges that cross the Red River: Providence Boulevard, US-79/Wilma Rudolph Boulevard, SR-374/Warfield Boulevard, and Interstate 24. Although the limited number of bridges affects all traffic movement, not just transit, it is particularly difficult to distribute bus service efficiently when multiple routes must use the same roadway.
- Employment growth heading east. Much of Clarksville's job growth is occurring on the eastern edge of the city, outside CTS' core service area. When Gateway Medical Center built its new facility on Dunlop Lane near I-24, CTS extended a route in order to continue providing service to the new location. CTS is also monitoring the potential for expanding bus service to the city/county industrial park located east of I-24, where some interest has been expressed.

### ***General Transit Service and Capital Needs***

The Strategic Plan recommends implementing a "call-n-ride" service for two rapidly-growing areas that are currently outside the CTS service area: the Trenton Road area and the Rossvie Road corridor. This would be a reservation-based, curb-to-curb service in which passengers could call the driver to request a trip, and would be given an expected pick-up time. Passengers could also schedule a recurring subscription trip. Initially the service could use one of the agency's paratransit vans. Estimated annual cost of this service is \$200,000 for each area, according to the Strategic Plan. The "call-n-ride" service would be an interim step toward establishing a regular bus route for the area, allowing CTS to test the market in those areas and refine the schedule, stops, etc. that work best for future fixed-route service.

Service to the Trenton Road corridor would connect the high-density residential areas developing near the I-24/Trenton Rd. interchange (Exit 1) with major destinations in the vicinity of the I-24/Wilma Rudolph Boulevard interchange (Exit 4), including Walmart, Governor's Square Mall and Gateway Medical Center. It would also help link Route 2 (Tiny Town Rd.) with Route 7 (Wilma Rudolph/Gateway Medical Center) and Route 8 (Express along 101<sup>st</sup> Airborne Pkwy. and Needmore Road). It should be noted that the lack of shoulders and sidewalks for passenger boarding and alighting is a significant impediment to providing safe transit service for passengers as well as vehicles.

The proposed Rossvie Corridor service would help tie in future high-growth areas east of I-24 to the area's existing transit routes. It would also allow Route 7 (Gateway Medical Center) resources to be focused more on destinations along Wilma Rudolph Boulevard rather than being stretched to cover the



area around the new hospital. Clarksville’s proposed improvement of Rossview Road west of I-24 is expected to provide sidewalks for a portion of the corridor.

The Strategic Plan recommends some changes to the single hub and spoke pattern currently used for CTS routes. All buses currently leave and return from the downtown center on Legion Street, so passengers must first ride downtown in order to make a transfer to their final destination. As Clarksville continues to grow and its roads become busier, the additional time needed to travel downtown will significantly impair the level of service provided to passengers. To efficiently expand its fixed-route service to the northwest and northeast parts of the city, CTS will therefore need additional transfer points. In the northwest part of Clarksville, bus transfers are currently being made at a bus shelter in the parking area of a major shopping center on Fort Campbell Boulevard (US-41A). However, this facility needs to be upgraded to a hub with restrooms, trashcans, etc. for passengers to use instead of relying on the nearby stores for these amenities. The Strategic Plan also proposes a transfer hub and a circulator for the St. Bethlehem area, which has been a recent focus for expanded bus service.

**Table 4-15** below lists the proposed transit capital investments for the Clarksville MPO area for the period covered by this Plan. Funding for projects shown in the 2014-2016 timeframe is included in the MPO’s current Transportation Improvement Program (TIP).

**Table 4-15: Proposed Transit Capital Investments, 2014 to 2040**

Horizon	Project Description	Estimated Cost*
2014-2016	Vehicle Replacement – Demand Response (vans)	\$254,600
	Vehicle Replacement – Fixed Route (buses)	\$1,455,000
	Develop mini-hub (St. Bethlehem area)	\$750,000
	Support Equipment, Misc. Capital Expenditures and Transit Enhancements**	\$637,220
	Administrative & Maintenance Facilities	\$2,500,000
2017-2026	Vehicle Replacement – Demand Response – 10 vehicles, twice	\$1,000,000
	Vehicle Replacement – Fixed Route – 17 buses	\$6,100,000
	New Vehicles – Demand Response – 2 vehicles, replaced twice	\$100,000
	New Vehicles – Fixed-Route – 1 bus	\$300,000
	Support Equipment, Misc. Capital Expenditures and Transit Enhancements	\$6,000,000
2027-2035	Vehicle Replacement – Demand Response – 14 vehicles, twice	\$4,200,000
	Vehicle Replacement – Fixed Route – 18 buses	\$5,400,000
	New Vehicles – Fixed Route – 1 bus	\$300,000
	Develop mini-hub (northwest)	\$750,000
	Support Equipment, Misc. Capital Expenditures and Transit Enhancements	\$5,400,000
2036-2040	Vehicle Replacement – Demand Response – 14 vehicles	\$2,700,000
	Vehicle Replacement – Fixed Route – 14 buses	\$3,100,000
	Support Equipment, Misc. Capital Expenditures and Transit Enhancements	\$2,000,000

\* Costs shown are in 2012 dollars.

\*\* Includes projects such as bus shelters, signage, pedestrian access and walkways, bicycle storage facilities, etc.



## ADDITIONAL RECOMMENDATIONS

As the region grows, there are a number of ways in which other public agencies, as well as private ones, can collaborate with CTS to ensure that the transit system remains a viable option for a larger number of citizens:

Influencing Agencies	Actions to Support Transit
CTS City of Clarksville Clarksville Partnership	Maintain financial support for evening service, whose primary federal funding source has been merged into other programs. To further the region’s economic development goals, citizens need access to job training and other adult education.
Clarksville Partnership Clarksville-Montgomery County Regional Planning Commission	Encourage new employment and retail to locate in areas where CTS already provides services.
Clarksville-Montgomery County Regional Planning Commission	Ensure that streets in new subdivisions are designed to allow efficient circulation, and that they include usable sidewalks.  Include CTS in discussions with developers about incorporating locations for future bus stops, especially when a large-scale development is anticipated, or when the developing site is directly adjacent to a transit route.



## Bicycle and Pedestrian Transportation

The past few years have seen growing interest nationally in “Complete Streets,” the philosophy that a transportation corridor should provide safe travel for non-motorized users as well as cars, motorcycles and trucks. In many cases the facilities may physically share a route, while in some circumstances the non-motorized users may be better accommodated through a parallel facility. By making it safer and more convenient to walk and bicycle, the region can expand the transportation choices available to citizens while also promoting improved health. Key facilities are also important in providing safe access to the area’s transit routes.

The Clarksville region has made significant progress in executing the plans undertaken during the past decade. Highlights include implementation of several miles of greenways and trails, as well as the adoption of local “Complete Streets” policies to ensure sidewalks will be part of the area’s transportation network as the region grows. The challenge for the next 25 years is to create a fully integrated network that serves all bicyclists and pedestrians – regardless of whether the trip is purely recreational, or related to the functions of daily life. Local investment in the area’s greenways and trails can be leveraged further by integrating them with sidewalks and access to area transit routes.

### CLASSIFICATION OF BICYCLE/PEDESTRIAN FACILITIES AND USERS

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#### Types of Facilities

Bicycle and pedestrian facilities can be designed in a number of ways to provide adequate accommodations for non-motorized travel needs. **Table 4-16**, from the *AASHTO Guide to Bicycle Facilities*, provides guidance as to the type(s) of bicycle facilities that are most appropriate for specific roadway settings. The Kentucky Transportation Cabinet has also published a *Lane Configuration Guide to Support Safe Bicycling and Vehicular Travel*.

Below is a brief description of each type of facility:

**Shared Lane (or Shared Roadway)** – There is no designated separate area for bicycle traffic. Bicyclists travel in the same lane as motorized vehicles, and the lane is standard width. Shared lanes can either be marked or unmarked. All public roads are essentially unmarked shared-lane facilities, since under Tennessee and Kentucky state law, bicycles have the same rights (and responsibilities) as motorized vehicles. Shared lanes may be marked by posting “Share the Road” signs that help to promote motorist awareness of bicyclists in shared lanes. A recently adopted alternative for roads with a speed limit of 35 mph or less is to use the “sharrow” marking.



**Wide Outside Lane** – A type of shared lane in which the typical road lane is made wider (generally 14 feet instead of 11 or 12 feet). The additional width allows bicycles and motor vehicles to operate with fewer potential conflicts, since motor vehicles may be able to pass a bicyclist and maintain the required 3-foot distance while remaining in the same lane.



**Bicycle Boulevard** – A designated alternative to a roadway that has a high volume of vehicular traffic or does not have the desired space for a marked bicycle facility. A bicycle boulevard provides travel in the same direction, and offers access to the same destinations, as the road that has more traffic. It may be on a road that runs generally parallel to the major highway.



**Bike Lane** – An area of a roadway for the preferential or sole use of bicyclists, designated through the use of pavement markings, striping and special signing.

**Shared-Use Path** – A facility for all non-motorized traffic (both bicycles and pedestrians) that is physically separated from motorized vehicles. These facilities can be constructed adjacent to a street or highway with adequate safeguards so that motorized vehicles will not attempt to enter the path.

**Shoulder** – A shoulder serves the dual purpose of providing a safe area for bicyclists while lessening the chance that motorists have to enter the opposite lane to avoid bicyclists. Typically, shoulder widths are at least four feet and are not marked as a bike lane.

**Multi-Use Paths** – Multi-use paths can be paved or unpaved. They are intended for a variety of non-motorized users which may include bicyclists, walkers, runners, rollerbladers, and horseback riders. **Greenways** are a type of multi-use path developed within a natural corridor, whose purpose is for conservation as well as for non-motorized transportation and recreation.

**Sidewalks** – A sidewalk is a transportation facility built for use by pedestrians. Sidewalks are often located along roadways, separated with a curb and/or planting strip, and have a hard, smooth surface. All sidewalks must meet the requirements of the Americans with Disabilities Act (ADA), which requires public rights of way to be accessible to people with disabilities, including those with visual impairments.

The term “bicycle route” does not refer to a particular facility design. Rather, it describes an identified system for bicycle travel, designated under the authority of the appropriate jurisdiction. Bicycle routes for transportation purposes provide a continuous route between designated facilities, and are based upon whether bicycling is safe and convenient along a particular street.

## Types of Bicyclists

Bicycle travel can vary given the purpose of the trip and/or the proficiency of the rider. A 1994 report by the Federal Highway Administration (FHWA) outlines three general categories of bicyclists to assist highway designers in selecting the appropriate types of facilities.

**Group A bicyclists.** These are advanced or experienced bicyclists who generally use their bicycle as they would a motor vehicle. They typically prefer direct access to destinations with a minimum of detour or delay. These bicyclists are generally comfortable riding with traffic and prefer to have sufficient operating space on the travelway or shoulder.



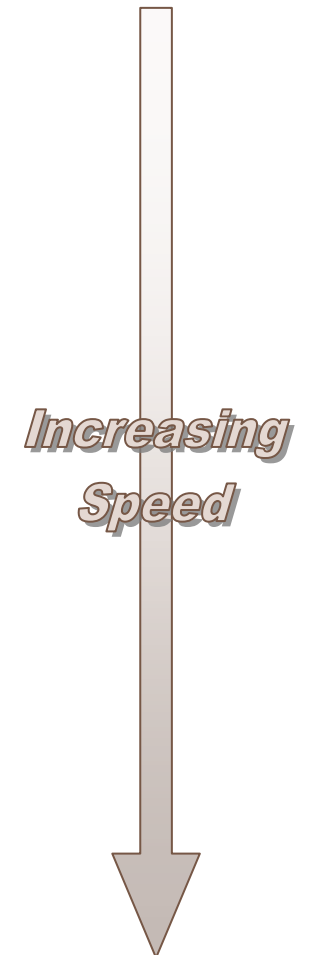
**Group B bicyclists.** This category includes basic or less confident adult riders. They prefer to avoid roads with fast and busy traffic unless there is ample separation between them. They are comfortable riding on neighborhood streets and separated pathways and prefer designated facilities such as pathways and striped bicycle lanes.

**Group C bicyclists.** Children riding on their own or with parents are included in group C. They may not travel as far as group A or B bicyclists but still require access to key destinations in their community (e.g. schools, recreational facilities or convenience stores). Appropriate facilities for group C bicyclists include



**Table 4-16: General Considerations for Bike Facility Types**

Bike Facility Type	Best Use	Motor Vehicle Design Speed	Traffic Volume	Classification or Intended Use
<b>Shared Lanes (unmarked)</b>	Minor roads with low volumes, where bicyclists can share the road with no special provisions.	Variable (rural or urban)	Generally less than 1,000 vehicles per day	Rural roads, or neighborhood/local streets.
<b>Bicycle Boulevards</b>	Local roads with low volumes and speeds, offering an alternative to, but running parallel to, major roads.	Use where the speed differential between motorists and bicyclists is typically 15 mph or less. Generally posted limits of 25 mph or less.	Generally less than 3,000 vehicles per day.	Residential roadways.
<b>Marked Shared Lanes</b>	Space-constrained roads with narrow travel lanes, or road segments for which bike lanes are not selected, due to space constraints or other limitations.	Variable. Use where the speed limit is 35 mph or less.	Variable. Useful where there is high turnover in onstreet parking.	Collectors or minor arterials.
<b>Shared Lanes (wide outside lanes)</b>	Major roads where bike lanes are not selected due to space constraints or other limitations.	Variable. Generally any road where the design speed is more than 25 mph.	Generally more than 3,000 vehicles per day.	Arterials and collectors intended for major motor vehicle traffic movements.
<b>Bike Lanes</b>	Major roads that provide direct, convenient, quick access to major land uses. Also can be used on collector roads and busy urban streets with slower speeds.	Generally, any roadway where the design speed is more than 25 mph.	Variable. Speed differential is generally a more important factor in the decision to provide bike lanes than traffic volumes.	Arterials and collectors intended for major motor vehicle traffic movements.
<b>Paved Shoulder</b>	Rural highways that connect town centers and other major attractions.	Variable. Typical posted rural highway speeds (generally 40-55 mph)	Variable.	Rural roadways; intercity highways
<b>OFF-ROAD FACILITIES</b>				
<b>Shared use path adjacent to roadway</b>	Adjacent to roadways with no or very few intersections or driveways. The path is used for a short distance to provide continuity between sections of path on independent rights of way.	Use where the adjacent roadway has high-speed motor vehicle traffic, such that bicyclists might be discouraged from riding on the roadway.	Use where the adjacent roadway has very high motor vehicle traffic volumes, such that bicyclists might be discouraged from riding on the roadway.	Provides a separated path for bicyclists and pedestrians. Intended to supplement a network of on-road bike lanes, bicycle boulevards, and paved shoulders. Not intended to substitute or replace on road accommodations for bicyclists, unless bicycle use is prohibited.
<b>Shared use path on independent right-of-way (greenway)</b>	Linear corridors in greenways, or along waterways, freeways, active or abandoned rail lines, utility right of way, or unused right of way.	N/A	N/A	Provides a separated path for bicyclists and pedestrians. Intended to supplement a network of on-road bike lanes, bicycle boulevards, and paved shoulders.



Source: AASHTO Guide to Bicycle Facilities (2012)



separated pathways, residential streets with low vehicle speeds and other streets with well-defined separation between bicyclists and motor vehicles.

No single type of facility meets the needs or desires of all bicyclists. Typically, the needs of group B and C are combined to create two broad classes of bicyclists for consideration by facility designers. In general, group A bicyclists are best served by providing sufficient operating space on all roadways. Group B and C bicyclists are better served by providing designated bicycle routes and/or separated pathways.

## EXISTING BICYCLE & PEDESTRIAN FACILITIES

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### Sidewalks

Sidewalks in the Christian County portion of the CUAMPO region are available on about 4 miles of major roadway. Fort Campbell Boulevard (US-41A) has sidewalks on the east side between the state line and Morgan Road, and on both sides between Morgan Road and Thompsonville Lane (KY-911). Pembroke-Oak Grove Road (KY-115) also has sidewalks between Thompsonville Lane (KY-911) and Nick Lane.

In Montgomery County, sidewalks are almost exclusively limited to downtown Clarksville and areas where development has taken place since 2004, when the City of Clarksville and Montgomery County adopted sidewalk requirements. The dramatic effect of these policies can be seen by looking at the number of miles of sidewalk and where they are available. Montgomery County has about 175 total linear miles of sidewalk – more than double the number recorded ten years ago. About 80% of the current sidewalk mileage is outside the downtown Clarksville area, in the area north of 101<sup>st</sup> Airborne Division Parkway (SR-374) where much of the recent growth has occurred. (See **Figure 4-21.**)



*Peachers Mill Road*

The City of Clarksville’s sidewalk ordinance requires sidewalks be built on both sides of the road as part of new development on any public road except in industrial parks, subdivisions where parcels are 5 acres or larger, or where the topography or nature of the road makes it unsafe for pedestrians. Montgomery County’s resolution requires sidewalks anywhere within the urbanized area, with the same exceptions. In addition, the city and county require their own road projects to incorporate sidewalks (except routine resurfacing), and they assume responsibility for sidewalk maintenance and repair in their respective jurisdictions.

Given the dynamic growth the CUAMPO region is anticipated to experience during the next 25 years, continued implementation of this local development policy will provide much safer transportation for those who walk. This includes people who need to walk from their home or workplace in order to reach a transit route.



## Multi-Use Paths / Greenways

The City of Clarksville has almost 10 miles of paths connecting to parks, schools, and the downtown riverfront. (See **Figure 4-21**.) These include:

- The **Upland Trail**, which runs about 1.7 miles from Valleybrook Park along Spring Street to College Street, where it connects to the Clarksville Riverwalk.
- The **Riverwalk** and its **North Extension** form a mile-long trail running along the Cumberland River and providing access to McGregor Park.
- The **Fort Defiance Trail**, located between Providence Boulevard and the Cumberland River, is a 0.85-mile trail which starts on the grounds of the Fort Defiance Civil War Park and Interpretative Center. At the end of the trail is a former Civil War outpost overlooking the Cumberland and Red Rivers.
- The **Clarksville Greenway** offers another 4.25 miles of pathway through wooded areas. A trailhead is located on Marys Oak Drive, with a marked pedestrian crossing from the Kenwood High School campus to allow users to cross East Pine Mountain Road. A second trailhead is located further east at the end of Pollard Road. From this point the Clarksville Greenway winds along the west side of the Red River for another 2.75 miles before ending at the sewer treatment plant just north of the downtown area.
- **Liberty Park**, recently opened, provides a 1.8-mile path around a 10-acre community fishing pond. The park is located on the south end of the downtown riverfront, bordered by Cumberland Drive and Zinc Plant Road.



The City of Clarksville is now starting Segment 1 of the **Clarksville River Trail**, which extends from the junction of the Cumberland and Red Rivers and continues north along the Red River for about a quarter-mile. With the addition of Segment 2, the path will reach the sewer treatment plant where the Clarksville Greenway currently ends.



Just outside the City of Clarksville, **Rotary Park** offers five miles of recreational hiking and biking trails in a nature preserve of more than 100 acres. The park is maintained by Montgomery County and is located at the US-41A Bypass (Ashland City Road) and E. Old Ashland City Road.

In the City of Oak Grove, there is a bicycle/pedestrian trail incorporated as part of a four-acre development near Walter Garrett Lane and US-41A. Additionally, the **Southern Lakes Bike Tour** route (which crosses the southern part of Kentucky) passes through the northeastern part of the CUAMPO area, following Bradshaw Road (KY-109) and Barkers Mill Road (KY-1881).

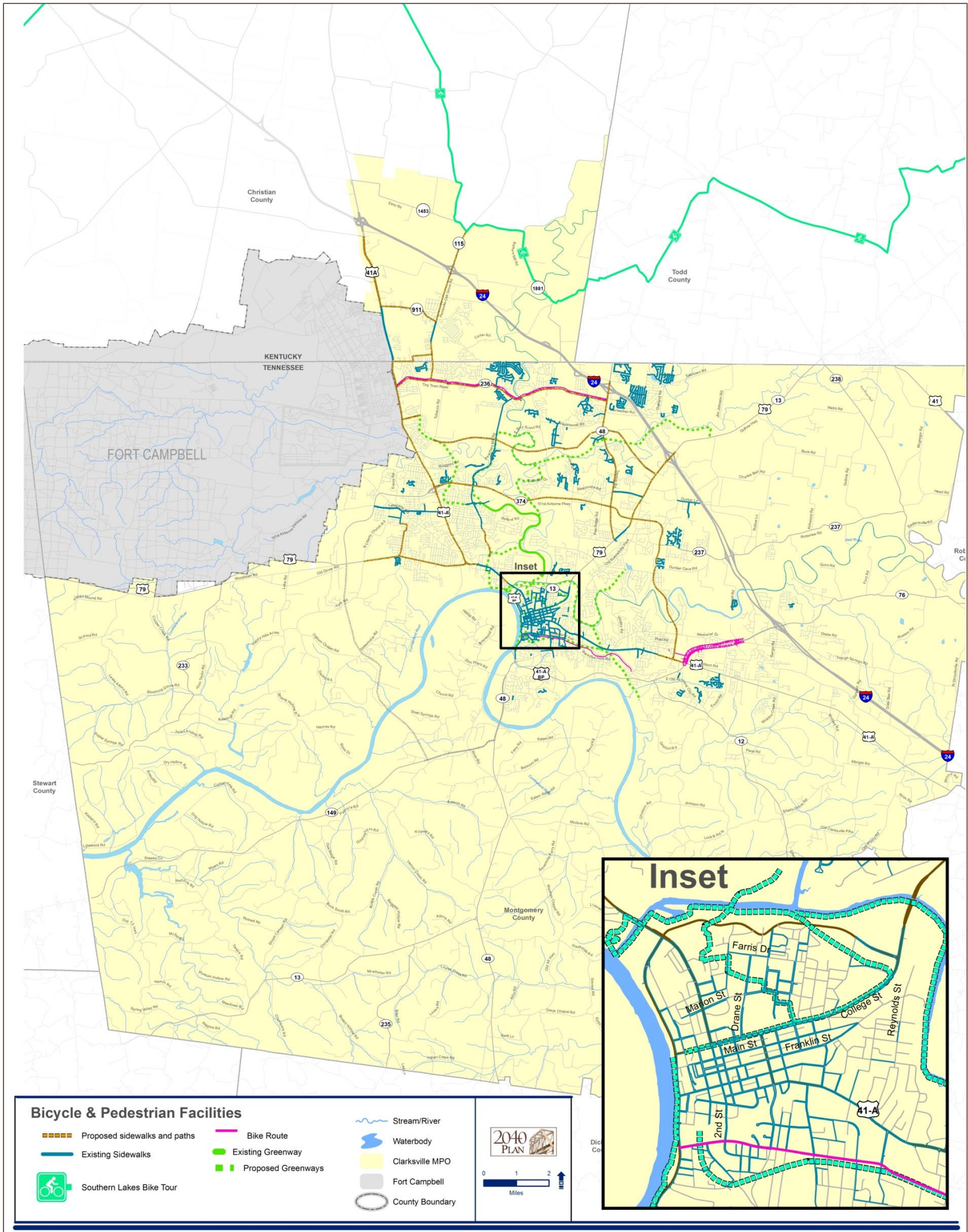
## Bicycle Routes

The City of Clarksville recently completed a *Downtown Parking, Streets and Network Study* in which many stakeholders expressed an interest in street designs that include marked bicycle lanes as well as on-street parking. **Table 4-17** shows the proposed projects that include bicycle/pedestrian facilities.





Figure 4-21: Bicycle and Pedestrian Facilities



**Table 4-17: Bicycle and Pedestrian Facilities recommended in Clarksville Downtown Parking, Streets and Network Study**

Street Name	From	To	Proposed Improvements
<b>Short-Term Recommendations (First 5 Years)</b>			
8th Street	College Street	Kraft Street	Stripe shared lanes for autos and bikes and allow on-street parking on west side
Farris Drive	Drane Street	8th Street	Stripe shared lanes for autos and bikes and allow on-street parking on either north or south side
2nd Street	College Street	Commerce Street	Replace western travel lane with angled back-in on-street parking and mark eastern travel lanes as shared lane for autos and bikes
	Commerce Street	Madison Street	Replace western travel lane with parallel on-street parking and mark eastern travel lanes as shared lane for autos and bikes
3rd Street	Madison Street	Commerce Street	Replace western travel lane with angled back-in on-street parking and mark eastern travel lanes as shared lane for autos and bikes
	Commerce Street	College Street	Restripe to include parallel on-street parking on east side, one northbound travel lane, and a 5' bike lane.
College Street	2nd Street	Riverside Drive	Stripe 7-foot bike lane on both sides
Marion Street	1st Street	8th Street	Stripe 4-foot bike lane on both sides
<b>Future Improvements (More than 5 Years)</b>			
Residential Sidewalk	All	All	Construct sidewalk on residential streets where none exist
Main Streetscape	Riverside	2nd Street	Construct sidewalk (Riverside to 1st), add bulbouts with trees and/or bioswales (Public Sq to 2nd)
Commerce Streetscape	3rd Street	University	Implement cross-section with on-street parking and sidewalks
Spring Streetscape	Adams	Union	Implement cross-section with on-street parking and sidewalks
Spring Streetscape	Commerce Street	Riverside Drive	Implement cross-section with on-street parking and sidewalks
Jefferson/West/Home Streetscape	Riverside	College Street	Implement cross-section with on-street parking and sidewalks
1st Streetscape	Commerce Street	Franklin	Implement cross-section with on-street parking and sidewalks
1st Streetscape	College Street	Marion	Implement cross-section with on-street parking and sidewalks
Union Streetscape	2nd Street	Madison Street	Implement cross-section with on-street parking and sidewalks
Kraft Streetscape	College Street	Riverside Drive	Reconstruct roadway including median and urban curb and gutter drainage with bike lanes and sidewalk.
College Streetscape	Ford	2nd Street	Implement cross section with wide outside shoulders



There are currently no dedicated bicycle lanes on roads in the CUAMPO area, although several are signed as bicycle routes. In the downtown Clarksville area, this includes Riverside Drive, Crossland Avenue and Old Ashland City Road; east of downtown, State Route 76 is signed between Memorial Drive and Madison Street (US-41A), as is Sango Drive; and further north, the entire length of Tiny Town Road (SR-236).

## BICYCLE/PEDESTRIAN NEEDS

Both the City of Clarksville and Montgomery County have established a system for objectively and quantitatively prioritizing sidewalk needs, illustrated in **Table 4-18**. Currently there is no similar program within the City of Oak Grove. As seen in the table, the prioritization system places some emphasis on filling gaps in the existing sidewalk network, and also recognizes the need for maintenance and repair.

**Table 4-18: Sidewalk Priority Indicator, City of Clarksville and Montgomery County**

Factor	Priority Rank (1-5)
In Central Business Improvement District (a designated pedestrian district)	5
<b>WITHIN A HALF-MILE OF THESE TRIP GENERATORS:</b>	
Elementary, Middle & High Schools	5
Colleges & Universities	4
Parks & Greenways	4
Public Housing	4
Multi-Family Development	3
Civic Centers (post office, library, government offices, etc.)	3
Commercial or Mixed-Use Development	2
Single-Family Development	2
<b>WITHIN A QUARTER-MILE OF THESE TRIP GENERATORS:</b>	
Transit Routes	3
Senior Housing	2
<b>OTHER FACTORS</b>	
Missing Segment (within ¼ mile of existing sidewalk)	5
Damaged Segment of Existing Sidewalk	4
Missing Segment (within ½ mile of existing sidewalk)	3
Available Right-of-Way	2
Daily Traffic Volumes >20,000 vehicles per day (vpd)	3
Daily Traffic Volumes 5,000 to 20,000 vpd	2
Posted Speed Limit > 40 mph	3
Posted Speed Limit 30-40 mph	2

Source: City of Clarksville and Montgomery County Sidewalk Ordinance/Resolution, 2004



**Table 4-19: Proposed Sidewalks or Multi-Use Paths**

Street Name	From	To	Miles	Roadway	Transit Route?	Build with Roadway Project?	Notes
KY-911 (Thompsonville Ln.)	US-41A	KY-115 (Pembroke-Oak Grove Rd.)	1.8	State		Yes; 2017-2026	
KY-115 (Pembroke-Oak Grove Rd.)	Nick Ln.	KY-400 (State Line Rd.)	0.4	State	Yes	Yes; 2017-2026	
KY-400 (State Line Rd.)	US-41A	KY-115 (Pembroke-Oak Grove Rd.)	1.5	State	Yes	Yes; 2017-2026	
KY-115 (Pembroke-Oak Grove Rd.)	KY-911 (Thompsonville Ln.)	Oak Grove City Hall	0.8	State		Yes; 2017-2026	
SR-236 (Tiny Town Rd.)	US-41A (Fort Campbell Blvd.)	SR-48 (Trenton Rd.)	7.0	State	Yes		Incorporate sidewalks as development occurs
US-41A (Fort Campbell Blvd.)	US-79 (Dover Rd.)	KY-400 (State Line Rd.)	6.7	State	Yes		
Peachers Mill Rd.	US-41A (Providence Blvd.)	Dale Terrace	1.4	Local	Yes		South of Peachers Ridge Rd., use proposed Heritage Park Trail
Jack Miller Blvd. Extension	Tobacco Rd.	Peachers Mill Rd.	2.0	Local		Yes; 2017-2026	Link to proposed Heritage Park Trail
East-West Connector Phase 1	US-79 (Wilma Rudolph Blvd.)	SR-48 (Trenton Rd.)	2.5	Local		Yes; 2017-2026	Link to proposed Spring Creek Trail
Providence Blvd.	Market St.	Quarry Rd.	0.2	State	Yes	No	Gap in existing sidewalk
Providence Blvd.	US-41A (Fort Campbell Blvd.)	Cedar Ct.	0.3	State	Yes	No	
KY-115/Pembroke Rd.	SR-236 (Tiny Town Rd.)	KY-400 (State Line Rd.)	0.8	State	Yes	No	Explore building in Fort Campbell rail right-of-way
US-41A (Fort Campbell Blvd.)	KY-911 (Thompsonville Ln.)	KY-117 (Herndon-Oak Grove Rd.)	2.2	State		No	Incorporate sidewalks as development occurs
US-41A (Madison St.)	Alfred Dr.	SR-76	0.9	State	Yes		
East-West Connector Phase 2	SR-48 (Trenton Rd.)	Peachers Mill Rd.	3.7	Local		Yes; 2027-2035	
SR-374 (101st Airborne Div. Pkwy.)	US-79 (Wilma Rudolph Blvd.)	US-41A (Fort Campbell Blvd.)	6.3	State	Yes *	No	* Express route, limited stops
SR-374 (Warfield/Richview Blvd.)	US-79 (Wilma Rudolph Blvd.)	US-41A (Madison St.)	5.5	State		No	
SR-48 (Trenton Rd.)	SR-374 (101 <sup>st</sup> Airborne Div. Pkwy.)	Tylertown Rd.	4.0	State		Yes; 2027-2035	
US-79 (Wilma Rudolph Blvd.)	SR-374 (101st Airborne Div. Pkwy.)	I-24/Alfred Thun Rd.	2.5	State	Yes	No	
SR-48 (Trenton Rd.)	SR-374 (101st Airborne Div Pkwy.)	US-79 (Wilma Rudolph Blvd.)	1.0	Local	Yes	Yes; 2036-2040	
KY-115 (Pembroke-Oak Grove Rd.)	I-24	KY-1453 (Elmo Rd.)	1.3	State		Yes; 2017-2026	
Donna Dr./Cunningham Ln.	US-79 (Dover Rd.)	Lafayette Rd.	1.8	Local	Yes		
US-79 (Dover Rd.)	Liberty Church Rd.	Dover Crossing Rd.	3.0	State	Yes		
New Connection	SR-76	SR-374 (Richview Rd.)	0.5	Local		No	



Funding for pedestrian and bicycle facilities can come from a variety of sources. Federal funds include the Transportation Alternatives Program grants (formerly called transportation enhancements); safety funds such as those used recently for pedestrian crossing improvements on Fort Campbell Boulevard; and the local Surface Transportation Program (L-STP) funds allocated by CUAMPO. The City of Clarksville also uses local funds from the Street Department budget to meet sidewalk needs.

Both the Clarksville-Montgomery County Greenway Master Plan and the Clarksville Smart Growth 2030 Plan have identified a future network of multi-use paths that will continue to build connections between neighborhoods and existing and future parks. This Plan incorporates those proposed paths, as well as additional facilities that may either be new sidewalks or additional multi-use paths, based on continuing unfulfilled needs from the 2035 Plan. The additional facilities recommended here will help ensure safe access to transit routes and connectivity across the Kentucky/Tennessee state line within the CUAMPO region. The proposed facilities are listed in **Table 4-19** and shown in **Figure 4-21**.

Many of these paths can be built as part of the roadway projects included in the 2040 Plan. In accordance with Federal Highway Administration requirements, TDOT, KYTC and the cities and counties in the CUAMPO region incorporate bicycle/pedestrian facilities into all federally-funded projects that reconstruct or widen a road. The Christian County portion of the CUAMPO will benefit greatly from this policy, since most of the area's significant roads are scheduled for improvements during the next 25 years. Certain major routes in Montgomery County will also have new bicycle/pedestrian facilities added during a planned roadway improvement, including:

- Trenton Road (SR-48),
- The East-West Connector, and
- Warfield Boulevard (SR-374).

Along Tiny Town Road (SR-236), local development policies will ensure that sidewalks are built as part of each development that occurs along the corridor. The City of Oak Grove should consider a similar policy to implement sidewalks along the section of Fort Campbell Boulevard (US-41A) between Thompsonville Lane (KY-911) and Herndon-Oak Grove Road (KY-117).

This leaves nearly seven miles of bicycle/pedestrian facilities still needed for the Fort Campbell Boulevard (US-41A) corridor, from Providence Boulevard to the Tennessee/Kentucky state line. This corridor serves transit riders for Route 1/Fort Campbell, which is among the routes with highest ridership. No further widening is planned for this 7-lane highway, so the addition of bicycle/pedestrian facilities will likely require standalone, retrofit projects.

Similar needs exist on other transit routes to varying degrees. Outside Clarksville's central business district, only Routes 5 and 6 (Hilldale and Madison Street) have sidewalks along even one-third of their routes. It is recommended that Clarksville and Montgomery County evaluate sidewalk needs for these two routes, along with Route 3 (Cunningham Loop) and Route 7 (Wilma Rudolph/Gateway Medical Center). These routes rely on "critical corridors" identified in previous plans for sidewalk improvements: Wilma Rudolph Boulevard (US-79/SR-13), Madison Street (US-41A), and Fort Campbell Boulevard (US-41A).

As noted earlier, the region has made admirable progress in the past decade toward its goals for non-motorized travel. This is significantly enhancing the quality of life and perceived attractiveness of the area. To maintain mobility and expand transportation choices over the next 25 years, it will be important to create a network that can serve both recreational and "purposeful" trips.



## Freight Movement and Intermodal Connectivity

To plan a regional freight transportation network that promotes economic prosperity requires some understanding of the area's relative economic strengths, target industries, and development goals.

Clarksville-Montgomery County economic development officials conducted a labor market assessment in 2012, focused on a 10-county laborshed, that identified the region's target industries as automotive, distribution and logistics, alternative energy technologies, and business process outsourcing. This is generally consistent with the current and emerging composition of the regional workforce. As discussed in Chapter 2, five manufacturers are on the list of the region's ten largest private-sector employers, including some who make automotive products.

In fact, the region's economy is classified as part of the "Machinery Belt" in a recent report by the Brookings Institution, meaning a higher than average percentage of its manufacturing jobs involve primary metals, fabricated metal products, machinery and motor vehicles and parts. Data also shows a very high tonnage of stone, gravel and sand, clay and ceramics are being shipped to, from and within the area. With these commodity types, there are promising opportunities to further develop the region's intermodal capabilities.

Further development of intermodal facilities could have several benefits to the area: first, businesses would have a greater number of options to ship and receive their goods, which is likely to generate cost-savings to them from greater efficiency as well as more competitive pricing. Second, having multiple options means the region's freight transportation network will experience less impact in the face of an unforeseen disruption, whether it be a natural disaster or other catastrophe that closes a highway for several weeks, or a national labor strike such as the one that occurred several years ago with United Parcel Service. Finally, enhancing barge and rail transportation has the potential to divert some truck traffic from an increasingly congested interstate corridor. As confirmed by the freight analysis performed by TDOT in its recent I-24 Corridor Study, the actual number of trucks diverted is not expected to be large, and the roadway capacity on I-24 would quickly be filled by new traffic. However, the benefit of diverting even a small number of trucks can be significant for highway operations and reduces wear on pavement and bridges.



In addition to the bulk commodities described above, the Clarksville region ships and receives large volumes of goods at its distribution and warehousing facilities, including a Walmart distribution center located off Fort Campbell Boulevard (US-41A) just north of the City of Oak Grove. Except for Nashville, Clarksville is also the largest population center within a 50-mile radius, and has the major retail, entertainment and services that would be expected for the fifth largest metropolitan area in Tennessee. For many of the goods associated with these activities, the speed and reliability of shipments is often the most important factor affecting transportation decisions, along with flexibility in delivery location.

As a result, it is not surprising that the lion's share of freight movement occurs by truck, as discussed below, and that trucks are expected to continue to dominate the transport of goods for the next 25 years. It is therefore important to continue investing in a balanced regional freight network, and to manage congestion on the major corridors that trucks use to reach I-24.



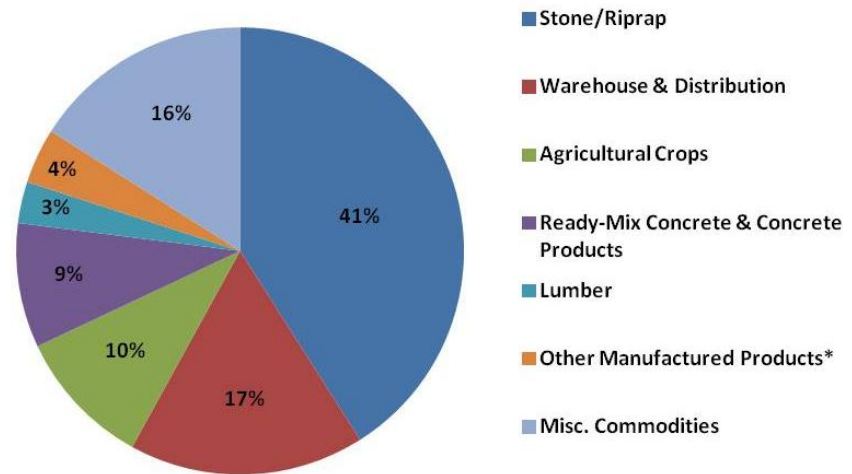
## REGIONAL COMMODITY FLOWS

The primary source of information for freight planning is the U.S. Census Bureau’s Commodity Flow Survey (CFS), which is conducted every five years. Data from the 2012 survey will not be released in time for use in the 2040 Plan, so the most recent available survey is 2007. The information presented here is for the same year, from a database purchased by TDOT that provides a greater level of geographic detail than the CFS. Once the 2012 data is released, this analysis may be revisited if the results indicate unexpected differences in the composition of the region’s commodity flows. However, the impact of the global recession has served to dampen some of the change that might otherwise have occurred in a five-year period. While the CUAMPO area has experienced healthy growth in its employment base, most of the new jobs are either in sectors that are not heavily freight-dependent, or they are the result of expansions by existing manufacturers. The most important changes in commodity flow would have been expected from the opening of Hemlock Semiconductor, which manufactures solar panel components. However, HSC’s plans to open a facility in the Clarksville area have been adversely impacted by international trade policy, and the commissioning of the plant (beginning of production) has been delayed indefinitely until international market conditions change.

**Figure 4-22: Commodities Shipped By Truck From the Clarksville Region, by Weight**

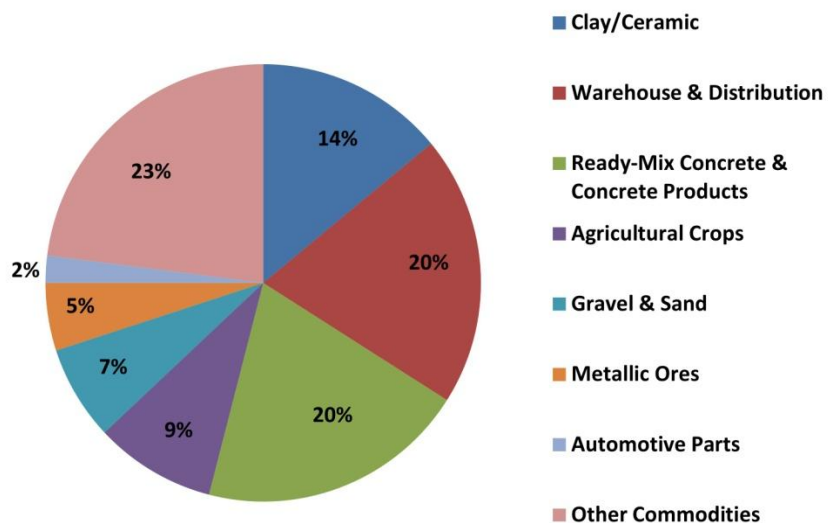
Source: IHS Global Insight, 2007

\* Includes ceramic tile, automotive parts, fabricated metal, and aluminum and alloys.



**Figure 4-23: Commodities Shipped By Truck to the Clarksville Region, by Weight**

Source: IHS Global Insight, 2007



As noted, trucks transport by far the greatest share of freight in and out of the CUAMPO region, carrying nearly 60% of all commodities. When in-bound and out-bound freight is examined separately, a somewhat different picture emerges. More than 90% of the commodities shipped out of the region are carried by truck, with water and rail carrying a combined total of less than 5%. However, trucks carry only 27% of commodity tonnage into the region. Drayage transport accounts for most of the rest, primarily coal shipped by barge from Stewart County and then trucked to its final destination.

FHWA's current Freight Analysis Framework (FAF3) data was also used to examine daily commercial truck flows through the CUAMPO planning area for the years 2007 and 2040. The FAF indicates a general continuation of current trends for this area, with no significant change in the proportion of long-distance trucks. Two locations are projected to see above average truck growth: the I-24 interchange at Fort Campbell Boulevard (US-41A) associated with the primary truck route to and from the northwest into Clarksville and the freight entry point for Fort Campbell, and SR-76 west of I-24, associated with the primary truck route to and from the southeast into Clarksville. Both I-24 interchanges will see above average truck growth due to industrial growth in the Clarksville-Montgomery County Industrial Park.

This high-level picture of current freight conditions, as well as opportunities based on the nature of the regional economy, provides context for the following sections on rail and water infrastructure.

## Rail

Rail transportation provided in the CUAMPO area is exclusively freight, and is served by two railroad systems as shown in **Figure 4-24**.

### EXISTING RAIL

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The Surface Transportation Board (STB) separates commercial railroad companies into three classes based on revenues for each of the railroads. The largest railroad systems are classified as Class I railroads, followed by Class II railroads, which are mid-small sized companies (also known as short-line railroads), and Class III railroads, which are small sized companies. In the MPO area, there is one Class I Railroad (CSXT) and one Class II (short-line) Railroad (R.J. Corman). There is also a National Defense (ND) Railroad operated by the U.S. Army between Hopkinsville and the Fort Campbell military installation. This railway line is not discussed further since rail service is exclusively for the Fort Campbell Military Reservation and is not provided to private businesses along this line.

#### Class I Railroad – CSX Transportation

CSX Transportation (CSXT) operates about 21,000 miles of track in 23 states in the eastern U.S. In Tennessee, CSXT operates more than 1,500 miles of track. In addition to the mainline on the northeast edge of the CUAMPO area, CSXT operates lines from Nashville southward to Birmingham, Alabama, and from Nashville westward to Jackson and on to Memphis. CSXT also operates a north-south line from Jellico, at the Kentucky/Tennessee border, southerly to Knoxville and into Ocoee, Tenn., near the Georgia border. As of 2011, CSXT reported more than 1,800 employees in Tennessee.

The CSXT rail line serving the area runs approximately 14 miles northeast of Clarksville with both the region's shortline railroad and the Fort Campbell military rail line connecting to the CSXT railroad. (See **Figure 4-24**.) CSXT operates trains along this line from Chicago to Jacksonville, through Louisville, Nashville and Atlanta. CSXT is capable of running full double stack clearances and does not currently





have any bridge clearance problems in Tennessee. However, it projects significant congestion by 2015 on its busy Chicago-Jacksonville mainline route which passes just to the northeast of the CUAMPO area. CSXT has indicated that it expects to construct a number of sidings to allow increased passing.

### **Class II Shortline Railroad - R.J. Corman Railroad Company (RJCM)**

Shortline and regional railroads are generic terms referring to small and middle-sized railroads respectively. Shortline and regional railroads are an important and growing component of the railroad industry. Today, they operate and maintain 29 percent of the American railroad industry's route mileage, and account for nine percent of the rail industry's freight revenue and 11 percent of railroad employment. In Tennessee, shortlines comprise about one-quarter of the operated rail mileage.

The major railroad in the CUAMPO area is the R.J. Corman Railroad (RJCM), a short-line railroad which was purchased from CSX in 1987. It connects with CSXT's Chicago-Jacksonville mainline at a point about 14 miles northeast of Clarksville in Guthrie, Ky., and also connects with the CSX line in Memphis, Tenn. The line passes through the CUAMPO region beginning in Todd County, Ky. at the Kentucky/Tennessee state line, and crossing Montgomery County on a northeast-southwest axis. (See **Figure 4-24.**)

Service within Montgomery County includes a spur to the site of Hemlock Semiconductor, Inc. and the Clarksville-Montgomery County Industrial Park where R.J. Corman maintains a transfer warehousing and serves several industries. The line then crosses the Cumberland River on the south side of downtown Clarksville on its way to TVA's coal-fired power plant in Cumberland City, Tenn. Current commodities shipped include aluminum, steel, wallboard, lumber, zinc, grain, paper and chemicals. Key customers in the CUAMPO region include Metalpha Bridgestone Tire (steel), Nyrstar Taylor Chemicals (zinc), Orgain Building Supply (lumber) and Florim USA (tile).

### **Shortline Improvements**

#### ***Cumberland River railroad bridge***

Using federal transportation enhancement funds received by Montgomery County in 2009 and 2010, the Montgomery County Rail Authority is performing rehabilitation (painting and lighting) of the 1903 rail bridge (owned by R.J. Corman Railroad) on 1859 piers over the Cumberland River. This unique swing railroad bridge is on the National Register of Historic Places and is an iconic structure in downtown Clarksville. The aesthetic improvements are intended to aid downtown riverfront revitalization efforts.

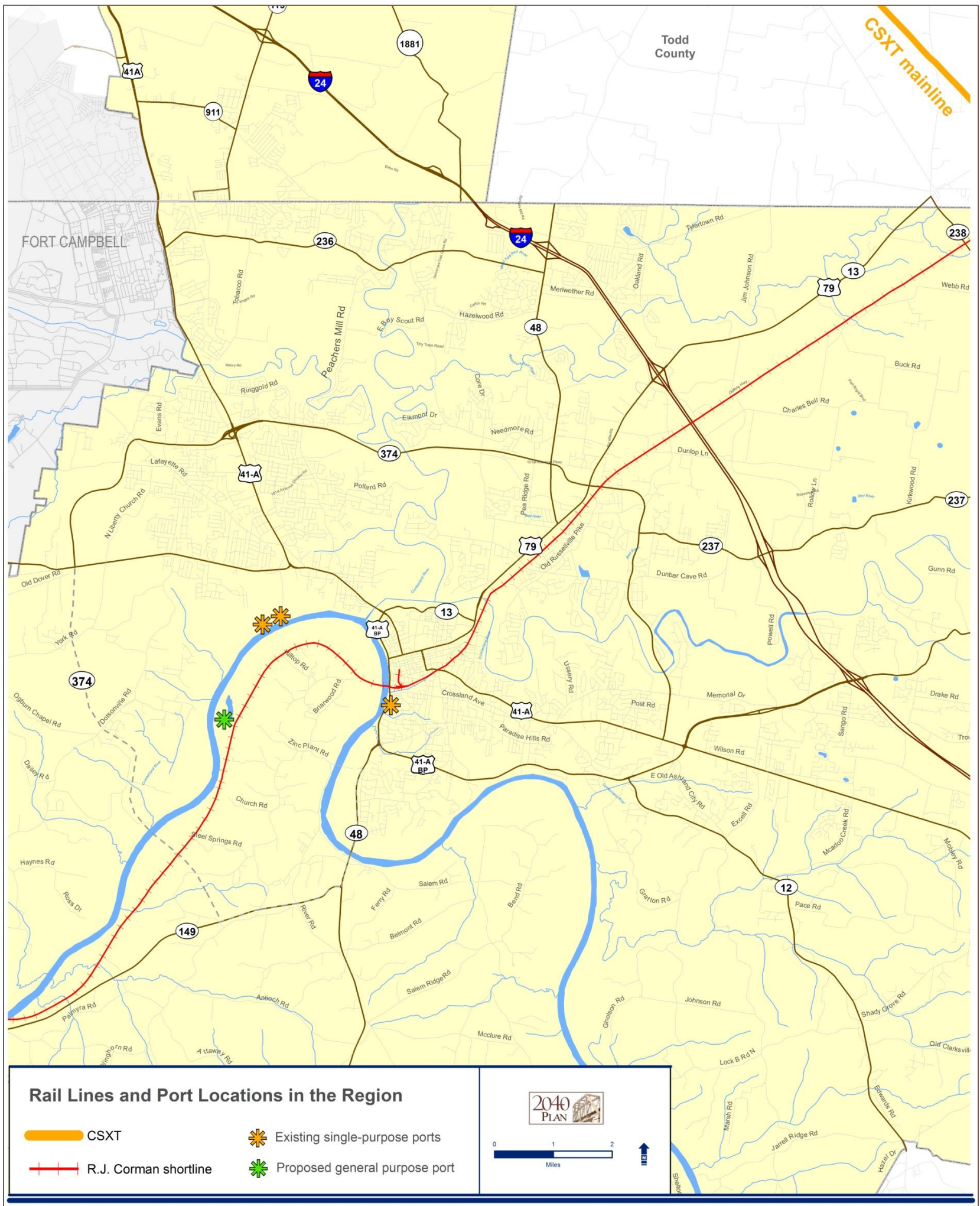
#### ***Appalachian Shortline Rail Project***

Many of the shortline track deficiencies identified in CUAMPO's 2035 Plan are being addressed through federal discretionary grant funds received in 2010 through the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant funds. A total of \$17.6 million was awarded to R.J. Corman for rehabilitation of hundreds of miles on five unconnected shortline railroads in Kentucky, Tennessee and West Virginia. Of that amount, \$2.8 million was designated for Tennessee to rehabilitate rail lines in Montgomery and Stewart counties, and to construct a new switching terminal in Memphis. The rehabilitation work includes rail, ballast, crossties, grade crossing improvements, and bridge work. R.J. Corman is also performing about \$11.3 million in work on its lines in Kentucky, including track rehabilitation in Todd County, Ky. where the line crosses into the CUAMPO area at Guthrie.

R.J. Corman, working with the Montgomery County Port Authority and Montgomery County Rail Authority, has also proposed a new intermodal general commodities terminal in Clarksville on the Cumberland River at the end of Zinc Plant Road in Cumberland Heights. For further discussion, see the Waterways section later in this chapter.



Figure 4-24: Rail Lines and Ports in the Region



## FUTURE RAIL TRANSPORT

### Freight Rail

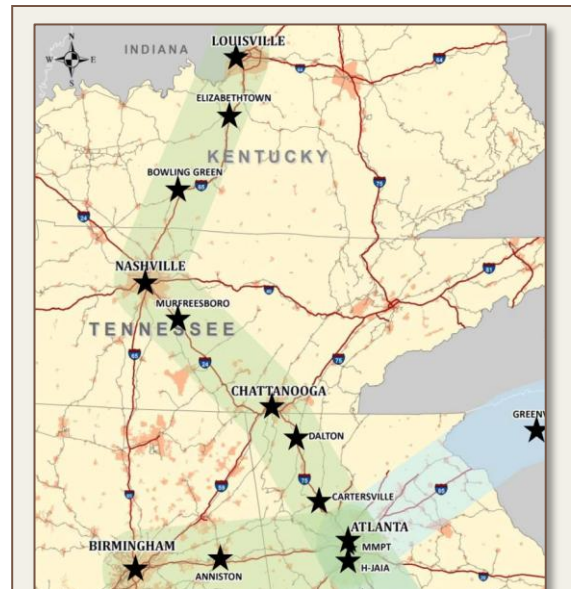
Rail freight traffic is forecasted to grow exponentially over the next 25 years. A renewed interest in rail is also occurring due to the forecast of future highway congestion as well as an anticipated increase in the cost of fuel. As the number of trains and trainloads increases, the Clarksville region must ensure that existing railroads are adequately maintained, that needed system improvements are made (especially those involving safety), and that the land uses which are located in or around the railroad are compatible with rail services.

State rail plans for both Kentucky and Tennessee were last adopted more than 10 years ago, although individual studies continue to be performed for proposed rail projects in specific regions. New requirements being issued by the Federal Rail Administration will require all states to have a rail plan conforming to certain guidelines in order to continue receiving federal funds. Due to the new federal policies, and the heightened public interest in rail, it can be anticipated that both states will update their rail plans in the next two to three years. CUAMPO should participate in these efforts to ensure that planned state investments include the maintenance/expansion of the region's freight rail infrastructure. In addition, as significant highway improvements are made in areas with at-grade rail crossings, future traffic growth should be considered to determine whether projects should be designed to incorporate a grade separation.

### Passenger Rail

#### High Speed Passenger Rail Service

Both Kentucky and Tennessee participated in a recent tri-state study of a potential high speed passenger rail corridor from Atlanta to Louisville, led by the Georgia Department of Transportation (GDOT). The intercity service would be a link in a longer connection between Atlanta and Chicago, passing through Chattanooga, Nashville and Bowling Green. The study concluded that the line was cost-feasible based on projected revenue from passenger fares, although the ratio was not quite as favorable as two other projects that GDOT evaluated (Atlanta to Birmingham, Ala., and Atlanta to Jacksonville, Fla.) The study used a "representative" alignment that generally follows the Interstate 65 corridor between Nashville and Louisville, with a potential station in Bowling Green, Ky. CUAMPO area residents would



**Figure 4-25:** Potential high speed passenger rail service linking Atlanta and Chicago, passing through Chattanooga, Nashville, and Bowling Green. (Map from study of the Atlanta to Louisville corridor, GDOT, June 2012)

This line would connect the Midwest and Southeastern networks shown in the Federal Railroad Administration's High Speed Rail Strategic Plan (April 2009), shown in **Figure 4-26** below.



most likely access the future intercity rail service by driving or taking regional transit to the Nashville station.

The proposed Atlanta to Louisville route is likely to receive attention at some future point, since it would provide the connection between planned intercity rail service in the Southeast and the Midwest. (See **Figure 4-26.**) In a recent evaluation of passenger rail corridors performed independently by TDOT, this line emerged as the one with the best near-term potential for high speed service. Practically speaking, the project's timeline will likely be driven by the degree of interest from the Atlanta region. The primary focus in the Southeast for the next decade will likely be the proposed high speed rail service linking Atlanta to the Washington, D.C. region via Charlotte and Raleigh, NC, which connects much larger population centers and includes a link where North Carolina has already been operating successful passenger rail service for many years.

### ***Regional Commuter Rail Service***

Over the past 15 years, interest in commuter rail service connecting the Clarksville and Nashville regions has continued to grow. The overwhelming success of the commuter bus service launched in 2012 suggests the implementation of a high capacity transit service, such as commuter rail, may be feasible within the timeframe of the 2040 Plan. Discussion of the proposed high-capacity transit service between Clarksville and Nashville can be found in the Transit section of Chapter 4.

## **Waterways**

The Cumberland River is the only navigable waterway for freight transport within the CUAMPO area. The Cumberland River is maintained by the United States Army Corps of Engineers as part of the inland waterway system. Approximately 37 miles of the Cumberland River traverses Montgomery County with a maintained channel depth of nine feet.

### **CURRENT CONDITIONS**

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Currently, four sites in the CUAMPO region operate as single-purpose port facilities along the Cumberland River. (See **Figure 4-24.**) Each facility, on the land side, is exclusively served by truck transport with the exception of one location (Nystar) which has rail access.

- ***Ingram Materials, Inc.*** – This site is located off South Riverside Drive at river mile 126.7 on the right bank and consists of a sand terminal. Water depth at the facility is nine feet with berthing space of 200 feet. Open storage at the rear of the facility has a capacity for 26,000 tons of sand.
- ***Nystar Taylor Chemicals*** – This site is off Zinc Plant Road at river mile 122.2 on the left bank in the Cumberland Heights area. Water depth at the facility is 11 feet with berthing space of 1,000 feet. A storage building at the rear of the facility has a capacity of 15,000 tons of zinc concentrate. One 6-inch pipeline extends to the wharf from five steel sulfuric acid storage tanks at the rear of the facility with a capacity of 1,430,000 gallons. One surface railroad track serves the location, which connects with R.J. Corman Railroad. Nystar has offered a long-term lease to R.J. Corman for a proposed expansion of this port, discussed later in this section.



- **Winn Materials, Inc.** – This site is off Barge Point Road south of the “Dover Triangle” area, or the area formed by Dover Road, Dover Crossing, and Fort Campbell Boulevard. The facility is at river mile 123.7 on the right bank. The primary purpose of this facility is to load crushed limestone onto barges and unload sand. Other commodities that are handled include sheet steel coils, fertilizer, lumber, grain, and other bulk steel and metal products. Water depth at the facility is 22 feet with berthing space of 390 feet.



- **Hopkinsville Elevator Company Inc.** – This site is also located off Barge Point Road, at river mile 123.9 on the right bank. The primary purpose of this facility is the shipment of grain products. Water depth at the facility is 22 feet with berthing space of 800 feet. Grain elevators are located at the rear of the facility, consisting of four steel tanks with a capacity of 216,000 bushels.

## FUTURE WATERWAYS TRANSPORT

The geographic location of the Clarksville area along the Cumberland River, which is part of the Mississippi Inland Waterway System, affords the region the opportunity to attract increased water transport over the next 25 years.

As depicted in **Figure 4-27**, the Clarksville region is centrally located along the Mississippi Inland Waterway System. In addition, the region is well served by the interstate highway system (I-24) and rail transportation, with one railroad running parallel to the river throughout the western portion of the region. These factors give a competitive edge to the region as future barge transport increases throughout the inland waterway system. As capacity issues occur in other metropolitan areas along the Cumberland River, the Clarksville area will be strategically positioned to accommodate increases in barge transport, given the relative level of excess capacity currently available.

### Port Service

The region has had extensive discussions for many years about the development of a public port for the Clarksville area, including studies that evaluated different sites. Surveys of local industries performed for those studies indicated sufficient

**Figure 4-27: Mississippi Inland Waterway System**



Source: Intermodal Port Development Study, Clarksville-Montgomery County Regional Planning Commission



interest and cargo volume to support a general commodities terminal, with goods split about evenly between in-bound and outbound shipments.

The nearest existing general purpose barge facilities are currently 45 miles away in Nashville. As a result, several companies in the Clarksville area currently use trucks on I-24 to transport bulk commodities to the Nashville barge terminal for loading and unloading. The University of Tennessee's Center for Transportation Research recently estimated as much as 1.6 million tons annually are carried by these cross-haul traffic movements.

#### ***Proposed Cumberland River Regional Waterway Facility***

The R.J. Corman Railroad Company, with the support of the Montgomery County Port Authority and Montgomery County Rail Authority, has proposed a new intermodal general commodities port on the Cumberland River at the end of Zinc Plant Road in Cumberland Heights. (See **Figure 4-24** for the general location.)

The project would modify and expand Nystar Taylor Chemical's docking facilities (on the Cumberland River at Mile 122) into an intermodal general commodities terminal, including construction of a rail spur from the R.J. Corman shortline to serve the port. Nystar has offered a long-term property lease for the facility.

Truck access to most of the region's ports will be improved by the highway projects currently underway and/or recommended in the 2040 Plan. The planned extension of State Route 374, shown in relation to existing rail and ports in **Figure 4-24**), could provide an alternate route for trucks to travel to/from the west and south without passing through the congested portions of central Clarksville. Widening is also planned for State Route 149 east of the junction with proposed SR-374, and for State Route 48/13 across the Cumberland River north to Zinc Plant Road near the US 41A Bypass (through south Clarksville), setting the stage for increased industrial access to this area for intermodal freight service.

Trucks traveling to and from western I-24 still do not have a particularly desirable route. US-41A (Fort Campbell Boulevard) is a seven-lane highway providing north-south access to the I-24/US-41A interchange in Kentucky, but it is lined with commercial development with no access control. The alternative route to and from western I-24 is 101<sup>st</sup> Airborne Division Parkway (US-79/SR-374) -- east of US-41A (Fort Campbell Boulevard) -- and Wilma Rudolph (US-79) to I-24 Exit 4. Although four-lane divided 101<sup>st</sup> Parkway highway is access-controlled, it is projected to be at level of service E by 2026 partly because the proposed East-West Connector which would otherwise serve local traffic will not be complete. (This underscores the economic importance of the East-West Connector in serving local traffic generated by continuing residential growth south of SR-236 (Tiny Town Road).) Wilma Rudolph Boulevard (US-79/SR-13) is a seven-lane principal arterial without controlled access, and is lined with regional commercial uses.

Trucks traveling to and from eastern I-24 use SR-76 (Martin Luther King Jr. Boulevard) from Exit 11 to Madison Street (SR-112) and SR-76 continuing as the US-41A Bypass to Riverside Drive at the intersection of SR-48/13 north of Zinc Plant Road.



## Aviation

The CUAMPO region contains one public airport, the Clarksville Regional Airport (airport location ID CKV), which is a general aviation airport that supports minimal freight air traffic. The nearest airport with commercial service is the Nashville International Airport (airport location ID BNA), approximately 60 miles southeast of Clarksville, via I-24. Outlaw Field is governed by the Clarksville-Montgomery County Regional Airport Authority, which has responsibility for the maintenance of the airfield.

### AIRPORT LOCATION AND ACCESS

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The Clarksville Regional Airport is accessed via Outlaw Field Road, which connects with Tiny Town Road (SR-236) to the north, Airport Road to the west and Jack Miller Boulevard to the south. Tobacco Road borders airport property to the east and intersects Tiny Town Road (SR-236), Jack Miller Boulevard, and US-41A.

The airport is located about 7 miles from I-24 via Tiny Town Road, which connects to Trenton Road (SR-48) about one mile from the I-24/Trenton Road (Exit 1) interchange. Airport Road also connects to US-41A (Fort Campbell Boulevard) approximately 0.6 mile to the west of Outlaw Field Road.

Public transit serves Outlaw Field via Route 1 (Fort Campbell), and Route 2 (Tiny Town), which operate Monday through Saturday on 60-minute headways. The two routes are staggered by 30 minutes, effectively creating a 30-minute headway for riders who use the portion of the routes that run between Fort Campbell Gate 4 and the downtown transfer center.

From the air, Outlaw Field is approximately 4.0 nautical miles southeast of the Fort Campbell Army Airfield and 4.0 nautical miles northeast of the Sabre Army Heliport, which are just west of the MPO area. Fort Campbell's primary runway is 05/23 (northeast/southwest orientation). Outlaw Field is about 1.5 miles east of the R-3702A-B Restricted Airspace areas, two miles southeast of the Campbell 1 Military Operations Area (MOA) and also well within the A-371 Alert Area.

### AIRPORT CHARACTERISTICS

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According to the most recent Airport Master Record, the airport currently has two asphalt runways. Each runway is constructed of asphalt and both are in good condition.

Runway 17/35 is the main runway with a length of 6,000 feet, width of 100 feet, and rated at 60,000 pounds single-wheel load and 90,000 pounds dual-wheel load. This runway is equipped with High Intensity Runway Lights (HIRL) and threshold lighting which are automatically activated at dusk. Runway 17/35 is equipped with a 2-light Precision Approach Path Indicator (PAPI) at both ends, as well as non-precision runway markings. Runway 35 is also equipped with a Medium Intensity Approach Lighting System (MALS).

Runway 5/23 has a length of 4,000 feet, width of 100 feet, and is rated at 40,000 pounds single-wheel load and 60,000 pounds double-wheel load. This runway is not equipped with runway lighting.

Approaches available to pilots include GPS Rwy 17, GPS Rwy 35, Localizer Rwy 35, and VOR Rwy 35. Because of the close proximity of Outlaw Field to Fort Campbell, arrival and departures are controlled (once airborne) by Fort Campbell Air Traffic Control.



The number of based aircraft has declined somewhat over the past several years, totaling 33 aircraft in 2012 (Table 4-20). The airport had an average of 85 daily aircraft operations in 2012 (Table 4-21).

**Table 4-20: Based Aircraft by Type, 2012**

Based Aircraft By Type	
Aircraft Type	Number of Aircraft
Single Engine	25
Multi-engine	7
Jet Aircraft	0
Helicopter	0
Ultralights	1
<b>Total</b>	<b>33</b>

Source: AirNav, LLC, 2013

**Table 4-21: Average Daily Aircraft Operations, 2012**

Average Daily Aircraft Operations*	
Local General Aviation	41
Transient General Aviation	30
Military	11
Air Taxi	3
Commercial	0
<b>Total Daily Aircraft Operations</b>	<b>85</b>

\* For 12 month period ending May 10, 2012.

Source: AirNav, LLC, 2013



A new 15,000 square-foot terminal, completed in 2012, is expected to raise the airport's profile and attract more general aviation and corporate traffic to the Clarksville region. (Photo credit: Bill Larson)

A new airport terminal was completed in 2012 for \$4.85 million to serve private boardings at the airfield and houses the offices of the Clarksville-Montgomery Airport Authority. Matching FAA funds, the Airport Authority is resurfacing its tarmac, runways and taxi-ways, and improving fences and access to the new fire station, for \$3 million in FY 2014. An update to the Outlaw Airport Master Plan is currently underway.

## COMMERCIAL PROVIDERS

The airport currently has two providers of commercial aeronautical services. The Clarksville Jet Center is the airport-operated fueling business, which currently provides fueling services, tie-down services, and marshaling/parking services. Of these services, fueling provides the main source of revenue, although the profit margins are relatively small..

Commercial aeronautical services are also provided by Outlaw Aircraft Sales, Inc. (formerly Montgomery County Aero). This company is authorized to provide aircraft maintenance and repair services; avionics, instrument, and propeller maintenance, repair, or overhaul service; aircraft rental/flight training; aircraft





sale and leasing; and operation of a commercial hangar. However, the company currently provides aircraft maintenance (avionics, instrument, and propeller maintenance, repair, or overhaul service), flight instruction with two instructors, and aircraft and aircraft parts (from engine to instrumentation) sales (both onsite and online).

The airport currently does not have a full-service fixed-base operator (FBO), which would typically provide maintenance, flight instruction, aircraft rental, aircraft charter, and sales of aircraft, aircraft parts, and pilot supplies.

## AVIATION NEEDS

The Airport Authority recently completed a Strategic Plan developed with input from stakeholders including Airport Authority members, local elected officials, the area’s largest employers, and surveys collected from users of the airport as well as general members of the community. It also included a review of the airport’s finances, lease agreements, rules and regulations and minimum standards.

The plan’s SWOT analysis (which identified strengths, weaknesses, opportunities, and threats) is summarized below in **Table 4-22**.

**Table 4-22: Summary of SWOT analysis from 2012-2022 Airport Strategic Plan**

STRENGTHS	
VOR (VHF Omnidirectional Range) navigation and ASOS (Automated Surface Observing System) on field	A VOR on-airport allows for direct navigation to and from the airport using a highly-reliable non-precision NAVAID. The ASOS provides current weather information to pilots, which is especially helpful at a non-towered airport.
New terminal	The new terminal is one of the largest GA terminals in the state of Tennessee and is expected to significantly elevate the visibility of the airport and allow the airport to provide outstanding terminal facilities to flight crews, passengers, and customers.
Lack of noise complaints	Noise complaints are not typical, even with night helicopter activity.
Two runways	Although the airport has intersecting runways, by having two runways (rather than one), the airport’s capacity is increased and the ability to accommodate operations during various crosswind conditions is improved.
WEAKNESSES	
Only non-precision approaches	Although the airport does have non-precision approaches to 17 and 35, it currently does not have precision instrument approaches, which allow pilots to land with lower minimums. Therefore, there will likely be weather conditions that prevent arrivals.
No air traffic control tower	Although the current number of operations at the airport does not justify the need for a control tower, airlines that may be recruited in the future much prefer operating out of an airfield that is controlled, providing a perceived higher level of safety.

*(continued next page)*



**Table 4-22: Summary of SWOT analysis from 2012-2022 Airport Strategic Plan (continued)**

<b>WEAKNESSES</b>	
Maintenance	Some facilities/services are not maintained, such as the ASOS which has been out of service for extended periods.
<b>OPPORTUNITIES</b>	
Fort Campbell	With the close proximity of Fort Campbell, the airport may be able to develop a positive and mutually beneficial relationship. This could realize future potential operations and financial benefits as an alternate in the event of a Fort Campbell shutdown.
Transient traffic	Transient traffic is beneficial because of the opportunity for fuel sales. The airport can be more effective in actively attracting transient traffic by offering incentives and amenities such as lunch gift cards, games of golf, etc., that are negotiated with local businesses.
Enhance airport visibility	It is important to install and maintain signage to enable passengers, customers, etc. to locate the airport from I-24, including signage on local roads once drivers leave the interstate.
<b>THREATS</b>	
Bi-county convenience center (landfill) location	Concern has been expressed by some stakeholders regarding the close proximity of this facility to the airport and the wildlife concerns that it may create.
Agricultural activities on airport property	The airport currently leases property and allows continuous farming of corn crops. There are concerns that this on-airport agricultural activity may create wildlife hazards.

The Strategic Plan also establishes the following goals over the next 10-year period:

**Short-term goals**

- Update the Airport Master Plan.
- Review the effect on-airport agricultural activity has on the safety of aircraft operations.
- Develop a Public Relations Plan.
- Begin efforts to further evaluate the potential for the Clarksville-Montgomery Country region to support schedule commercial airline service.
- Evaluate the location of the bi-county convenience center (landfill) and its potential impact on airport operations.

**Medium-term goals**

- Pursue installation of Instrument Landing System (ILS).
- Cater to, and attract more, general aviation (GA) traffic and corporate traffic.



- Services that attract GA operators include low-priced fuel, a professionally-managed flight school, tie-down availability, on-airport food/beverage/pilot supplies, and onsite rental cars.
  - Corporate operators expect first-class line service and customer service (also known as red-carpet service), a community hangar capable of accommodating various corporate aircraft, deicing and other services for turbine-powered aircraft, onsite rental cars, and services to flight crews, including exercise facilities, showers, and a tv/lounge area.
- Forge new relationships with Fort Campbell and Austin Peay State University.
  - Diversify revenues and become financially self-sufficient. Pursue establishment of new long-term leases/tenants.
  - Develop a Marketing Plan and marketing budget.
  - Regularly conduct user surveys and remain aware of services being offered and facilities available at competing airports. It is important to stay ahead of the competition if possible.

### Long-term goals

- Establish timeline/goals from Airport Layout Plan (ALP) for acquiring property to enable expansion and installation of ILS to increase the potential for future business and support of local industry.

### Commercial air carrier service

The Strategic Plan also addresses the potential for the Clarksville region to attract commercial air carrier service, in which many stakeholders have expressed interest. The plan notes a number of reasons this would be a significant challenge. Commercial air carrier service would require several million dollars of upfront capital investment to accommodate air carrier ticketing and baggage functions, ramp operations/parking, TSA passenger screening, and sufficient automobile parking and concessions for passengers. Payback on this major investment would likely be very slow, according to the plan, because air carriers often expect subsidies from smaller communities in order to provide service. In addition, the proximity of Nashville International Airport (BNA), which already has all of these facilities, presents very difficult competition.

The plan recommends that the Airport Authority apply for a Small Community Air Service Development Grant to undertake an Air Service Development Study/Analysis. This study would provide the authority with the estimated degree of demand for commercial air carrier service, providing important information that can be used to determine whether or not to pursue the capital improvements that would be necessary.



## Safety

*Moving Ahead for Progress in the 21<sup>st</sup> Century Act* (MAP-21), the federal transportation legislation signed into law in 2012, continues to emphasize highway safety and the reduction of fatal and serious injury crashes. MAP-21 also continues to fund the Highway Safety Improvement Program (HSIP), which emphasizes a data-driven, strategic approach to improving safety on all public roads. Each state is required to develop a Strategic Highway Safety Plan (SHSP) that defines strategies to address key safety problems.

### VEHICULAR CRASHES

Each year federal, state, and local governments design and implement measures geared toward increased safety for the public. In 2010 the National Highway Transportation Safety Administration (NHTSA) reported 30,196 fatal crashes, resulting in 32,885 fatalities in the United States. For the same year NHTSA calculated a fatal crash occurred at a rate of 1.11 per 100 million vehicle miles traveled (VMT). This was down from 2009's rate of 1.15 per 100 million VMT.

Fatal crash rates in Tennessee and Kentucky in 2010 were higher than the nationwide rate, at 1.46 and 1.58 per 100 million VMT, respectively. Both Tennessee and Kentucky's fatal crash rates have been trending downward over the past four years.

Non-fatal crashes in Tennessee have averaged approximately 161,125 yearly from 2008 to 2011. The average yearly non-fatal crash total for Montgomery County over the same period is approximately 4,273 or 2.7 percent of the state total. Kentucky has averaged 125,475 non-fatal crashes over the same five-year period. Christian County has averaged 1,847 non-fatal crashes yearly, about 1.5 percent of the state's yearly average. **Table 4-23** further categorizes recent crash data for each county.

**Table 4-23: Number of Crashes by Type, 2008 to 2011**

Year	Fatal Crashes	Injury Crashes	PDO* Crashes	Total Crashes
<b>Montgomery County</b>				
2008	13	1271	2303	3587
2009	22	1519	2435	3976
2010	25	1470	2744	4239
2011	18	1643	3709	5370
<b>Average</b>	<b>20</b>	<b>1476</b>	<b>2798</b>	<b>4293</b>
<b>Christian County</b>				
2008	8	391	1368	1767
2009	10	405	1582	1997
2010	14	346	1404	1764
2011	10	340	1555	1905
<b>Average</b>	<b>11</b>	<b>371</b>	<b>1477</b>	<b>1858</b>

Sources: TN Department of Safety and Homeland Security, Research, Planning, and Development Division  
 KY Office of Highway Safety, "Kentucky Traffic Collision Facts Book" 2009, 2011

\* PDO – Property Damage Only



**Table 4-24** compares the number of crash-related fatalities for Montgomery and Christian Counties. Similar to statewide trends for Tennessee, crash fatalities in Montgomery County are on a downward trend over the past several years, having decreased by approximately 41 percent. Fatalities in Christian County increased over the same period by 22 percent, reaching a high in 2010.

**Table 4-24: Number of Fatalities, 2007 to 2011**

Number of Fatalities (2007-2011)						
	2007	2008	2009	2010	2011	Pct Change (2007-2011)
Montgomery County	32	13	23	25	19	-41
Christian County	9	8	11	17	11	22

Source: National Highway Transportation Safety Administration FARS Database

The Tennessee Department of Safety collects data on related causes of fatal crashes and submits it to the FARS unit at NHTSA. Two key categories are crashes that are alcohol related, and crashes that involve unrestrained motorists. **Tables 4-25** and **4-26** provide data for each of these categories.

**Table 4-25** summarizes alcohol related fatalities from 2007 to 2011, in which a blood-alcohol content level of 0.08 or higher was recorded at each crash. Montgomery County saw almost a 70 percent decrease in alcohol related fatalities from 2007 to 2011, and Christian County experienced a 80 percent decrease in the same period. This very likely reflects the success of recent enforcement programs by law enforcement agencies for Montgomery County and the City of Clarksville, which have been funded by grants from the Tennessee Governor’s Highway Safety Office (GHSO) over the past several years. State and local law enforcement agencies in both Kentucky and Tennessee have also launched a joint “Hands Across the Border” campaign to conduct sobriety checks at multiple sites.

Montgomery County now ranks in the lower third of counties statewide in the rate of alcohol-related fatalities per 100,000 people. Both the Christian County Sheriff’s Department and City of Hopkinsville Police Department received Governor’s awards in 2012 for impaired driver enforcement.

**Table 4-25: Percent of Fatalities Related to Alcohol, 2007 to 2011**

Percent of Fatalities Related to Alcohol (2007-2011)						
	2007	2008	2009	2010	2011	Pct Change (2007-2011)
Montgomery County	34%	23%	35%	40%	11%	-69
Christian County	44%	13%	18%	24%	9%	-80
<b>Total</b>	<b>37%</b>	<b>19%</b>	<b>29%</b>	<b>33%</b>	<b>10%</b>	<b>-73</b>

In 2011, approximately one-third of fatal crashes in the Montgomery and Christian County involved unrestrained motorists, classified as those not wearing a seatbelt. Through increased enforcement,



legislation, and public awareness, the percentage of unrestrained fatalities has continued to trend downward. As shown in **Table 4-26**, in Montgomery County one out of every two fatal crashes included an unrestrained motorist. This value increased to two out of every three motorists in Christian County for the same period.

**Table 4-26: Percent of Fatalities Involving Unrestrained Motorists**

Percent of Fatalities Involving Unrestrained Motorists (2007-2011)						
	2007	2008	2009	2010	2011	Pct Change (2007-2011)
Montgomery County	53%	31%	52%	44%	32%	-41
Christian County	67%	75%	27%	29%	27%	-59
<b>Total</b>	<b>56%</b>	<b>48%</b>	<b>44%</b>	<b>38%</b>	<b>30%</b>	<b>-47</b>

Both the GHSO in Tennessee and the Kentucky Office of Highway Safety have implemented public awareness programs to educate the community of the dangers of both drunk driving and distracted driving. Recent programs include:

**Tennessee**

- Click It or Ticket
- Booze It and Loose It
- Buckle Up in Your Truck
- 100 Days of Summer Heat

**Kentucky**

- Click It or Ticket
- Drive Sober or Get Pulled Over
- Buckle Up in Your Truck
- One Text or Call Could Wreck It

The data suggests that these programs are successfully raising public awareness about transportation safety concerns, although Christian County is still ranked high in overall number of crashes involving unrestrained motorists.

**BICYCLE AND PEDESTRIAN CRASHES**

While motor vehicle crashes account for the largest percentage of crash statistics, pedestrian and bicycle crashes also exist. **Table 4-27** summarizes the fatal crashes involving pedestrians and bicyclists from 2007 to 2011. Over the five-year period, there were a total of two cyclist fatalities and 18 pedestrian fatalities in the two-county area.

From 2007 to 2011, there were 63 bicycle-related crashes and 129 pedestrian-related crashes in Montgomery County. For bicyclists, about 1 in 50 crashes resulted in a fatality. (Bicycle riders under 16 years of age are required to wear helmets in Tennessee.) For pedestrians, approximately one in 10 crashes resulted in a fatality.

Almost half of the pedestrian fatalities in the 5-year period occurred on Fort Campbell Blvd. In 2012, TDOT installed pedestrian warning signs in both directions along Fort Campbell Blvd. and retrofitted five signalized intersections at Peachers Mill, Lafayette/Sinclair, Concord/West Concord, Cunningham, and Quinn to include crosswalks, ADA compliant curb ramps, and countdown pedestrian signals.



**Table 4-27: Bicycle and Pedestrian Fatalities, 2007 to 2011**

Year	Montgomery County		Christian County		Total	
	Cyclist	Pedestrian	Cyclist	Pedestrian	Cyclist	Pedestrian
2007	0	0	0	0	0	0
2008	1	3	0	0	1	3
2009	0	2	0	1	0	3
2010	0	5	1	1	1	6
2011	0	4	0	2	0	6
<b>Total</b>	1	14	1	4	2	18

In Christian County, there were 31 bicycle-related crashes and 61 pedestrian-related crashes from 2007 to 2011. For pedestrians, approximately 7 in 100 crashes resulted in a fatality. For bicyclists, about 3 in 100 crashes resulted in a fatality. (Bicycle riders are NOT required to wear helmets in Kentucky.)

Both KYTC and TDOT sponsor activities to promote bicycle and pedestrian safety. Educational efforts include raising drivers’ awareness of sharing the road with bicyclists and promoting the “3-foot law” passed in Tennessee in 2007, but not yet widely known among drivers:

*“The operator of a motor vehicle when overtaking and passing a bicycle proceeding in the same direction on the roadway, shall leave a safe distance between the motor vehicle and the bicycle of not less than three feet (3’) and shall maintain such clearance until safely past the overtaken bicycle.”*  
 (Tennessee Code Annotated 55-8-175(c))



Although the 3-foot provision does not have the force of state law in Kentucky, it is a recommendation specifically noted in the Kentucky Transportation Cabinet’s summary of laws for drivers and bicyclists.

Safety education is also targeted to bicyclists, reminding them that cyclists using public roads are subject to the same traffic laws as motor vehicles, and to pedestrians to remind them of laws regarding crosswalks and signals. Although the Safe Routes to School program is no longer funded as a separate federal program, its activities are eligible for funds from the federal Transportation Alternatives and Highway Safety Improvement programs. Safe Routes to School projects can include hosting bicycle “rodeos” and other programs that teach children to use sidewalks and bicycle facilities safely.

Local agencies responsible for street maintenance and operations also have an important role to play in bicycle and pedestrian safety. Streets should be swept on designated bicycle routes to ensure that bike lanes and shoulders are clear of debris.

## **MOTORCYCLE CRASHES**

Due to the nature of the vehicles involved, motorcycle crashes can result in severe injury or fatalities. GHSO statistics show that, on average, 136 motorcycle crashes occur in Montgomery County every year, and the number appears to be on the rise. In 2008 and 2009, the county ranked eleventh in the state. In 2011, the number of motorcycle crashes increased 32 percent, moving Montgomery County to the fifth-ranked county by accident volume.



Christian County averaged 204 motorcycle crashes over the same five-year period, placing it in the top five of counties with a population over 50,000.

### **Motorcycle safety**

All motorcycle riders are required to wear helmets in Tennessee. In Kentucky, only motorcycle riders under 21 years of age are required to wear helmets. With proof of medical coverage, motorcyclists over 20 years old may ride without helmets.)

According to the GHSO, 30 percent of all fatally injured motorcycle riders in 2011 had blood alcohol content (BAC) levels of 0.08 or higher. An additional 7 percent had alcohol levels of BAC 0.01 to 0.07. Alcohol plays a significant role in motorcycle fatalities because it affects balance and coordination, both skills essential to riding a motorcycle.

The Tennessee Department of Safety administers the Tennessee Motorcycle Rider Education Program, which combines rider training with other issues such as motorcycle licensing procedures and information on the effects of alcohol and drugs. Courses are taught by Motorcycle Safety Foundation (MSF) Certified Instructors/Coaches in an off-street environment, and are offered at three levels of skill: Basic Rider 1, Basic Rider 2, and Advanced Rider. Motorcycles are provided. Fort Campbell also provides motorcycle rider education courses at a range of skill levels.



## **RAILROAD TRAIN/VEHICULAR CRASHES**

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Interactions between trains and vehicles are limited, but still pose dangers to the traveling public. From 2007 to 2011, eleven such crashes occurred in Christian County. The county ranked highest of all Kentucky counties with a population over 50,000. Based on data analyzed by the University of Kentucky, the annual crash rate for Christian County was 0.30 for this period.

The Federal Railroad Administration Office of Safety data does not include any highway-rail crashes from 2008 to 2011. Prior to 2008, two crashes occurred in 2007.

## **STRATEGIC HIGHWAY SAFETY PLANS**

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Both Montgomery and Christian counties have high crash rates in certain categories compared to the statewide averages in their respective states.

Based on the most recent five years of crash data (2008 to 2012), Montgomery County had the fifth highest crash rate of all counties in Tennessee. When further investigated, the data shows that Montgomery County had relatively high crash rates for senior drivers and young drivers, ranking among the top 15 percent of counties statewide.

Montgomery County also ranked particularly high in the rate of motorcycle crashes and injury crashes (as opposed to those that resulted in property damage only). **Table 4-28** shows the four crash categories which were noticeably more frequent in Montgomery County, and the statewide ranking among other counties for crash rates in those categories.

Christian County is ranked seventh among the top 25 counties of overall safety concern, based on 2010-2012 crash data. In fact, it appears on seven out of the eight “problem ranking maps” in which the





Kentucky Office of Highway Safety identifies the counties with the highest rate of certain crash types. **Table 4-29** shows the categories in which Christian County ranks high.

**Table 4-28: Montgomery County Ranking for Crash Rates in Certain Categories**

Category	State Ranking, 2008-2012 (out of 95 counties)
Injury	5
Senior Drivers (65+)	5
Motorcycles	11
Young Drivers (15 to 24)	14

Source: Tenn. Dept. of Safety and Homeland Security, Research, Planning & Development

**Table 4-29: Christian County Ranking for Crash Rates in Certain Categories**

Category	State Ranking, 2010-2012 (out of 120 counties)
Serious Injury	6
Motorcycles	7
Speed related	9
Fatal Crashes	11
Driver impaired	13
Involving Commercial Vehicles	13
Unrestrained motorist	19

Source: Kentucky Office of Highway Safety

Led by the Federal Highway Administration, the Tennessee Strategic Highway Safety Plan (SHSP) is adopted and updated regularly in partnership with a group of federal, state, local and regional agencies – including CUAMPO – with a common interest in transportation system safety. The plan identifies data-driven emphasis areas and strategies to reduce the number of fatal and serious injury crashes. Tennessee has identified these eight emphasis areas in its current SHSP:

- Improve Crash Data
- Reduce Lane Departures
- Improve Intersection Safety
- Legislation
- Improve Motor Carrier Safety
- Improve Work Zone Safety
- Improve Driver Behavior
- Educational and Awareness Programs

Kentucky also has a Strategic Highway Safety Improvement Plan (SHSIP) which identifies eight emphasis areas. These include:

- Impaired Driving
- Lane Departure
- “Drive Smart” Safety Corridors
- Aggressive Driving



- Young Drivers
- Incident Management
- Occupant Protection
- Commercial Vehicle Safety
- Traffic Records
- Legislative Issues

Several of these emphasis areas are particularly appropriate for the CUAMPO region, based on the nature of crashes that have occurred recently:

- ***Driver Behavior (Tennessee), Young Drivers (Kentucky)***  
Given the high rate of crashes among both young and senior drivers in the region, Tennessee’s *Driver Behavior* emphasis area is potentially beneficial to the area. Within this emphasis area, both young and senior driver education measures are discussed. The *Young Drivers* section of Kentucky’s Strategic Highway Safety Plan addresses young drivers much like the Tennessee plan does, and provides corrective measures and education to reduce the number of young driver related crashes. Increased focus on these areas could potentially reduce two of the region’s highest crash categories.
- ***Improve Intersection Safety (Tennessee)*** is another emphasis area that would potentially benefit the region. Angle and rear-end crashes accounted for over 50 percent of area crashes, based on data for 2008-2011. Typically these types of crashes occur at or near intersections. By applying recommendations set forth in the Tennessee SHSP, there is the potential to eliminate a large percentage of these crashes.
- ***Reduce Lane Departures (Kentucky and Tennessee)***  
Montgomery County ranks fifth statewide in the rate of injury crashes, and Christian County ranks sixth. Lane departures often result in injury crashes, due to the high potential for a vehicle to strike a fixed roadside object after leaving the travel lane. Both Tennessee and Kentucky have emphasized the reduction of lane departure crashes in their respective highway safety improvement plans. Both states also note the importance of educating the motoring public and applying safety measures to minimize or prevent these types of crashes. By implementing lane departure reduction strategies, agencies may be able to decrease the proportion of injury crashes occurring in the region.

Both Kentucky and Tennessee have worked to develop strategies that will reduce the number of injury and property damage crashes. Through the continued implementation of stated emphasis areas, trends in crash reduction are expected to continue. The education of motorists along with improved safety measures are also expected to aid in fewer severe crashes throughout the CUAMPO region.

The Tennessee GHSO uses NHTSA funding to provide grants to programs designed to reduce the number of fatalities and injuries resulting from traffic crashes. To qualify for a grant, a county must have a greater than average rate of crashes based on the latest 5-year ranking. Applications can be submitted by local governments, law enforcement agencies, academic institutions, or private non-profit organizations. Eligible project types are those included in the State of Tennessee’s Highway Safety Performance Plan:

- Driver Education
- High Visibility Enforcement (HVE)
- Impaired Driving Education
- Motorcycle Safety
- Safe Communities
- Teen Driver Safety



## SPECIAL SAFETY ISSUES

The region’s driving population has some characteristics that pose unique challenges for roadway safety, including the presence of returning troops at Fort Campbell. A recent study by USAA, the major auto insurer for military families, found that Army troops returning from deployment had 23 percent more at-fault crashes than the general population. They conclude that one of the causes is driving habits that are life-preserving while serving in the Middle East, but are inconsistent with the regular rules of the road at home. **Table 4-30** shows the driving behaviors characteristic of troops while deployed, and how those translate to the typical U.S. driving environment.

**Table 4-30: Driving Behaviors Learned During Deployment**

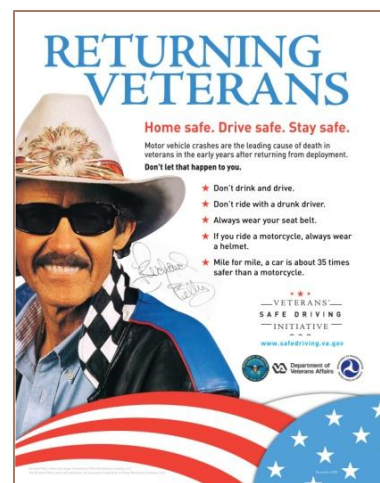
In Combat	At Home
Drives as far as possible from road edge to avoid Improvised Explosive Devices (IEDs).	Drives in middle of road, straddling lanes.
Changes direction and lanes unexpectedly, especially at tunnels or underpasses where insurgents might be waiting.	Weaves through traffic. Does not signal turns, merges or lane changes. Avoids or changes lanes at underpasses and tunnels.
Always moving. Does not stop for traffic or people. Always has right of way.	Anxious when stopped. Rolls through traffic lights and stop signs. Does not yield right of way to other vehicles.
Speeds as fast as the lead vehicle in a convoy.	Drives over posted speed limit.
Hypervigilant of roadside elements.	Overly attentive to roadside elements.

Source: Office of the Surgeon General (Army), cited in *Returning Warriors: 2012 Driving Safety Report* (USAA)

Although this is a behavioral issue, there are some engineering countermeasures (shown in **Table 4-31**) which may be helpful in addressing these problems on certain roadways. These strategies generally improve safety for other drivers as well.

Other resources include the Veterans’ Safe Driving Initiative, a joint effort of the U.S. Departments of Veterans Affairs, Defense and Transportation. The awareness campaign features racecar driver Richard Petty as its spokesperson and uses the slogan “You got home safe. Drive safe. Stay safe.”

Information developed for the campaign includes advice to family members on how to bring up their concerns about risky driving. Other materials raise the awareness of VA medical staff about the potential increased risk of automobile and motorcycle accidents from high doses of medications, including those used to treat post-traumatic stress disorder. A brochure targeted specifically to veterans suggests techniques for recognizing and managing feelings of aggression, thrill-seeking, or anxiety while behind the wheel.



**Table 4-31: Potential Countermeasures for Risky Driving Behaviors**

Driver Behavior	Potential Countermeasure
Drives in middle of road	Upgrade pavement markings / delineation Increase lane width Install rumble stripes
Traffic congestion increases anxiety	Use dynamic signage to inform drivers of congestion and advise on alternate routes Utilize smart phone app for traffic congestion / road work
Rolls through traffic signals and stop signs	Increase yellow or all red signal phase for additional intersection clearance time
Drives over posted speed limit	Reduce speed limit with enforcement Have law enforcement keep track of warnings issued
Overly attentive to roadside elements	Remove sight obstructions Limit advertising Maintain clear zone Reduce trash / roadkill Increase space between sidewalk and curb
Anxiety driving alongside parked cars	Reduce / remove on-street parking
Anxiety driving at night	Additional street / highway lighting
Anxiety at tunnels / overpasses	Keep clear of debris / signage distraction; additional lighting
Weaves around potholes, etc.	Better pavement maintenance

Sources: *ITE Traffic Handbook*, 6<sup>th</sup> Edition; *AASHTO Highway Safety Manual*; discussion with Dr. Erica Stern, University of Minnesota

## Security

Security goes beyond safety, and includes planning to prevent, manage, and respond to risks and threats to the regional transportation system and its users. Potential threats include natural disasters such as flooding, tornadoes, and earthquakes, and may also include acts of violence or terrorism. In the CUAMPO area, the presence of Fort Campbell likely improves the quality of emergency preparedness planning because it provides the community with excellent resources, including security expertise.

Fort Campbell and its operations also have a unique impact on the regional transportation system, including security considerations along Fort Campbell Boulevard (US-41A) in Christian County, which is a designated route for movement of military personnel and equipment.



## STRATEGIC HIGHWAY NETWORK (STRAHNET)

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The Strategic Highway Network, also known as STRAHNET, is a system of about 61,000 miles of highways which are considered important to the nation’s strategic defense. This includes all interstate highways. An additional 2,000 miles of STRAHNET major connectors link approximately 200 major military installations and ports. Together, STRAHNET and the Connectors define the total minimum public highway network necessary to support military deployment needs.

STRAHNET routes in the CUAMPO area include:

- I-24
- US-41A between I-24 and Screaming Eagle Boulevard (Gate 4 entrance to the military installation), which is a STRAHNET major connector.

Special considerations for STRAHNET routes include maintenance of bridge capability, pavement conditions, and congestion management. CUAMPO agencies have plans to develop video surveillance, dynamic message signs and other technologies along the I-24 and US-41A (Fort Campbell Boulevard) corridors for better management of traffic related to military convoys.

## ROLES IN TRANSPORTATION SECURITY

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Generally the role of transportation agencies is to provide support to the state, local and/or federal emergency management officials who oversee overall response efforts. They may also work in coordination with these officials to identify transportation infrastructure that is particularly critical or vulnerable, and develop plans to reduce the risk that these locations or routes will become impassable. Often the plans or lists generated through this process are not made publicly available so that the area is not advertising its weaknesses to those who might pose a threat.

There is great value in ongoing communication and coordination between agencies who manage transportation facilities and services, and those who manage emergency response. One example is the CUAMPO’s participation in regular incident management meetings held in the Middle Tennessee region. Local and state law enforcement, fire/rescue, TDOT, and others meet to discuss resource needs and opportunities to coordinate. Typical meeting agendas may include an “after action” review of a recent incident to discuss what went well, what did not go well and how procedures might be changed to improve management of future incident scenes. Traffic is a common issue at these locations, since it is critical for emergency responders to be able to reach the area and then quickly transport anyone in need of medical attention away from the scene.

Although there are numerous agencies in the CUAMPO region who contribute to the security of the transportation system, below are some of the key participants and their roles.

### State and Local Government

TDOT’s Office of Emergency Operations is responsible for a preparedness program that includes planning, training, and exercises, and is also responsible for coordinating TDOT’s statewide emergency response activities. The department provides traffic control, manpower, and equipment to the Tennessee Emergency Management Agency (TEMA) upon request. A separate emergency services coordinator provides assistance to TEMA for emergencies involving Class 1, 2 and 3 railroads (defined in the Rail section of this chapter).



Both KYTC and TDOT have an freeway incident management program. Called “HELP” in Tennessee and “Safe Patrol” in Kentucky, these programs have trained staff who respond to motorist emergencies. They also coordinate with state/local emergency officials on freeway traffic control at incident locations, as described further in the Operations section of this chapter.

Montgomery and Christian Counties each maintain a local Emergency Management Agency which coordinates emergency response of public and private agencies to incidents, including those that impact the region’s transportation system. Their responsibilities include designating facilities for emergency use, traffic control during emergencies, and ensuring preparedness to restore critical infrastructure. Christian County EMA recently improved its dispatch capabilities by upgrading its radio communications system to increase interoperability.

### **Austin-Peay State University (APSU)**

APSU maintains an emergency preparedness plan that coordinates functions and responsibilities with state and local government agencies. Transportation-related areas addressed by the plan include evacuation, emergency transportation services and clearance/restoration of roads on campus.

### **Clarksville Transit System**

Clarksville Transit System has an adopted System Security and Emergency Preparedness Plan (SSEPP) which is reviewed annually and revised as needed.

The SSEPP is developed in coordination with the City of Clarksville Risk Management and Safety Office. Its primary purpose is to maintain an effective physical security program for employees and users of the transit system, including vehicles and facilities. In addition, the SSEPP process is a mechanism for communicating with local public safety and emergency management agencies about CTS’ resources and capabilities to support their efforts in managing community-wide emergencies. For example, CTS holds annual meetings with local law enforcement and the Montgomery County Emergency Management Agency.

CTS develops and maintains security procedures, ensures that all security systems are operable, and carries out exercises for readiness. Each manager and supervisor is responsible for identifying and addressing their own area’s vulnerability to threats. Proactive efforts by the agency include participation in local interagency emergency training and drills, seeking involvement from City of Clarksville Police Department personnel in its vulnerability analysis, and the development and distribution of crime prevention information to passengers.

The SSEPP may be updated and revised again after the Federal Transit Administration releases new guidance on transit safety plan requirements put into place by MAP-21. CTS’ current plan includes strategies for identifying risks and minimizing exposure to hazards, as well as a staff training program. It will also need to add performance targets once FTA has provided information about the specific safety performance measures that will apply to all transit agencies receiving federal funds.



## Management & Operations

In an era of reduced budgets, transportation agencies are placing increased emphasis on the efficient management of the existing transportation system (capacity preservation), as opposed to adding new capacity (capacity enhancement). In fact, MAP-21, like its predecessor SAFETEA-LU, requires metropolitan areas to consider ways to promote the efficient management of the transportation system, and FHWA has directed transportation planners and transportation system operators to work together on solutions.

This section describes some of the approaches that can be used as lower-cost, lower-impact solutions to congestion. In some cases they may completely eliminate the need to add roadway lanes; in other cases, they extend the useful life of the road and allow an agency to postpone a major widening project. Some approaches involve the use of advanced technology, whereas others simply require communication and cooperation.

### TRAVEL DEMAND MANAGEMENT

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The traditional response to road congestion has been to increase the transportation “supply” by adding lanes or additional buses to handle peak-hour traffic volumes. The concept of travel demand management (TDM) involves providing travelers with options to change their mode, trip time, or route to avoid traffic congestion.

Ridesharing programs are one way to reduce the amount of travel occurring on area roadways. One vanpool can take 10 to 15 other vehicles off the road. Montgomery County residents who wish to become part of a regular vanpool can contact the Regional Transportation Authority (RTA) to see if they can be matched with others traveling to the same area at similar times. Carpools can also help reduce congestion around schools, which are frequently located along major routes and where daily traffic backups occur as parents line up in their cars to pick up or drop off children.

Employers can help manage travel demand by providing flexible work hours, or cooperating with other major employers to stagger their normal working hours so that commuting trips are spread across a longer period of time. Chambers of commerce can provide a forum where employers can discuss the need for such solutions in a particular geographic area.

For those whose work primarily involves the use of a telephone and desktop computer, telecommuting can eliminate the need to travel at all, and is becoming increasingly feasible as more areas have access to broadband Internet.

Finally, travel demand can be shifted from one route to another by providing motorists with information that allows them to determine which route is less congested. This is not a new concept, as rush-hour traffic reports have been available on local radio stations for decades. However, recent technology has added a wealth of other options for obtaining more detailed information. Real-time traffic information on major routes is available in both Tennessee and Kentucky by dialing 511, visiting the TDOT/KYTC websites, or through a variety of free and paid websites and smartphone applications. Paid services are also available that send traffic information directly to subscribers (via cellphone text message, e-mail, or personal navigation device) about particular routes that the subscriber wants to monitor.



## SYSTEMS MANAGEMENT & OPERATIONS (M&O)

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In most regions, the traffic signal system is one of the best opportunities to make significant improvements to congestion at a relatively low cost. Proper signal coordination can greatly improve traffic flow along urban highways by reducing delay and the number of stops. Signal coordination can also decrease intersection crash rates, reduce rear-end conflicts, and reduce crashes during turning movements at signalized intersections. However, the proper functioning of the system requires regular maintenance. Signal timing must be updated periodically as new access points are added along a road, or when development changes result in new traffic patterns.

Many agencies do not perform this regular maintenance due to staffing levels, budget restrictions, or difficulty in communicating the benefits of proper signal timing to local leaders, although the benefit/cost ratio of a regular signal timing program has been shown to be more than 20:1 in terms of user time, vehicle operating costs and reduced crash rates (*ITS Benefits, Costs and Lessons Learned Database*, U.S. DOT). In Metro Nashville/Davidson County, an analysis of travel times before and after a signal re-timing project on a major arterial route found conditions improved by more than 30 percent during peak hours.

Signal changes can also address traffic problems at major intersections, where a significant percentage of urban congestion occurs, without requiring physical modifications to the intersection. The FHWA report *Low Cost Traffic Engineering Improvements* (2003) describes a number of innovative intersection treatments which can be implemented simply by making changes to the traffic signal cycles.

For example, the Maryland State Highway Administration (MDSHA) addressed peak-hour congestion problems at one of its major intersections for only \$5,000. Because a large number of drivers needed to make an exclusive left turn at the intersection, the line of waiting vehicles often filled the entire length of the left turn lane. Once the turn lane was full, additional drivers waiting to get into the turn lane then began to block the thru-lane. MDSHA's solution was to allow two exclusive left-turn lane periods in the direction of peak traffic flow – one at the beginning of the mainline cycle, and one at the end. The only cost associated with this improvement was the engineering assessment of the intersection and then reprogramming the signal controller.

The 2040 Plan recommends setting aside funds throughout the life of the Plan to be used by CUAMPO agencies to evaluate and implement M&O improvements.

## INCIDENT MANAGEMENT

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FHWA estimates that up to a third of our highway congestion is caused by incidents such as crashes, roadway debris, construction work zones, bad weather, and special events. Often the congestion resulting from a primary incident causes secondary incidents, such as rear-end crashes from drivers who were slow to notice the line of stopped traffic, or vehicles overheating or running out of fuel while waiting for the primary incident to be cleared. Given the cost of delay and the risk of secondary incidents, it is clear why state and local officials have begun to increase their focus on roadway incident management.

Both KYTC and TDOT operate a freeway incident management program. Called "HELP" in Tennessee and "Safe Patrol" in Kentucky, these service patrols have trained staff who respond to motorist emergencies for several purposes: (1) to protect emergency personnel and motorists who are involved in an incident from passing traffic, (2) to alert other drivers to the hazard and guide them safely through the area to





avoid secondary incidents; and (3) to coordinate the clearance of the roadway as quickly as possible so that traffic flow is restored.

As part of its HELP program, TDOT has installed blue highway reference markers every tenth of a mile in the median of the I-24 corridor to help pinpoint the location where response is needed. Motorists who call for assistance are asked to provide the number of the nearest reference marker, which helps the agency provide a faster response.

CUAMPO staff participate in regular Traffic Incident Management (TIM) meetings which include local and state law enforcement, emergency responders, TDOT HELP operators, tow truck operators, and others involved in incident response. Issues and suggestions from these meetings often develop into formal proposals for new procedures, equipment or projects that are eligible for federal transportation funds programmed through CUAMPO.

## **INTELLIGENT TRANSPORTATION SYSTEMS (ITS)**

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Intelligent Transportation Systems (ITS) refers to the use of advanced technologies to manage the existing transportation system more effectively, improve its efficiency, and to make the system more user friendly. A wide variety of ITS technologies are under development or are being used in cities and towns throughout the U.S. and internationally, ranging from dynamic message signs on highways to automatic vehicle locator (AVL) systems on transit vehicles. The live traffic video cameras available on the City of Clarksville's website are an example of ITS in action.

In order to qualify for federal transportation funding, agencies must show that their ITS projects conform to the Regional ITS Architecture. This document is developed and maintained by CUAMPO to identify and coordinate the types of ITS services that are planned for implementation in the region. The architecture ensures that all agencies involved in transportation (emergency responders, law enforcement, transit agencies, local and regional transportation agencies) have the ability to share resources and information to better manage the overall daily operations of the transportation system. For example, live traffic video available from the Clarksville Traffic Operations Center might be shared across fiber optic communication lines so that it can also be viewed by personnel with the Montgomery County Emergency Management Agency and the Tennessee Department of Transportation. The 511 system operated by KYTC and TDOT is another example of ITS, and the fact that a caller can be routed from one state's system to the other is an example of ITS interoperability.

CUAMPO will be updating its Regional ITS Architecture in the near future. Its current architecture, adopted in 2006, was developed in conjunction with the existing Kentucky ITS Statewide Architecture and existing Tennessee Statewide ITS Architecture.

A total of 28 local, regional, state, and federal stakeholders were consulted for input and assistance in defining the existing and desired ITS systems, including:

- Christian Co Highway Department
- Clarksville Fire Department
- Clarksville Information Services
- Clarksville Police Department
- Clarksville Street Department
- Clarksville Transit System
- Clarksville/Montgomery Co E-911
- Clarksville/Montgomery Co RPC
- FHWA, Kentucky Division
- FHWA, Tennessee Division



- Fort Campbell Military Base
- Kentucky State Police
- KYTC, District 2
- KYTC, Planning Division
- KYTC, Traffic Ops Division
- Kentucky Vehicle Enforcement
- Montgomery Co Ambulance Service
- Montgomery Co Emergency Management
- Montgomery Co Highway Department
- Montgomery Co Sheriff's Office
- Oak Grove Emergency Management
- Oak Grove Fire Department
- Oak Grove Planning Department
- Oak Grove Police Department
- Pennyrile Area Development District
- Subscription Weather Service
- TDOT
- Tennessee Highway Patrol

As noted, a number of ITS systems are already in operation in the region. For example, the City of Clarksville operates a coordinated traffic signal system and provides real-time video surveillance of traffic at key locations which is available to the public on the city's website. Another project is under development which will implement video surveillance and dynamic message signs (DMS) on US-41A (Fort Campbell Boulevard). The Clarksville Transit System has equipped all of its vehicles with AVL, uses "smart cards" which allow passengers to pay by swiping an electronic card as they board, and has video surveillance on board all of its vehicles for security purposes.

*The public can view current traffic conditions at key locations by visiting the City of Clarksville's website. Shown here is video surveillance of the Madison Street/State Route 76 intersection.*



Over the next five to ten years, there are several planned expansions to these systems and plans for a number of new ITS applications to better manage regional transportation operations. For example, in its recently completed I-24 Corridor Study, TDOT identified two locations on I-24 between Clarksville and Nashville where dynamic message signs and cameras are recommended for installation. The equipment would be placed about a mile prior to Exit 24 in each direction so that motorists could exit to an alternate route if advised of an incident on this stretch of the interstate. Although the equipment will be located in Robertson County, outside the CUAMPO boundaries, it will certainly have benefits for the flow of traffic into and out of the Clarksville metropolitan area.

As with signal management and operations, the 2040 Plan includes funding set aside throughout the life of the Plan to implement various ITS projects and programs regionwide.



## ACCESS MANAGEMENT

A road's operational efficiency and safety can be significantly affected by the way it is designed. This is an important issue for CUAMPO to consider as various road projects in the 2040 Plan are implemented, particularly if the region wants to preserve the capacity that is being added through those projects. Several citizens who provided input during the development of the Plan mentioned concern about the lack of access management on some of the region's major roads, and the desire to see this improved.

Each time a vehicle makes a turn, it increases the number of potential conflict points with other vehicular movements on the same road, and thus increases the crash risk. A driver making a left turn across oncoming traffic is in a particularly vulnerable position: in addition to the potential for being struck from the side by an oncoming vehicle, the driver is also at some risk of being rear-ended or struck at an angle by vehicles traveling in the same direction as the driver and approaching from behind.

The potential severity of such a crash is much greater on a higher-speed road, and its risks are multiplied when the road is a multi-lane highway.

Many of the major multi-lane highways in the region are designed with a center two-way left turn lane, particularly in areas with extensive commercial development on either side of the road. There are some benefits to having this center lane. It provides a place for a left-turning vehicle to move out of the main flow of traffic while waiting to complete the left turn, which helps reduce delay for vehicles approaching from behind, as well as the risk that they will strike the turning vehicle.

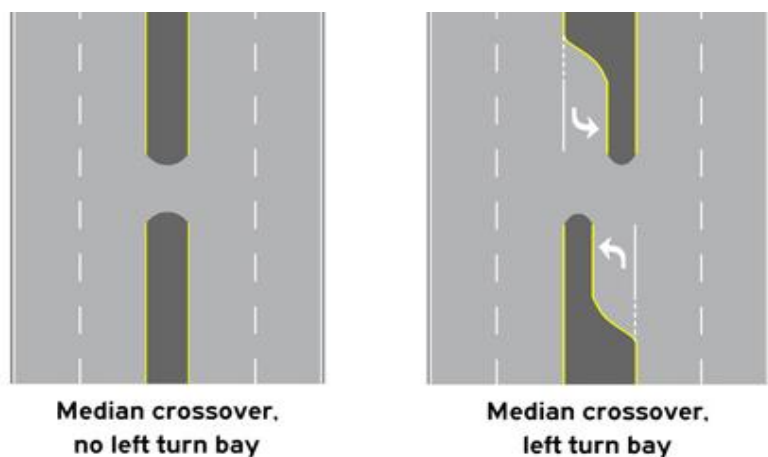
However, the center lane also introduces new risks, including the potential for a crash with other vehicles trying to move into the center lane for the same purpose. Having a continuous two-way left turn lane also means that drivers must contend with the possibility of having another vehicle move directly into their path at any given location along the road. This effectively slows the speed at which they can safely travel, particularly if they must periodically brake to avoid left-turning drivers who misjudged the time needed to cross. TDOT crash data for 2006-2008 indicated that for multi-lane urban interstates and state routes, the crash rate was 30% higher for facilities with a two-way left turn lane compared to median-divided highways.

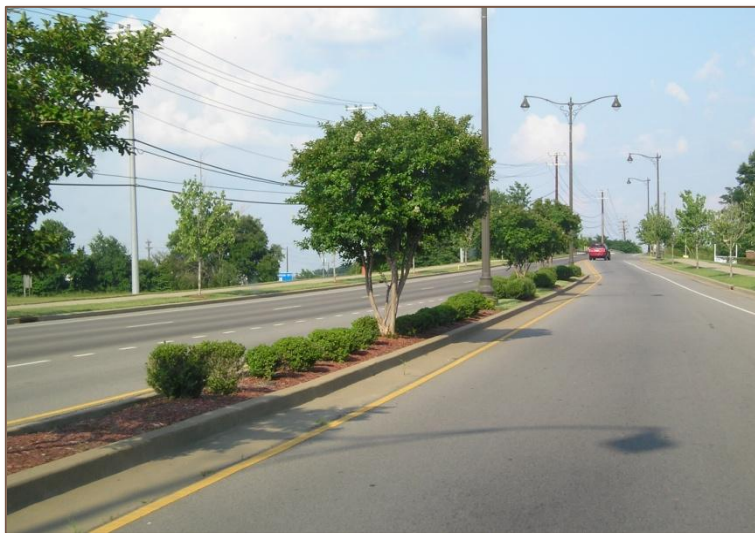
### Medians

Medians serve an important safety purpose on multi-lane roadways by providing a clear physical separation between bi-directional traffic. Medians also improve traffic flow by limiting left turns across oncoming traffic to a small number of designated locations.

Where possible, a turn bay should be provided for left-turning vehicles to move out of the travel lane until there is an opportunity to cross, so that other motorists are not delayed behind the vehicle that is waiting to turn. (See Figure 4-28.)

Figure 4-28: Median Crossover Designs (from *Model Inventory of Roadside Elements: FHWA, 2010*)





*Portions of Dunlop Lane have been constructed with a center median. Medians serve an important safety purpose on multi-lane roadways and also improve traffic flow.*

*A concrete driveway apron marks a future access point along Tiny Town Road (SR-236). The City of Clarksville's access management ordinance sets standards for the number and spacing of driveways to ensure that safety and traffic flow are maintained as property along this route continues to develop.*



## Driveway Management

As noted earlier in this chapter, roads are classified according to their function. The primary purpose of low-speed roads is to provide property access, whereas higher-speed roadways provide few access points because their primary purpose is to carry thru-traffic. On higher-speed roads, therefore, there should be fewer driveways overall.

Driveway management on arterial routes can yield considerable operational benefits, allowing traffic speeds to improve as much as 15 to 20 miles per hour. **Figure 4-29** shows there is also a significant safety benefit. Statistics indicate that an arterial road with 10 driveways per mile has 30 percent fewer crashes than a similar road that has 20 driveways per mile.

KYTC has provided a model ordinance that local governments can adopt for purposes of access management, as well as its own access policies. TDOT is currently working to develop state access



policies and is also working with local governments on pilot corridor management agreements in the Nashville and Cleveland areas.

The City of Clarksville adopted an access management ordinance in December of 2006 to preserve operational capacity and safety on its roads. All site development plan applications must include an access plan that is reviewed by the City Street Department to verify that it adheres to the standards for the number, spacing, and length of driveways that access a public road. Standards vary based on whether the road is an arterial, collector or local road, and based on the type of development that the driveway will serve.

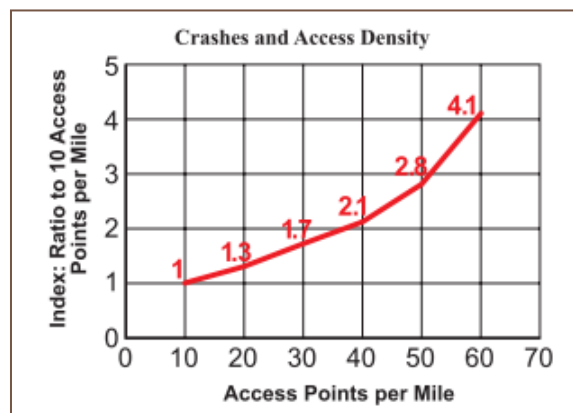
### Land Development Policies

Local governments can also indirectly influence roadway efficiency through their development policies, particularly their subdivision regulations.

Lot frontage requirements can be used to manage access proactively, so that city or county officials are not later forced into the position of approving requests for undesirable driveways. Larger minimum frontages should be established for lots that adjoin major roads. Each lot can then have its own driveway while maintaining a relatively small total number of access points along the road. Service roads or frontage roads may also be encouraged on arterial roadways, and reverse frontage properties with access to local streets are preferred along arterial streets in Clarksville.

Local governments should also consider how their standards for driveway width and curb radius may impact traffic on the road that serves a property. Some communities have recently adopted smaller curb radii and/or narrower driveway widths with the goal of improving safety; however, drivers must slow down in order to make tight turns, adversely affecting the flow of traffic on arterial and collector streets. Thus, this design can be very useful on residential streets, but on a major arterial road, forcing drivers to brake heavily before turning can negatively impact traffic flow and even cause crashes.

Finally, guidelines are also helpful in the location and spacing on public road intersections along arterial and collector roadways. These guidelines address the spacing of traffic signals and full-movement intersections so that traffic signal coordination is effective and adequate turning movement and storage movement space exists between public road intersections.



**Figure 4-29:** Relationship between a road’s crash rate and the number of access points per mile. From the Transportation Research Board’s *Access Management Manual* (2003).



# Chapter 5

## Recommended Plan and Funding

This chapter consolidates the project and program recommendations made in previous chapters to present a financially feasible plan that meets the needs of the region’s transportation system over the next 25 years. Available funding sources are identified and described here, along with the range of transportation investments that are eligible for various types of funding. Forecasts are presented for the level of funding anticipated to be available from each source through the year 2040.

The projected revenue is then compared to the recommended projects and programs to demonstrate that the anticipated level of funding will be sufficient to cover the cost of implementing the recommended Plan. This chapter also identifies projects and services that have been identified in the region as transportation needs, but cannot currently be funded.

### SOURCES OF TRANSPORTATION FUNDING

#### Federal Transportation Funding

Table 5-1 provides a summary of the major federal funding programs that are available to implement projects and programs in Metropolitan Planning Organizations (MPOs), including the CUAMPO. Nearly all require non-federal matching funds, usually either state or local dollars. The typical funding ratio is shown for each of the federal programs, although it should be noted that the required non-federal match may vary depending on the details of a particular project.

Table 5-1: Federal Transportation Funding Programs

Federal Programs	Description	Funding Ratio
National Highway Performance Program (NHPP)	Combines former funding programs for Interstate Maintenance (IM), National Highway System (NHS) and the portion of the Bridge Replacement & Rehabilitation (BRR) used for bridges on the federal-aid system.  Provides funding for construction, reconstruction, resurfacing, restoration, rehabilitation, preservation, or operational improvement of segments of the National Highway System. This includes Interstate highways and bridges on the NHS, as well as projects to improve freight transport. Projects must support progress toward national goals for the condition and performance of the system.	Interstates: 90% federal, 10% non-federal  Other roads: 80% federal, 20% non-federal  90 to 95% federal match available for projects in the state’s freight plan.
Surface Transportation Program (STP or S-STP)	Provides funding for roads functionally classified as rural major collector and above. Funds may be utilized on projects in Rural Areas, Urbanized Areas, Small Urban Areas, Enhancement, Safety and Rail-Highway Crossings. Also funds bridge replacement & rehabilitation on non-federal aid routes (activities previously under the BRR local program of SAFETEA-LU).	80% federal 20% non-federal
Local - Surface Transportation Program (L-STP)	Provides funding for small urban areas (5,000 to 50,000 persons) and urbanized areas (50,000 and greater in population) for projects on roads functionally classified as urban collectors or higher. Funds may also be used for bicycle/pedestrian projects or “flexed” for transit use.	80% federal 20% non-federal

(continued next page)



**Table 5-1: Federal Transportation Funding Programs (continued)**

Federal Programs	Description	Funding Ratio
Transportation Alternatives Program (TAP)	Combines former funding programs for Enhancements, Safe Routes to Schools, Scenic Byways, and Recreational Trails. Eligible activities include bicycle and pedestrian facilities, sidewalks near elementary and middle schools, main street and boulevard projects, and environmental mitigation to address impacts of the transportation system.	80% federal 20% non-federal
Highway Safety Improvement Program (HSIP)	Provides funds to make improvements to high hazard locations on eligible roadways, including highway-rail grade crossings. Projects are selected based on crash rate and crash frequency.	90% federal 10% non-federal
Federal Transit Administration (FTA) 5307	Section 5307 is a formula grant program for urbanized areas providing capital, operating, and planning assistance for mass transportation. This program now includes funds previously available through the Job Access/Reverse Commute program (FTA-5316), which provides new or expanded transportation service to fill gaps that exist for welfare recipients and other low-income individuals to and from jobs and other employment-related services. Reverse Commute projects facilitate the provision of new or expanded public mass transportation services for the general public from urban, suburban, and rural areas to suburban work sites.	Capital: 80% federal 20% non-federal  Operating: 50% federal 50% non-federal
FTA-5310	Section 5310 is a formula grant program for the special needs of elderly individuals with disabilities. Funds (which are subject to annual appropriations) are appropriated annually based on an administrative formula that considers the number of elderly individuals with disabilities in each State. Funds available through the former New Freedoms program (FTA-5317), which encourages services and facility improvements that go beyond those required by the Americans with Disabilities Act, are now combined with this program.	80% federal 20% non-federal
FTA-5339	Section 5339 is a formula grant program that provides capital funding to replace, rehabilitate and purchase buses and related equipment, and to construct bus-related facilities.	80% federal 20% non-federal
Congestion Mitigation/Air Quality Improvement (CMAQ)	Provides funding for transportation projects in air quality non-attainment or maintenance areas. CMAQ projects are designed to contribute toward meeting the national ambient air quality standards.	80% federal 20% non-federal
Federal Lands Access Program	Provides funding for projects on transportation facilities that are located on or adjacent to federal lands, or that provide access to federal lands.	80% federal 20% non-federal

### State and Local Revenue Sources

Both Tennessee and Kentucky have dedicated state revenue sources that provide funding for transportation investments. These funds are used primarily to match the federal programs listed above and to fund the various functions of each state’s department of transportation. Additionally, a portion of these funds are redistributed back to local jurisdictions to use for their individual transportation needs.



### ***State of Tennessee Transportation Funding***

The State of Tennessee's dedicated funding for transportation consists primarily of revenue from the state gasoline tax, as well as a motor fuel tax on diesel sales and a gasoline inspection tax.

The current state gas tax is 20 cents per gallon, and the motor fuel tax is 17 cents per gallon. Neither of these rates has changed in more than twenty years. All revenue generated from these two sources is restricted to spending on roadways and/or mass transit. The gasoline inspection tax rate is 1.7 cents per gallon, with 98% of the revenue used for transportation funding; the remaining 2 percent goes to the state's general fund.

The state gasoline tax generates about \$670 million annually. This revenue is divided among the Tennessee Department of Transportation (60%), local governments (37%) and the state's general fund (3%). The majority of the state's share of the gasoline tax is spent to match the federal funding obtained through the programs listed in **Table 5-1**. The rest is used to fund highway operations and maintenance activities across the state, as well as the Tennessee Department of Transportation's administrative functions.

Revenue from the diesel motor fuel tax is shared among the Tennessee Department of Transportation (66.8%), county governments (21.3%), municipal governments (10.7%), and the state's general fund (1.2%). In recent years, most of the state's share of the motor fuel tax has been spent for grants to local public transit systems and shortline railroads across the state. **Table 5-2** provides a summary of these funding sources.

### ***Commonwealth of Kentucky Transportation Funding***

Within Kentucky, funding for highway improvements comes from the Commonwealth's Road Fund, established in 1914 to finance the maintenance, operation, and development of a statewide transportation system.

The available funding from Kentucky's Road Fund includes three major categories:

- *Parkway and State Primary Pavement Rehabilitation (SPPR)* – state funds available for pavement rehabilitation projects on the Parkways and State Primary Road System within the State of Kentucky;
- *Resurfacing Program* – state funds available for resurfacing; and
- *State Construction (SP)* – state funds available for non-routine maintenance and state-funded improvement projects.

The majority of Road Fund revenue comes from sales and gross receipts on various motor fuels and license and privilege taxes on motor vehicles and semi-trucks. **Table 5-2** provides a summary of the four primary funding sources. In addition to those sources, the Road Fund receives income from tolls and interest from investment of Road Funds.





**Table 5-2: Sources of Transportation Funding in Tennessee and Kentucky**

<b>TENNESSEE</b>	
Gasoline Tax	Established in 1923, the current gas tax rate is 20 cents per gallon. The rate has not changed since 1989 and is not indexed to gas prices. The gasoline tax is the largest shared revenue source for combined county and municipal governments. Shared gasoline tax revenues are restricted to funding street and road construction and public transit systems.
Motor Fuel Tax	Enacted in 1941, the motor fuel tax is imposed on the sale of diesel fuel and alternative fuels. Its current rate is 17 cents per gallon and has not changed since 1990. Like the gasoline tax, it is not indexed.
Gasoline Inspection Tax	The gasoline inspection tax was established to assure that gasoline and oil sold in the state met minimum quality standards. The current rate is 1.7 cents per gallon. 98% of the revenue goes to the state highway fund and 2% goes to the state’s general fund. By statute, about \$12 million is set aside each year to provide monthly funds to local governments exclusively for use for county roads and city streets.
<b>KENTUCKY</b>	
Gasoline Tax	Since 1980, the gasoline tax in Kentucky has been tied to the average wholesale price per gallon, and the rate is set to 9 percent of the average wholesale price per gallon. As of July 1, 2013, the current state gas tax rate is 32.3 cents per gallon. State law also establishes a minimum wholesale price per gallon, thus creating a “floor”, or minimum gas tax, which is currently 15 cents per gallon.
Liquified Petroleum Gas Tax	A tax on liquefied petroleum gas which includes any material which is composed predominantly of any of the following hydrocarbons, or mixtures of them, whether in the liquid or gaseous states: propane, propylene, butane (normal butane and isobutane), and butylene, and which are used to propel vehicles of any kind upon the public highways was first levied in 1960. In 1980, like gasoline and special fuels, the base was changed to the average per gallon wholesale price of gasoline.
Motor Vehicle Usage Tax	Motor vehicles were originally taxed under the 3 percent gross receipts tax that was repealed in 1936. After the repeal of that tax, a special 3 percent tax on motor vehicles was enacted and in July of 1990, the rate was increased to 6 percent. The tax is paid to the county clerk when a vehicle is first registered in the owner’s name.
Special Fuels Tax	A tax on special fuels which includes all combustible gases and liquids, capable of being used in motor vehicles, except gasoline, as defined in KRS 138.210, and liquefied petroleum gas, as defined in KRS 234.100 was first enacted in 1952. In 1988, the General Assembly made a major change in the special fuels law to require that the tax be levied on the dealer at the point of receipt of the fuels (as is the case for gasoline) instead of the point of sale by the dealer.

Source: Tennessee Department of Transportation and Kentucky State Budget Office

**Local Transportation Funding**

As noted, both the City of Clarksville and Montgomery County receive an annual share of the fuel taxes collected by the state. In addition to the state-shared revenues, there are several exclusive local taxes that provide revenue to cities and counties which can be used for transportation investments. These revenue sources include:

- Property Taxes
- Beer and Liquor Taxes
- Hotel/Motel Taxes
- In Lieu of Tax Payments
- Business Taxes
- Sales Taxes

In Montgomery County, a portion of the property taxes are dedicated exclusively for transportation purposes (12 cents per \$100 of assessed value). The other revenue sources are not dedicated for



transportation purposes wholly; however, they can and often are used to fund various transportation operations, maintenance, and capital expenditures, including providing local matching funds associated with the various state and federal funding programs previously described.

The City of Clarksville uses state-shared revenue as well as property tax and other revenues to fund transportation expenditures. The City has also established a capital project revenue district (CPRD) for the area bounded generally by I-24, Trenton Road, Warfield Boulevard (SR-374) and Rossvie Road (SR-237). Within this designated area, any incremental difference in taxes since the time of the district's creation is collected in a separate fund used for capital improvements. A number of proposed highway projects fall within this district, including Phase 1 of the East-West Connector and improvements to Trenton Road (SR-48).

Currently there are no locally dedicated funding sources for transportation within the City of Oak Grove beyond the State-aid funds provided through the Commonwealth of Kentucky, described above.

## TRANSPORTATION REVENUE FORECASTS

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### Highway Revenue Forecast

For an extended timeframe such as the 2040 Plan, revenue estimates are often developed by examining historic averages spent in the region, then projecting a trend based on those amounts. This is a reasonable starting-point for revenue projections and was used for several of the funding programs on which the 2040 Plan relies. However, this method is not necessarily appropriate for the federal funding programs that are used for roadway capacity enhancement projects of regional and statewide significance, including the National Highway Performance Program (NHPP) and state Surface Transportation Funds (S-STP). The region's primary example is Interstate 24.

I-24 plays a critical role in the flow of people and goods between the South and the Midwestern states. It is well understood that traffic congestion and safety issues on I-24 have an economic impact to a much larger area than Middle Tennessee and Southwest Kentucky. As this Plan was being prepared, TDOT was conducting a I-24 Corridor Study to develop a detailed list of future capacity and safety projects needed for the entire statewide corridor. The CUAMPO, along with the MPOs for the Nashville and Chattanooga regions, participated in the corridor study in order to coordinate the agencies' planning efforts.

Because of the Clarksville region's role as a gateway – and because of the new federal emphasis on targeting improvements to critical freight routes – it is reasonable to assume that state expenditures to address I-24 will be proportionate to the greater statewide benefits. To estimate future allocations of NHPP and S-STP funds, it is therefore more appropriate to use data that represent highway usage in the area, such as daily vehicle-miles traveled. Some of the largest highway projects proposed in this Plan, including the widening of I-24 in the Tennessee portion of the MPO, will require spending levels that exceed TDOT's recent historic spending average for the Clarksville area. This plan anticipates that the necessary additional funds will be made available when needed. The CUAMPO has consulted with TDOT on those assumptions and will continue to revisit them each time the Plan is updated.

**Table 5-3** shows the projected highway capital funding available to implement this Plan, listed by funding category. Funding estimates for federal fiscal years 2014 through 2016 are based on the CUAMPO's Transportation Improvement Program covering those years. Estimates for later years are



based on a 3% annual growth rate for federal, state and local funds. The revenue forecasts also reflect the Kentucky and Tennessee State Data Centers' projections that the region's population will grow more than 48% between now and 2040, which will lead to a corresponding increase in the base amount allocated to the CUAMPO through federal population-based formulas for transportation funding. Projections for the CUAMPO's allocation of local Surface Transportation Program (L-STP) funds have been adjusted accordingly to reflect increases after the 2020 and 2030 decennial census.

The annual base funds assumed for NHPP and S-STP were derived from data on highway usage, as explained above. Daily vehicle-miles traveled (DVMT) for Montgomery County were compared to statewide figures for DVMT as reported in the state's most recently published Highway Performance Monitoring System data (2011). Similarly, an estimate of DVMT for Christian County was developed by comparing statewide DVMT to DVMT for the proportion of NHS and state highway mileage contained within the CUAMPO planning area. The ratio of these counties' DVMT to statewide DVMT was then applied to the estimated apportionment of NHPP and S-STP for the two states for federal fiscal year 2014. The resulting figures were used as the region's base funds.

Estimates for the remaining funding categories are trend projections based on historic average expenditures over the past three to six years. The exceptions are the High Priority Funds (HPP) program and the Congestion Mitigation/Air Quality Improvement (CMAQ) program. Since the HPP program was not re-authorized in MAP-21, no additional HPP revenue is assumed over the life of the Plan. An equally conservative assumption has been made for future CMAQ funds, since the region has recently been reclassified as having attained the National Ambient Air Quality Standards (NAAQS) for ozone.

**Table 5-3: Projected Funding for Highway Capital Projects, 2014-2040**

Revenue Source	Annual Base Funds	Projected Funds*				
	Total	2014-2016	2017-2026	2027-2035	2036-2040	Total (2014-2040)
<b>TENNESSEE</b>						
National Highway Performance Program (NHPP)	\$6,912,827	\$10,080,000	\$84,922,910	\$105,827,329	\$75,659,869	\$276,490,107
State Surface Transportation Program (S-STP)	\$6,822,023	\$17,040,000	\$83,807,396	\$104,437,223	\$74,666,031	\$279,950,651
Highway Safety Improvement Program (HSIP)	\$900,000	\$5,400,000	\$11,056,348	\$13,777,951	\$9,850,367	\$40,084,666
Local Surface Transportation Program (L-STP)	\$2,062,500	\$11,090,000	\$47,641,992	\$62,265,660	\$44,516,022	\$165,513,674
Congestion Mitigation/ Air Quality (CMAQ)	\$921,230	\$377,599	\$0	\$0	\$0	\$377,599

*(continued next page)*



**Table 5-3: Projected Funding for Highway Capital Projects, 2014-2040 (continued)**

Revenue Source	Annual Base Funds	Projected Funds*				
	Total	2014-2016	2017-2026	2027-2035	2036-2040	Total (2014-2040)
High Priority Funds (HPP)	\$1,571,234	\$5,027,949	\$0	\$0	\$0	\$5,027,949
Transportation Alternatives Program (TAP)	\$1,164,739	\$626,360	\$14,308,626	\$17,830,803	\$12,747,900	\$45,513,689
City of Clarksville & Montgomery County (Local)	\$4,593,662	\$13,781,286	\$56,433,588	\$70,325,144	\$50,278,045	\$190,818,064
<b>Subtotal (TN)</b>	<b>\$23,377,081</b>	<b>\$63,423,194</b>	<b>\$298,170,859</b>	<b>\$374,464,111</b>	<b>\$267,718,234</b>	<b>\$1,003,776,398</b>
<b>KENTUCKY</b>						
National Highway Performance Program (NHPP)	\$3,839,439	\$0	\$47,166,858	\$58,777,339	\$42,022,092	\$147,966,289
State Surface Transportation Program (KY-STP)	\$2,049,945	\$8,110,000	\$25,183,229	\$31,382,272	\$22,436,346	\$87,111,847
State Funds (KY-SP)	\$3,937,500	\$12,050,325	\$51,271,058	\$67,008,666	\$47,906,972	\$178,237,021
<b>Subtotal (KY)</b>	<b>\$9,826,884</b>	<b>\$20,160,325</b>	<b>\$123,621,145</b>	<b>\$157,168,277</b>	<b>\$112,365,410</b>	<b>\$413,315,157</b>
<b>MPO TOTAL</b>	<b>\$33,203,965</b>	<b>\$83,583,519</b>	<b>\$421,792,004</b>	<b>\$531,632,388</b>	<b>\$380,083,644</b>	<b>\$1,417,091,555</b>

\* All totals include federal and non-federal share. Annual Base for NHPP and S-STP is based on ratio of daily vehicle-miles (DVMT) traveled in the CUAMPO planning area to statewide DVMT. Other programs based on historic averages. See text in this section for additional details.

In addition to capacity enhancement projects, the region’s roadway system will need funds for ongoing operations and maintenance (capacity preservation) to meet future transportation needs.

Over the past ten years, the City of Clarksville has spent an average of \$3.4 million annually for basic roadway operations and maintenance activities. The majority of the expenditures were for paving and pavement rejuvenation; other typical activities include maintenance of streetlights, signs and striping, traffic signals, street sweeping, mowing, and guardrail.

During the same period, the Montgomery County Highway Department spent an average of \$1.3 million annually for roadway maintenance and operations. As with the City of Clarksville, the majority of the funds were spent on paving, but mowing is also a significant roadway maintenance expense for the county.



The largest share of roadway maintenance and operations spending in the region is by TDOT, which averaged about \$12 million annually during the past 5 years. This included activities performed by its own regional staff as well as a number of maintenance contracts. Expenditures included pavement preservation, traffic signal maintenance and traffic management, signs and pavement markings, mowing and other ROW maintenance, and equipment/facility maintenance. KYTC averaged about \$4 million per year in maintenance expenditures for state routes in Christian County, including operations and maintenance of the 8-mile stretch of I-24 that lies within the CUAMPO planning area. KYTC also provides funds to Christian County for operations and maintenance of non-state routes, and the City of Oak Grove budgets local funds for the streets under its jurisdiction.

Based on these average expenditures, as shown in **Table 5-4** below, there are adequate resources available to operate and maintain the roadway system during the period covered by this Plan.

**Table 5-4: Projected Funding Available for Highway Operations & Maintenance, 2014-2040**

Revenue Source	Annual Average*	Projected Funds **				Total (2014-2040)
		2014-2016	2017-2026	2027-2035	2036-2040	
TDOT (various state sources)	\$12.0	\$36.2	\$134.6	\$146.2	\$93.2	\$410.2
KYTC (various state sources)	\$4.0	\$12.0	\$44.7	\$48.5	\$30.9	\$136.1
City of Clarksville (local and State-aid)	\$3.4	\$ 10.2	\$38.0	\$41.2	\$26.3	\$115.7
Montgomery County (local and State-aid)	\$1.3	\$3.9	\$14.5	\$15.8	\$10.0	\$44.2
City of Oak Grove	\$0.2	\$0.5	\$1.7	\$1.9	\$1.2	\$5.5
Christian County	\$0.1	\$0.4	\$1.6	\$1.7	\$1.1	\$4.9
<b>Total</b>	<b>\$21.0</b>	<b>\$63.2</b>	<b>\$235.1</b>	<b>\$255.3</b>	<b>\$162.7</b>	<b>\$716.6</b>

Note: Revenues and costs are shown in millions of dollars and reflect year of expenditure.

\* Based on historic trends over the last five to ten years.

\*\* Reflects annual growth rate of 3%.

### Transit Revenue Forecast

Capital and operating revenue projections for public transit were developed in consultation with the Clarksville Transit System (CTS) using the trend forecasting method discussed earlier, and are presented in **Tables 5-5** and **5-6**, respectively. Recent revenue history was established from budget information from the CUAMPO's FY11-14 Transportation Improvement Program, while funding estimates for 2014-2016 are based on the CUAMPO's Transportation Improvement Program covering those years. Projected operating funds for later years are based on a 3% annual growth rate. Projected capital funds are based on a more conservative 2% annual growth rate, recognizing that expenditures for major capital projects (such as vehicle replacement or a new transit facility) are larger, and local agencies must accumulate the necessary matching funds over several years. All capital funds are provided from Tennessee revenue sources; Kentucky provides operating assistance only.



CTS is the only public transit agency mentioned in Chapter 4 that receives funding through CUAMPO. Other services are funded primarily through state and federal programs designated for rural public transportation.

**Table 5-5: Projected Capital Funding Available for Transit, 2014-2040**

Revenue Source	Recent Trend *	Projected Funds***				
		2014-2016	2017-2026	2027-2035	2036-2040	Total (2014-2040)
FTA-5307 federal (80%) **	\$2,008,000	\$5,545,961	\$11,163,919	\$12,123,446	\$7,729,609	\$36,562,936
FTA-5307 state match (10%)	\$251,000	\$693,245	\$1,395,487	\$1,515,428	\$966,199	\$4,570,359
FTA-5307 local match (10%)	\$251,000	\$693,245	\$1,395,487	\$1,515,428	\$966,199	\$4,570,359
FTA-5339 federal (80%)	N/A	\$1,164,000	\$5,255,866	\$5,707,602	\$3,639,026	\$15,766,494
FTA-5339 state match (10%)	N/A	\$145,500	\$656,983	\$713,450	\$454,878	\$1,970,812
FTA-5339 local match (10%)	N/A	\$145,500	\$656,983	\$713,450	\$454,878	\$1,970,812
FTA-5310 federal (80%)	\$50,128	\$203,699	\$595,665	\$646,862	\$412,423	\$1,858,648
FTA-5310 state match (10%)	\$6,266	\$25,462	\$74,458	\$80,858	\$51,553	\$232,330
FTA-5310 local match (10%)	\$6,266	\$25,463	\$74,458	\$80,858	\$51,553	\$232,330
<b>Total</b>	<b>\$2,572,660</b>	<b>\$8,642,075</b>	<b>\$21,269,307</b>	<b>\$23,097,381</b>	<b>\$14,726,319</b>	<b>\$67,735,083</b>

\* From the CUAMPO's FY11-14 Transportation Improvement Program (TIP).

\*\* Includes some funds that were designated as FTA-5309 prior to MAP-21.

\*\*\*Projections for 2014-2016 are from the CUAMPO's FY14-17 TIP. Projections for 2017-2040 assume 2% annual growth.



**Table 5-6: Projected Funding Available for Transit Operations and Maintenance, 2014-2040**

Revenue Source	Recent Trend *	Projected Funds***				
		2014-2016	2017-2026	2027-2035	2036-2040	Total (2014-2040)
FTA-5307 (TN) federal (50%) **	\$3,501,900	\$3,116,624	\$13,441,353	\$16,750,044	\$11,975,225	\$45,283,246
FTA-5307 (KY) federal (50%)	\$928,120	\$960,000	\$3,897,719	\$4,857,172	\$3,472,572	\$13,187,463
TN state operating assistance – incl. 25% match for FTA-5307 TN and KY	\$2,545,703	\$2,501,968	\$10,607,917	\$13,219,137	\$9,450,849	\$35,779,871
Local operating assistance – incl. 25% match for FTA-5307 TN and KY	\$3,484,741	\$4,314,428	\$18,962,987	\$23,630,871	\$16,894,583	\$63,802,869
CMAQ (TN) federal (80%)	--	\$275,000	N/A	N/A	N/A	\$275,000
CMAQ (TN) state match (10%)	--	\$34,374	N/A	N/A	N/A	\$34,374
CMAQ (TN) local match (10%)	--	\$34,374	N/A	N/A	N/A	\$34,374
Farebox & Misc. Revenue	\$1,772,013	\$5,477,115	\$23,528,418	\$30,750,446	\$21,984,630	\$81,740,608
<b>Total</b>	<b>\$12,232,477</b>	<b>\$16,713,883</b>	<b>\$70,438,394</b>	<b>\$89,207,669</b>	<b>\$63,777,860</b>	<b>\$240,137,805</b>

\* From the CUAMPO’s FY11-14 TIP.

\*\* Includes some funds that were allocated as FTA-5316 (Jobs Access) prior to MAP-21.

\*\*\*Projections for 2014-2016 are from the CUAMPO’s FY14-17 TIP. Projections for 2017-2040 assume 3% annual growth rate. Farebox revenue projections based on recent trend data from CTS.

## PROJECTED COST OF RECOMMENDED TRANSPORTATION PROJECTS AND SERVICES

### Highway Project Costs

The methodologies used for estimating highway project costs for this Plan were developed in consultation with each state department of transportation and are described below.

Planning-level cost estimates for each of the Tennessee highway projects recommended in this Plan were developed in 2012 dollars. Unit costs were based on TDOT’s current cost-per-mile spreadsheet after adjusting the contingency category to 10 percent. To account for future inflation, the cost of projects in Tennessee was assumed to increase by 3% annually. Each project’s cost has been expressed in year of expenditure, i.e. it is assumed that projects constructed later will cost more than if they were built now.

It is important to note that the same cost-per-mile methodology was used to prepare new cost estimates for Tennessee projects that had been in previous CUAMPO plans. (The exception is projects



included in the Transportation Improvement Program, since their construction cost estimates are known to be relatively current.) Several successive CUAMPO plans have simply inflated the existing project cost estimates by a certain percentage based on the Construction Cost Index or similar data. While this is viewed as an acceptable practice in general, it was not deemed suitable for the 2040 Plan because so many of the Tennessee projects have been “on the books” for many years. Considerable development has taken place since these projects were first included in a CUAMPO plan that can significantly affect right-of-way costs. This decision resulted in a substantially higher total cost than indicated in previous CUAMPO plans, but provides more realistic guidance for the local and state officials who make choices about what to fund.

After consultation with the Kentucky Transportation Cabinet, project costs for the Kentucky portion of the CUAMPO were developed by inflating the 2035 Plan estimates from 2008 dollars to 2012 dollars, using a 3% annual inflation rate. A 4% annual inflation rate was then used to express cost estimates in year of expenditure for proposed projects in the Kentucky portion of the CUAMPO.

**Tables 5-7 through 5-10** summarize the estimated costs for the highway capacity enhancement projects recommended in the 2040 Plan. The tables reflect the agency and funding source(s) considered most likely to be applicable to each project. It should be noted that certain projects are eligible for more than one funding source, and it may be necessary to combine multiple funding sources in order to complete large highway projects within the given timeframe.

In fact, a strong financial partnership between TDOT and the CUAMPO will be essential in order to complete the projects that are needed during the 2017-2026 horizon before congestion reaches serious levels. Typically MPOs in Tennessee have not spent their local STP funds on state routes. However, the CUAMPO will need to contribute significant amounts of L-STP, as well as local funds, to ensure that sufficient funding is available for TDOT to make the state route improvements identified in this Plan – at the time that they are needed. This approach is consistent with recent statements from TDOT officials that the state will consider giving priority to projects where they have local financial partnership.

Finally, **Table 5-11** lists capacity preservation projects including various transportation enhancements, operational improvements, pavement resurfacing, rehabilitation and replacement projects, and bridge replacement and rehabilitation projects anticipated to occur during the period covered by this Plan. It should be noted that some of these activities will not always occur as standalone projects, but may be implemented as part of scheduled roadway capacity enhancement projects in this Plan.





**Table 5-7: Roadway Projects Proposed for Completion in 2014-2016**

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (millions, in YOE)
E+C 14, TIP #1	SR-112 / US-41A (Madison St.)	SR-76	McAdoo Creek Rd. / Sango Rd.	3.0	Clarksville, Montgomery Co.	Minor Arterial	Widening	2	5	TN-S-STP	E+C
E+C 19, TIP# 6	SR-374 Extension (Alternate C)	Dotsonville Rd.	US-79/SR-76 (Dover Rd.)	2.9	Montgomery Co.	Principal Arterial	New road	0	2	HPP, TN-S-STP	E+C
E+C 24, TIP #18	KY-115 at KY-911 (Thompsonville Ln)	-	-	0.1	Oak Grove	Minor Arterial	Intersection – add turn lane	-	-	KY-STP	E+C
E+C 35, TIP #65	Oakland Rd.	US-79/SR-13	Oakland Rd.	0.5	Montgomery Co.	Urban Collector	Realignment	2	2	TN-L-STP	E+C
E+C 37	SR-237 (Rossvie Rd.)	International Blvd.	I-24	0.8	Montgomery Co.	Minor Arterial	Widening	2	5	TN-S-STP	E+C
E+C 36, TIP #67	Sango Rd.	SR-76	Sango Rd.	0.25	Clarksville	Urban Collector	Reconstruct – add center turn lane	2	3	TN-L-STP	E+C

**Table 5-8: Roadway Projects Proposed for Completion in 2017-2026**

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (millions, in YOE)
E+C 34, TIP #66	SR-237 (Rossvie Rd.)	I-24	400 ft west of Keysburg Rd.	1.5	Clarksville	Minor Arterial	Widening	2	5	E+C	E+C
E+C 21, TIP #13	KY-911 (Thompsonville Ln.)	US-41A	KY-115 (Pembroke Rd.)	1.8	Oak Grove	Urban Collector	Widening	2	5	E+C	E+C
T-33	US-79/SR-13/Guthrie Hwy.	I-24	Solar Way / International Blvd.	1.1	Clarksville, Montgomery Co.	Minor Arterial	Widening	2/3	5	TN-NHPP /TN-S-STP	\$18.0
T-43, TIP #4 and 5	SR-149/SR-13	Proposed SR-374	Zinc Plant Rd	3.8	Clarksville, Montgomery Co.	Minor Arterial	Widening	2	5	HPP, TN-S-STP	\$50.9
T-41, TIP #2	SR-374 (North Pkwy)	Dunbar Cave Rd	Stokes Rd. (US-79/SR-13)	1.7	Clarksville	Minor Arterial	Widening	2	4/5	TN-S-STP	\$17.7
T-05A	SR-48 (Trenton Rd.)	Hazelwood Rd.	Tylertown Rd. (SR-236)	2.0	Clarksville	Minor Arterial	Widening	2	5	TN-S-STP	\$36.7
T-16	East-West Connector Phase 1	US-79 (Wilma Rudolph Blvd.)	Trenton Rd. (SR-48)	2.5	Clarksville	Minor Arterial	New Road	0	4	TN-L-STP	\$34.1
T-22	Jack Miller Blvd. Extension	Tobacco Rd.	Peachers Mill Rd.	2.0	Clarksville	Minor Arterial	New Road	0	4	TN-L-STP	\$29.5
T-29	Lafayette Rd	Walnut Grove Rd	Gate – Fort Campbell	0.4	Clarksville, Fort Campbell	Minor Arterial	Widening	2	5	FLAP	\$8.2
T-34	SR-48/Trenton Rd. at Needmore Rd.	-	-	-	Clarksville	Urban Collector	Intersection improvements	-	-	TN-L-STP	\$0.6
K-06	KY-400 (State Line Rd)	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.4	Oak Grove	Urban Collector	Reconstruct - Add Center Turn Lane	2	3	KY-STP	\$16.2
K-07	KY-115 (Pembroke-Oak Grove Rd)	KY-400 (State Line Rd.)	I-24	2.9	Oak Grove	Urban Minor Arterial	Reconstruct - Add Center Turn Lane	2	3	KY-STP	\$28.2
K-08	KY-115 (Pembroke Rd.)	I-24	KY-1453 (Barker’s Mill Rd.)	1.9	Oak Grove	Rural Minor Arterial	Reconstruct - Add Center Turn Lane	2	3	KY-NHPP	\$13.7
K-12	Oatts-Riggins Rd (New Roadway)	KY-400 (State Line Rd)	KY-911 (Thompsonville Ln)	1.5	Oak Grove	Urban Collector	New Road	0	3	KY-NHPP	\$9.9
K-13	KY-1453 (Elmo Rd) Rehabilitation	US-41A (Ft. Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	4.1	Christian Co.	Local	Reconstruct - Add Center Turn Lane	2	3	KY-SP	\$21.7



**Table 5-9: Roadway Projects Proposed for Completion in 2027-2035**

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (millions, in YOE)
T-40	SR-374/Richview Rd/Warfield Blvd	Memorial Dr.	Dunbar Cave Rd	2.1	Clarksville	Principal Arterial	Widening	2	4	TN-S-STP	\$49.9
T-42	SR-374 Extension (Alternate C)	SR-149	Dotsonville Rd	4.3	Montgomery Co.	Principal Arterial	New Road	0	2	TN-S-STP	\$56.7
T-05B	SR-48 (Trenton Rd.)	Hazelwood Rd.	Needmore Rd	2.2	Clarksville	Minor Arterial	Widening	2	5	TN-S-STP	\$56.2
T-23	US41A Bypass (Ashland City Rd.)	US41A/SR-112	SR-13	5.5	Clarksville	Principal Arterial	Widening	2/3	5	TN-NHPP/TN-S-STP	\$134.3
T-35	East-West Connector Phase 2	SR-48 (Trenton Rd)	Peachers Mill Rd.	3.7	Clarksville	Minor Arterial	New Road	0	4	TN-L-STP	\$73.2
T-36	Peachers Mill Rd.	Pine Mountain Rd.	Stonecrossing Dr.	0.4	Clarksville	Minor Arterial	Widening	3	4	TN-L-STP	\$6.3
K-02	Hugh Hunter\Gritton Church Rd.	KY 911 (Thompsonville Ln)	Allen Rd.	1.9	Oak Grove, Christian Co.	Local	Reconstruction	2	2	KY-SP	\$24.2
K-05	Gate 4 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.2	Oak Grove	Urban Collector	New Road	0	2	KY-STP/KY-NHPP	\$19.4
K-10	KY-117 (New Roadway)	US-41A (Ft. Campbell Blvd.)	KY-115 (Pembroke-Oak Grove Rd)	3.0	Oak Grove	Urban Collector	New Road	0	5	KY-STP	\$19.6
K-11	Gate 5 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.5	Oak Grove	Urban Collector	New Road	0	2	KY-STP	\$26.9
K-14	KY-109 (Bradshaw Rd) Rehabilitation	KY-1453 (Elmo Rd)	Bradshaw-Fidelio Rd.	1.0	Christian Co.	Rural Minor Collector	Reconstruct - add center lane	2	3	KY-STP/KY-SP	\$6.8

**Table 5-10: Roadway Projects Proposed for Completion in 2036-2040**

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (millions, in YOE)
T-06	I-24	Eastern terminus of Project K-04 (KY/TN State Line)	SR-76	10.7	Montgomery Co.	Interstate	Widening	4	6	TN-NHPP/S-STP	\$193.9
T-37	I-24	SR-76	SR-256 (Robertson County)	8.6	Montgomery Co., Robertson Co.	Interstate	Widening	4	6	TN-NHPP/S-STP	\$148.0
T-01	Needmore Rd.	Hazelwood Rd.	SR-236 (Tiny Town Rd.)	0.9	Clarksville	Urban Collector	Reconstruct - add center lane	2	3	TN-L-STP/TN-Local	\$13.6
T-05C	SR-48 (Trenton Rd.)	SR-13/US 79 (Wilma Rudolph Blvd.)	SR-374/101st Airborne Division Pkwy.	1	Clarksville	Minor Arterial	Widening	2	5	TN-S-STP	\$25.0
T-18	Whitfield Rd./Old Trenton Rd.	Needmore Rd.	SR-374/101st Airborne Division Pkwy	0.2	Clarksville	Urban Collector	Reconstruct - add center lane	2	3	TN-L-STP/TN-Local	\$5.2
K-04	I-24	US-41A (Fort Campbell Blvd)	TN State Line	7.8	Oak Grove, Christian Co.	Interstate	Widening	4	6	KY-NHPP	\$112.0



**Table 5-11: Additional Projects Anticipated throughout the Planning Period**

2040 Plan Number	Route	Sponsor	Jurisdiction	Description
-	Various Transportation Systems Management (TSM), Intelligent Transportation Systems (ITS) and safety improvements	TDOT, KYTC, MPO member agencies	All	Projects may include intersection improvements (e.g. additional turn lanes and/or signals); signage and lighting; other operational improvements such as signal timing, access management; and projects based on the MPO's Regional ITS Architecture.
-	Various bridges	TDOT, KYTC, MPO member agencies	All	Bridge Replacement / Bridge Rehabilitation (some work will also occur as part of scheduled roadway capacity projects)
-	Various routes	TDOT, KYTC, MPO member agencies	All	Enhancements to various routes and locations throughout the MPO planning area. Includes projects such as improvements to the bicycle/pedestrian network, trails, scenic byways, landscaping and beautification, mitigation of environmental impacts caused by transportation projects.
-	Various routes	TDOT, KYTC, CUAMPO member agencies	All	Pavement reconstruction, rehabilitation and resurfacing



### Transit Projects and Service Costs

Cost estimates for the transit capital projects identified in Chapter 4 were presented in 2012 dollars. In **Table 5-12** below, the costs have been adjusted to year of expenditure.

**Table 5-12: Proposed Transit Capital Projects by Horizon, 2014-2040**

	2014-2016*	2017-2026	2027-2035	2036-2040	Total (2014-2040)
Bus replacement	\$1,455,000	\$7,878,562	\$8,167,985	\$5,766,913	\$23,268,460
Bus fleet expansion	-	\$337,653	\$453,777	-	\$791,430
Van replacement	\$254,624	\$1,125,509	\$6,352,877	\$5,022,795	\$12,755,805
Van fleet expansion	-	\$112,551	-	-	\$112,551
Construct Northeast and Northwest hubs	\$750,000	\$844,132	-	-	\$1,594,132
Admin/maint. facilities	\$2,500,000	-	-	-	\$2,500,000
Support equip/misc. capital	\$637,220	\$6,753,053	\$8,167,985	\$3,720,589	\$19,278,847
<b>Total</b>	<b>\$5,596,844</b>	<b>\$17,051,459</b>	<b>\$23,142,623</b>	<b>\$14,510,298</b>	<b>\$60,301,224</b>

\* Based on the CUAMPO's FY14-17 TIP. Future costs based on 3% annual inflation rate.

The projected cost of future transit operations and maintenance, shown in **Table 5-13**, includes the new/expanded services recommended in Chapter 4. Costs for additional service are based on estimates developed for the CTS Strategic Plan, adjusted to year of expenditure.

**Table 5-13: Operating and Maintenance Costs of Transit Service by Horizon, 2014-2040**

2014-2016*	2017-2026	2027-2035	2036-2040	Total (2014-2040)
\$16,570,900	\$69,400,000	\$89,000,400	\$60,300,000	\$235,271,300

\* Based on items programmed in the CUAMPO's FY14-17 TIP. Future costs based on 3% annual inflation rate.



## DEMONSTRATION OF FISCAL CONSTRAINT

**Table 5-14** summarizes total roadway project costs by horizon, compared to available revenue. Unspent funds from one horizon were carried forward to the next horizon, with the appropriate annual growth factor applied to reflect that the value of the surplus funds increases over time. The 2014-2016 horizon is not shown, since all of the proposed roadway projects in that timeframe are already programmed in the fiscally constrained Transportation Improvement Program.

These projections reflect the reality that spending occurs in response to needs, which are variable over time, and that it is sometimes appropriate to build funding reserves. An apparent surplus of NHPP funds occurs in the 2017-2026 horizon because the routes that need improvement are not eligible for those funds. The state will spend the funds in other parts of the state where they are needed. Later in the Plan, the state will draw surplus funds from other areas to make major capital investments on I-24. Likewise, local fund reserves are used for emergency projects, responses to major developments, etc.

**Table 5-14: Projected Revenue Compared to Total Cost of Roadway Projects, by Horizon**

Funding Source	2017-2026		2027-2035		2036-2040	
	Revenue	Cost of Projects	Revenue	Cost of Projects	Revenue	Cost of Projects
<b>TENNESSEE</b>						
National Highway Performance Program (TN-NHPP) *	\$ 84.9	\$ 18.0	\$ 219.7	\$ 134.3	\$ 342.0	\$ 342.0
State Surface Transportation Program (TN-S-STP)	\$ 83.8	\$ 83.8	\$ 104.4	\$ 104.4	\$ 74.7	\$ 30.8
Highway Safety Improvement Program (HSIP)	\$ 11.1	\$ 11.1	\$ 13.8	\$ 13.8	\$ 9.9	\$ 9.9
Transportation Alternatives Program (TAP)	\$ 14.3	\$ 11.0	\$ 17.8	\$ 9.0	\$ 12.8	\$ 5.0
Local Surface Transportation Program (TN-L-STP)	\$ 47.6	\$ 47.6	\$ 62.3	\$ 62.3	\$ 44.5	\$ 18.8
City of Clarksville and Montgomery County (Local)	\$ 56.4	\$ 56.2	\$ 75.7	\$ 75.5	\$ 50.6	\$ 0
<b>TN Subtotal</b>	<b>\$ 298.1</b>	<b>\$ 227.7</b>	<b>\$ 493.7</b>	<b>\$ 399.3</b>	<b>\$ 534.5</b>	<b>\$ 406.5</b>
<b>KENTUCKY</b>						
National Highway Performance Program (KY-NHPP)	\$ 47.2	\$ 24.6	\$ 98.9	\$ 19.4	\$ 194.2	\$ 112.5
Surface Transportation Program (KY-STP)	\$ 25.2	\$ 25.2	\$ 31.4	\$ 31.4	\$ 22.4	\$ 1.8
State Funds (KY-SP)	\$ 51.3	\$ 43.5	\$ 84.6	\$ 51.1	\$ 142.8	\$ 0.5
<b>KY Subtotal</b>	<b>\$ 123.7</b>	<b>\$ 93.3</b>	<b>\$ 214.9</b>	<b>\$ 101.9</b>	<b>\$ 359.4</b>	<b>\$ 114.8</b>
<b>CUAMPO TOTAL</b>	<b>\$ 421.8</b>	<b>\$ 321.0</b>	<b>\$ 708.6</b>	<b>\$ 501.2</b>	<b>\$ 893.9</b>	<b>\$ 521.3</b>

Note: Revenues and costs are shown in millions of dollars and reflect year of expenditure.

\*Assumes NHPP expenditures for 2036-2040 will exceed typical regional spending levels since I-24 is a facility of statewide importance. See text for discussion.



Tables 5-15 and 5-16 illustrate that the recommended transit capital projects and services can be provided, based on regional projections of transit capital and operating funds. Revenue and costs for the 2014-2016 period are from the CUAMPO's current TIP.

**Table 5-15: Projected Revenue Compared to Total Cost of Transit Capital Projects, 2014-2040\***

Horizon	Projected Capital Revenue	Estimated Capital Costs
2014-2016	\$8.6	\$5.6
2017-2016	\$21.3	\$17.0
2027-2035	\$23.1	\$23.1
2036-2040	\$14.7	\$14.5
<b>Total (2014-2040)</b>	<b>\$67.7</b>	<b>\$60.3</b>

\* Revenue and costs are shown in millions of dollars, and reflect year of expenditure.

**Table 5-16: Projected Revenue Compared to Total Cost of Transit Operations, 2014-2040\***

Horizon	Projected Operating Revenue	Estimated Operating Costs
2014-2016	\$16.7	\$16.6
2017-2016	\$70.4	\$69.4
2027-2035	\$89.2	\$89.1
2036-2040	\$63.8	\$60.3
<b>Total (2014-2040)</b>	<b>\$240.1</b>	<b>\$235.3</b>

\* Revenue and costs are shown in millions of dollars, and reflect year of expenditure.



## UNFUNDED PROJECTS

Several additional projects have been listed separately in **Table 5-17** because they cannot be completed without more funding than is projected to be available for the 2040 Plan. This list is termed “illustrative,” since it illustrates the system investments that would fully implement the region’s transportation goals. Many of these projects have been proposed as part of other local and regional planning efforts. These projects are not currently eligible for federal funds available to the CUAMPO since they are not part of the official fiscally constrained Plan, but they can be considered if additional revenue becomes available, or in future Plan updates.

**Table 5-17: Illustrative Projects (Unfunded)**

Project No.	Roadway	Termini	Source
I-1	Terminal Rd./Needmore Rd./Fair Brook Place Connector	3-lane service road behind commercial development abutting the west side of Wilma Rudolph Blvd. (US-79/SR-13) from Fair Brook Place to Needmore Rd.	Clarksville 2030 Smart Growth Plan (SGP)
I-2	Professional Park Dr. Extension	Extension to Cardinal Ln.	Clarksville 2030 SGP, 1995 Clarksville Area Long Range Transportation Plan (LRTP)
I-3	Cardinal Ln. Extension	Dunbar Cave Rd. to SR-76	Clarksville 2030 SGP
I-4	International Blvd. Extension	Rossvie Rd. (SR-237) to SR-76 onto Trough Springs Rd. at Woodson Rd.	
I-5	Dixie Bee Rd. Extension	Sango Rd. to US-41A (SR-112)	
I-6	SR-374 (Richview Rd.) Extension	Madison St. (SR-112) south to the US-41A Bypass	
I-7	Kennedy Ln. Extension	over Spring Creek to Meriwether Rd.	1995 Clarksville Area LRTP
I-8	Tiny Town Rd. (SR-236) Extension	to Meriwether Rd.	1995 Clarksville Area LRTP
I-9	Dotsonville Rd. - Brady Dr. realignment	at Dover Rd. (US-79/SR-76)	
I-10	9 <sup>th</sup> Street-10 <sup>th</sup> Street Connector	New roadway	Alternative to 8 <sup>th</sup> St Extension from Franklin St. or Madison St., proposed in Clarksville 2030 SGP
I-11	8 <sup>th</sup> Street Connector	From Needmore Rd. at Arthurs Ct. to Patterson Ln. at Patricia Dr.	Clarksville 2030 SGP
I-12	New I-24 interchange	at Dunlop Ln.	1995 Clarksville Area LRTP, Clarksville 2030 SGP
I-13	Edgewood Place Connector	From East-West Connector to Ted Crozier Blvd.	Clarksville 2030 SGP
I-14	Richview Rd. (SR-374)	Widen from Memorial Dr. to Madison St. (US-41A)	
I-15	Northwest Corridor commuter rail or similar high-capacity transit service	Nashville to Clarksville	Initial Feasibility Study (2008), Update & Implementation Plan (2014)
I-16	Intermodal port facility	Cumberland River at Mile 122	General commodities terminal (rail/hwy/barge)





# Chapter 6

## Environmental Analysis: Potential Impacts and Mitigation

One of the Clarksville MPO's adopted goals, as outlined in Chapter 3, is to develop and maintain a transportation system that preserves the natural and cultural environment. The analysis in this chapter helps to evaluate how well the 2040 Metropolitan Transportation Plan meets that goal. MAP-21 also requires this type of review to ensure that appropriate consideration is given to potential environmental, historic and cultural impacts of the projects proposed in the 2040 Plan, as well as potential mitigation strategies.

One result of this review is a list of specific projects that are identified or "flagged" as potentially having environmental impacts, so that the discussion of avoidance and/or mitigation can begin early. More recently, MPOs have also begun to consider the relationship of the natural environment and the transportation system at a much broader scale, in terms of climate change and the network's resiliency to extreme weather events.

This chapter also assesses the extent to which the 2040 Plan fulfills the principles of Environmental Justice mentioned in Chapter 1. A geographic analysis is performed for the proposed transportation investments to identify whether there could be disproportionate impacts on minority or low-income populations, either through direct effects or through the lack of transportation investment.

### ENVIRONMENTAL CONSULTATION PROCESS

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As part of the development of the 2040 Plan, the Clarksville Area MPO implemented the following approach to ensure that environmental factors were considered:

- An appropriate level of review was undertaken to assess potential environmental, historic and cultural resource impacts in likely areas for mitigation activities in transportation planning;
- Potential impacts to wildlife and habitat were considered before transportation projects are planned, funded and designed;
- Consultation occurred with federal, state, tribal and local land use management, natural resources, wildlife, environmental protection, conservation and historic preservation agencies in developing the Plan; and,
- As part of the final Plan, the MPO has summarized the disposition of comments identified by the affected agencies.

### REVIEW OF PROPOSED TRANSPORTATION PROJECTS

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A review of available GIS databases was utilized to identify and locate known wetlands, flood zones, historic sites, and historic districts within the MPO boundary. Data collected were used to produce a base map of potential area impacts. Locations of the proposed projects in the 2040 Plan were then incorporated onto the base map to identify possible resource impacts.





Based on the data collected, the 2040 Plan does include projects that have the potential to impact sensitive environmental areas. The scopes of these projects vary and range from spot or intersection improvements to construction on new alignment. The locations shown for the projects are still at a planning level of detail and do not necessarily represent the final limits or exact design of the project. All federally-funded transportation projects must still go through the more detailed review of potential impacts required by the National Environmental Policy Act (NEPA). As a project is further developed, its footprint will continue to be refined and impacts will be better known.

It is also important to note that while the physical constraints of the project may not directly intersect an identified environmentally sensitive area, it is possible that project-related activities may have an indirect impact on the area. The final environmental impacts associated with each project will be determined only after an environmental study for the project is completed.

### Historic Lands Analysis

Throughout the Clarksville MPO area, the highest concentration of historic sites and historic districts are located in the central core of Clarksville. The City of Clarksville provided mapping files outlining the historic districts within the MPO area. In total, there are seven identified historic districts listed on the National Register of Historic Places. These districts include:

- **Clarksville Architectural District** (added 1976)
  - Public Square, Legion, 3<sup>Rd</sup>, Franklin, and Commerce Streets
  - 174 acres, 26 buildings
- **Clarksville Industrial District** (added 1976)
  - Bounded by Washington St, Crossland Ave, the ICG railroad (abandoned), and the Cumberland River
  - 213 acres, 3 buildings, 2 structures
- **Dog Hill Architectural District** (added 1980)
  - Washington St., 1<sup>st</sup> St, Union St, Madison St, and 2<sup>nd</sup> St
  - 130 acres, 36 buildings
- **Glenwood Historic District** (Glenwood Park) (added 1996)
  - 101-109 Glenwood Dr., 110-182 E Glenwood Dr., 111-179 W Glenwood Dr.
  - 260 acres, 67 buildings
- **Madison Street Historic District** (added 1999)
  - Address Restricted
  - 170 acres, 27 buildings
- **McCauley Hill Farm** (added 1995)
  - 1535 Harville Road
  - 5,180 acres, 18 buildings, 8 structures
- **Ringgold Mill Complex** (added 1980) (According to the Clarksville-Montgomery County Regional Planning Commission, this site may be delisted with the demolition of all buildings on the site.)
  - Northwest of Clarksville Mill Rd.
  - 50 acres, 4 buildings, 2 structures



Along with the historic districts identified above, properties listed on the National Register of Historic Places were also identified and compared with proposed project locations. Properties that fell within 500 feet of a proposed project centerline were recorded. This distance was used to incorporate any proposed right of way and potential alignment shifts. **Figure 6-1** shows the location of historic districts and historic sites in the MPO area in comparison with the general location of proposed transportation projects. **Table 6-1** summarizes potential impacts based on the historic data available.

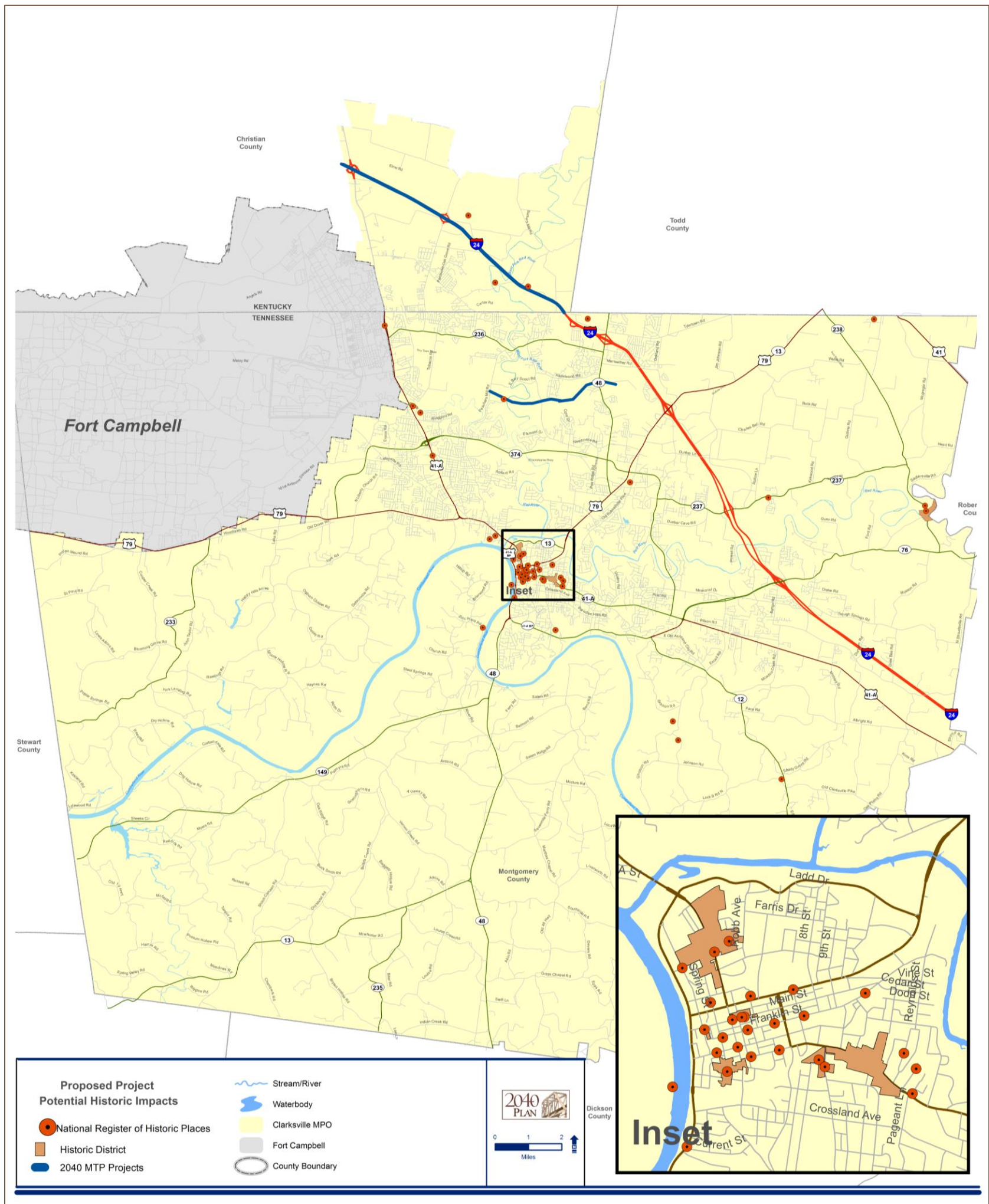
**Table 6-1: Projects with Potential Impact on Historic Resources \***

<b>National Register of Historic Places</b>					
<b>Location*</b>	<b>Project No.</b>	<b>Project Name</b>	<b>From</b>	<b>To</b>	<b>Description</b>
Allen House	T-35	East-West Connector, Phase 2	SR-48 (Trenton Rd.)	Peachers Mill Rd.	New Route
Simon French House	K-04	I-24	US-41A (Fort Campbell Blvd.)	TN/KY state line	Widen from 4 to 6 lanes
<b>Historic Districts</b>					
No impacts anticipated					

\*Sites are shown if located within 500' of the centerline of the road proposed for improvement.



Figure 6-1: Projects With Potential Impact on Historic Resources



## Wetland and Floodplain Analysis

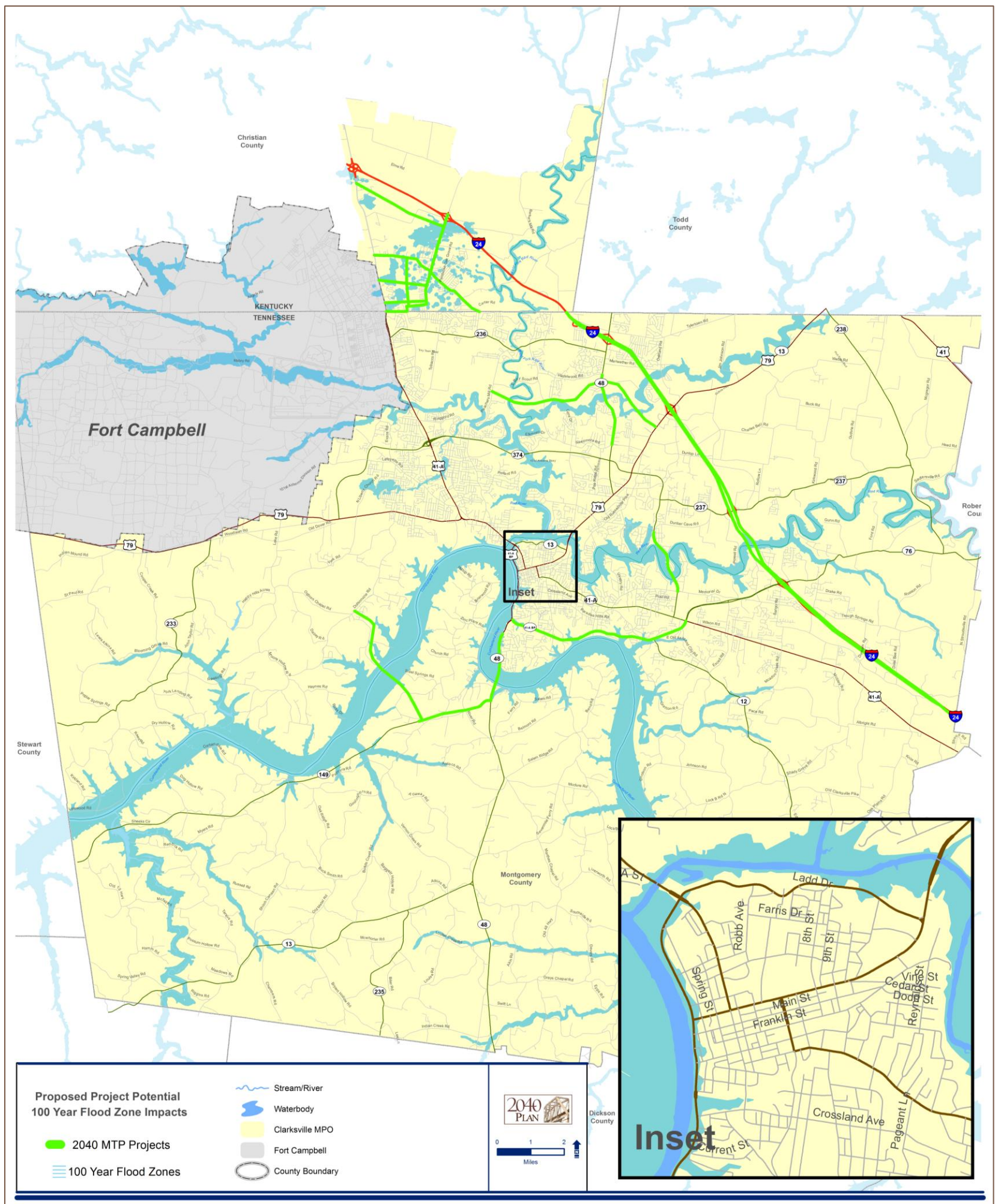
Potential impacts to floodplains and wetlands have also been investigated as part of the environmental analysis. A 100-year floodplain, as defined by the Federal Emergency Management Agency (FEMA), is an area that will be inundated by the flood event having a 1 percent chance of being equaled or exceeded in a given year. Proposed projects were compared to areas known to be within the 100 year floodplain. Projects with potential impacts are listed in **Table 6-2** and shown in **Figure 6-2**.

**Table 6-2: Projects with Potential Impact on 100-Year Floodplains**

Project Number	Project	From	To	Description
E+C 21	KY-911 (Thompsonville Ln.)	US-41A (Fort Campbell Blvd.)	KY-115/Pembroke Rd.	Widen from 2 lanes to 5 lanes (TIP project 13)
T-43	SR-149/SR-13	Proposed SR-374	Zinc Plant Rd.	Widen from 2 to 5 lanes (TIP project 4)
K-06	KY-400 (State Line Rd.)	US-41A (Fort Campbell Blvd.)	KY-115/Pembroke-Oak Grove Rd.	Widen from 2 to 5 lanes
K-07	KY-115/Pembroke-Oak Grove Rd.	TN/KY state line	I-24	Widen from 2 to 3 lanes
K-12	Oatts-Riggins Rd.	KY-400 (State Line Rd.)	KY-911 (Thompsonville Ln.)	New Route
T-16	East-West Connector, Phase 1	US-79 (Wilma Rudolph Blvd.)	SR-48 Trenton Rd.	New Connector
T-05B	Trenton Rd. (SR-48)	Hazelwood Rd.	Needmore Rd.	Widen from 2 to 5 lanes
T-06	I-24	KY/TN State Line	SR-76	Widen from 4 to 6 lanes
T-35	East-West Connector, Phase 2	SR-48 (Trenton Rd.)	Peachers Mill Rd.	New Connector
T-40	SR-374/Richview Rd./Warfield Blvd.	Memorial Dr.	Dunbar Cave Rd.	Widen from 2 to 4 lanes
T-42	SR-374 Extension (Alternative C)	SR-149	Dotsonville Rd.	New 2-lane roadway (TIP project 5)
T-23	US-41A Bypass (Ashland City Rd.)	US-41A/SR-112	SR-13	Widen from 2/3 lanes to 5 lanes
K-02	Hugh Hunter/Gritton Church Rd.	KY-911 (Thompsonville Ln.)	TN/KY state line	Reconstruct 2-lane road
K-05	Gate 4 Extension – Fort Campbell	US-41A (Fort Campbell Blvd.)	KY-115/Pembroke-Oak Grove Rd.	New 2-lane road
K-10	KY-117	US-41A (Fort Campbell Blvd.)	KY-115/Pembroke-Oak Grove Rd.	New Road
K-11	Gate 5 Extension - Fort Campbell	US-41A (Fort Campbell Blvd.)	KY-115/Pembroke-Oak Grove Rd.	New Route



Figure 6-2: Projects with Potential Impact on 100-Year Floodplains



In addition to 100-year flood zones, potential wetland impacts were also investigated. The U.S. Environmental Protection Agency defines wetlands as “lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface.” Wetlands are further described under the Clean Water Act as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

Wetland data was gathered from the U.S. Fish and Wildlife Service. The data was mapped for the entire MPO region for comparison with proposed projects in the 2040 Plan. All projects potentially impacting wetland areas larger than one acre have been identified and compiled in **Table 6-3**.

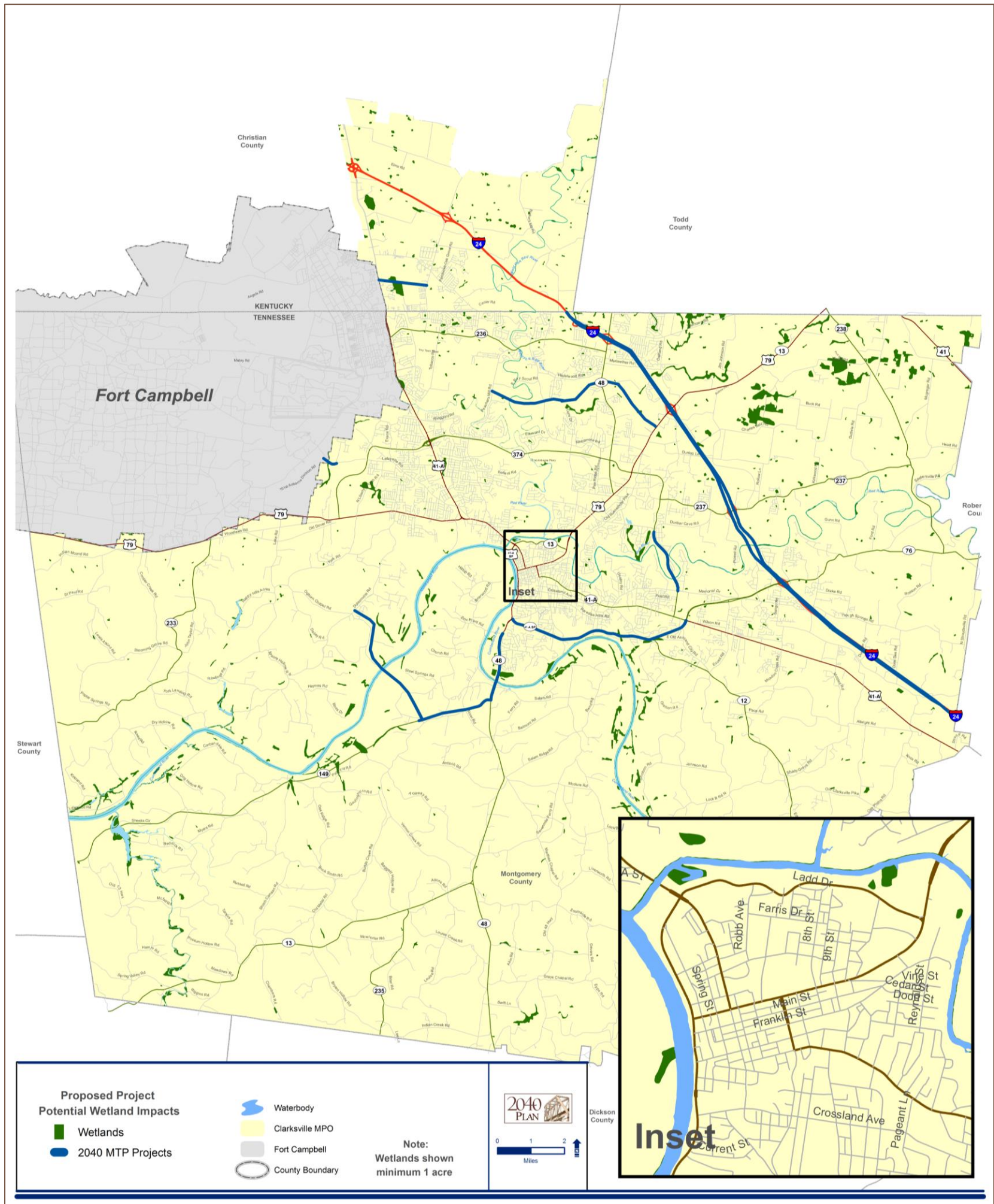
**Table 6-3: Projects with Potential Impact to Wetlands \***

Project	Project Name	From	To	Description
T-16	East-West Connector, Phase 1	US 79 (Wilma Rudolph Blvd.)	Trenton Rd. (SR-48)	New 4-lane road
T-35	East-West Connector Phase 2	SR-48 (Trenton Rd.)	Peachers Mill Rd.	New 4-lane road
T-43	SR-149/SR-13	Proposed SR-374	Zinc Plant Rd.	Widen from 2 to 5 lanes (TIP project 4)
T-42	SR-374 Extension (Alternative C)	SR-149	Dotsonville Rd.	New 2-lane road (TIP project 5)
T-23	US-41A Bypass (Ashland City Rd.)	US-41A/SR-112	SR-13	Widen from 2/3 to 5 lanes
T-06	I-24	KY/TN State Line	SR-76	Widen from 4 to 6 lanes
T-40	SR-374/Richview Rd./Warfield Blvd.	Memorial Dr.	Dunbar Cave Rd.	Widen from 2 to 4 lanes
T-29	Lafayette Rd.	Walnut Grove Rd.	Gate 10 - Fort Campbell	Widen from 2 to 4 lanes
K-11	Gate 5 Extension - Fort Campbell	US-41A (Fort. Campbell Blvd.)	KY-115/Pembroke-Oak Grove Rd.	New 2-lane road

\*Projects are identified here if a wetland area larger than 1 acre is within 100’ of the road’s centerline.



Figure 6-3: Projects with Potential Impact to Wetlands



## Karst Areas Analysis

The Clarksville MPO area is located within the geographic region known as the Western Highland Rim, which is characterized by karst terrain or the presence of sink holes and caves. Karst is generally underlain by limestone or dolomite, where the topography is formed chiefly by the dissolving of rock. Karst landscapes are commonly characterized by sinkholes, sinking streams, closed depressions, subterranean drainage, large springs, and caves (such as Dunbar Cave).

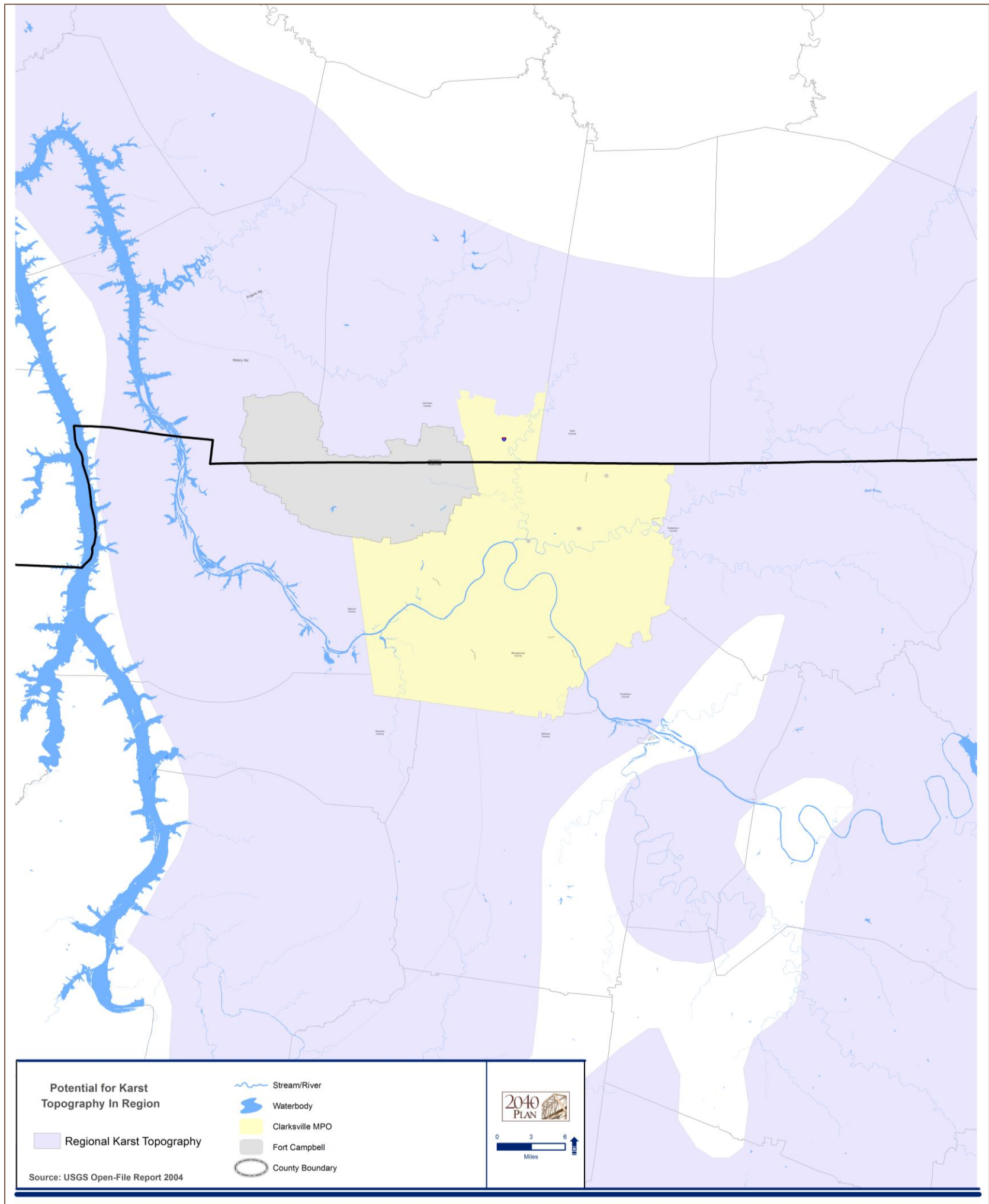
Karst regions are susceptible to unique problems such as sinkhole collapse, sinkhole flooding, and rapid groundwater pollution. Springs in karst areas are an important, productive source of groundwater. Rare biologic communities and endangered species can be found in the fragile underground environment which has developed in karst landscapes.

**Figure 6-4** identifies karst areas in the region surrounding the Clarksville MPO area. As demonstrated by the USGS data, the MPO area is located entirely in a potentially high karst area. All construction projects proposed within the MPO area will implement strategies to handle topographic issues as they arise.





Figure 6-4: Areas of Potential Karst Topography



## ENVIRONMENTAL MITIGATION STRATEGIES

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As previously mentioned, MAP-21 directs states and MPOs to expand the consideration of environmental issues and impacts within the transportation planning process. Metropolitan and statewide transportation plans must include a discussion of types of potential environmental mitigation activities as part of their plans. The following strategies have been developed by the Clarksville MPO to address and consider environmental impacts relative to its decisions early in the planning process:

- Continue to use GIS information to identify environmental features (both physical and cultural) early in the planning process, in order to avoid impacts and/or to establish early corrective action plans prior to project construction.
- Partner with local, state, and federal resource agencies early in the planning process to identify potential issues relative to projects under consideration in the MPO's plans and programs to develop appropriate solutions prior to actually beginning the project development process.

Environmental impacts cannot always be avoided. Mitigation is the attempt to offset potential adverse effects of human activity on the environment. Potential mitigation activities should be consistent with the requirements of agencies who have responsibility for the human and natural environments. Steps to take in the project development process include:

- **Avoid Impacts**  
The first strategy in the environmental process is to avoid adverse impacts altogether.
- **Minimize Impacts**  
Minimizing a proposed activity / project size or its involvement may be an option.
- **Mitigate Impacts**  
Precautionary, special operational management features and/or abatement measures may be used to reduce construction impacts and repair or restore existing resources.
- **Compensate for Impacts**  
Compensation could be made for environmental impacts by providing suitable replacement, or by substituting environmental resources of equivalent or greater value on or off-site.

CUAMPO will continue to work with resource agencies in the long range planning process and in the actual project development process, as appropriate. CUAMPO recognizes that not every project will require the same level of mitigation. All impacts on environmentally sensitive areas will be analyzed on a project by project basis to determine what mitigation strategies are appropriate.

For major construction projects, such as new roadways, or for projects that may have a region-wide environmental impact, a context sensitive solution process should be considered in which considerable public participation and alternative design solutions are used to lessen the impact of the project.



## CLIMATE CHANGE AND EXTREME WEATHER EVENTS

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Although the Clarksville region is experienced in dealing with the issue of transportation-related air pollutants, considering the implications of the transportation system on global climate change is a relatively new issue for the area.

There is general scientific consensus that the earth is experiencing a warming trend, and that it is important to minimize human-induced increases in atmospheric greenhouse gases (GHGs) to help combat this trend. The combustion of fossil fuels is by far the biggest source of GHG emissions. In the United States, approximately 29 percent of GHG emissions are from transportation sources.

### Climate Change Strategies

Because greenhouse gas emissions from transportation sources (fuel combustion and vehicle air conditioning systems) account for a large percentage of the total U.S. GHG emissions, the transportation sector will likely play a large role in the ongoing discussion of national GHG reduction goals. CUAMPO has already been engaged in some of the activities that the region can undertake to reduce transportation GHG emissions. Strategies include:

- ***Introduction of low-carbon fuels***

The objective of this group of strategies is to develop and introduce alternative fuels that have lower carbon content and therefore generate fewer transportation GHG emissions. These alternative fuels include ethanol, biodiesel, natural gas, liquefied petroleum gas, low-carbon synthetic fuels (such as biomass-to-liquids), hydrogen, and electricity.

- ✓ Members of CUAMPO have sponsored and obtained funds for projects to promote the use and availability of biodiesel in the region, as well as the purchase of hybrid vehicles for use in the public transit system. CUAMPO also maintains a list on its website of local fuel stations where citizens can purchase ethanol and biodiesel fuel.

- ***Improving transportation system efficiency***

These strategies seek to improve transportation system operations through reduced vehicle travel time, improved traffic flow, decreased idling, and other efficiency of operations, which can also result in lower energy use and GHG emissions. Strategies range from truck-idle reduction, to reducing congestion through Intelligent Transportation Systems (ITS) and other innovative forms of traffic management, to air traffic control systems that route aircraft more efficiently and reduce delays. Efficiency can also be improved by shifting travel to more efficient modes, where such shifts are practical in terms of price and convenience—such as passenger vehicle to bus, or truck to rail.

- ✓ CUAMPO's member agencies are implementing multiple technologies to cut energy consumption and improve traffic flow. This includes upgrading city traffic signals to use light-emitting diodes (LED), deployment of coordinated signal systems that can adapt to changing traffic conditions, and providing real-time information to citizens about congestion at recurring bottleneck areas.



- **Reducing carbon-intensive travel activity**

The objective of this group of strategies is to influence travelers' activity patterns to shift travel to more efficient modes, increase vehicle occupancy, eliminate the need for some trips, or take other actions that reduce energy use and GHG emissions associated with personal travel.

- ✓ The recent launch of regional commuter bus service between Clarksville and Nashville is an excellent example of a service that has persuaded many drivers away from single-occupant vehicle (SOV) trips. Now that Clarksville and Montgomery County have become members of the Regional Transportation Authority, the MPO can more formally participate in other RTA activities to manage travel demand, including employer vanpools.



### Adaptation to Climate Change

Although the Clarksville area will not be directly affected by rising sea levels or growing hurricane intensity, climate change has other weather-related effects that are very relevant to the region:

#### *More intense and longer lasting heat waves.*

Intense heat is damaging to transportation infrastructure, causing kinks in steel rails, placing stress on bridge joints, and softening asphalt. On routes with a large percentage of heavy truck traffic, it is not uncommon to see the roadway become heavily warped at the approaches to intersections,

a type of damage generated from the force of braking trucks on hot asphalt. Sustained heat waves could result in the need for more frequent road maintenance.

#### *More intense precipitation events.*

The record rainfall that created Kentucky and Tennessee's "Superflood" of 2010 inflicted millions of dollars in damage to the Clarksville region and forced the closure of major roadways.

Even smaller amounts of rainfall can significantly impact the transportation system when it is received in short, intense bursts. Since water is moving too quickly to be absorbed into the ground, it instead becomes surface runoff, causing dangerous ponding on urban streets and sometimes undermining their substructure. In areas of karst terrain, repeated deluges of fast-moving water can accelerate the erosion of limestone, creating caverns beneath roadways that may unexpectedly give way.

In the same year as the Superflood, the Tennessee Department of Transportation also dealt with a 25-foot sinkhole that opened suddenly on I-24 in southeast Tennessee, a series of sinkholes affecting an expressway in Knox County, and multiple rockfalls that occurred



after heavy rains, including one that closed a key route between Tennessee and North Carolina. Ironically, the roads most vulnerable to extreme weather are often the ones that provide the only passage through a difficult area.

Given the observed and anticipated changes in rainfall, it is particularly important for agencies to perform basic maintenance of bridge and drainage structures to ensure debris does not accumulate at openings. Retrofit actions may also be desirable to improve drainage structures on existing roadways as well as improvements to drainage structures during reconstruction and major improvement projects.

During the next year, CUAMPO will be participating in an effort led by TDOT to assess the vulnerability of the transportation infrastructure to climate change effects and extreme weather, and to consider various risk reduction strategies and their cost. This may lead to opportunities to incorporate additional strategies into CUAMPO's transportation planning activities.

## ENVIRONMENTAL JUSTICE AND TITLE VI

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Federal laws require that MPOs ensure federal funds are used fairly and without discrimination. Title VI of the Civil Rights Act of 1964 states that "No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Environmental Justice Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice (EJ) in Minority and Low-Income Populations*, clarified the need to involve minority and low-income populations in transportation decision-making processes and the need to assess the equity of transportation investments. The EO calls for identifying and addressing disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. Low-income population is defined as one whose median household income is at or below the Department of Health and Human Services poverty guidelines.

The intent of EO 12898, and the U.S. Department of Transportation's corresponding guidance, is to ensure that these groups are included in the transportation decision-making process, and to ensure that they may benefit equally from the transportation system without shouldering a disproportionate share its burdens.

A disproportionately high and adverse effect is one that is:

- Predominantly borne by a minority and/or low-income population; or
- Suffered by a minority and/or low income population more severely or in greater magnitude than the adverse effect suffered by the non-protected population.

Disproportionately high and adverse effects are not determined solely by the size of the population, but rather the comparative effects on these populations in relation to either non-minority or higher income populations. In this EJ assessment, U.S. Census data was used to identify the demographics of the area in order to recognize potential "communities of concern." Communities of concern are areas where the percentage of low-income households or minorities is greater than that of the entire MPO area.



It is important to note that impacts from transportation projects can be either positive or negative. For example, positive impacts could be improved traffic conditions, decreased accidents, and new/improved sidewalks and bikeways. In order to construct some of these projects, a negative impact could be disruption to residents and businesses during the construction period and right-of-way that may need to be acquired. As the projects in the 2040 Plan progress through the planning and design stages, these areas should be carefully addressed.

## ANALYSIS

### Minority Populations

2010 Census data indicates that minority persons comprise 33.2 percent of the population in the MPO area, as shown in Table 6-4.

**Table 6-4: Percent Minority Population in the MPO Area**

	Total Population	Minority Population	Pct. Minority Pop.
Montgomery County	172,331	56,778	32.9%
Christian County	73,955	23,246	31.4%
<b>MPO Area</b>	<b>176,840</b>	<b>58,884</b>	<b>33.2%</b>

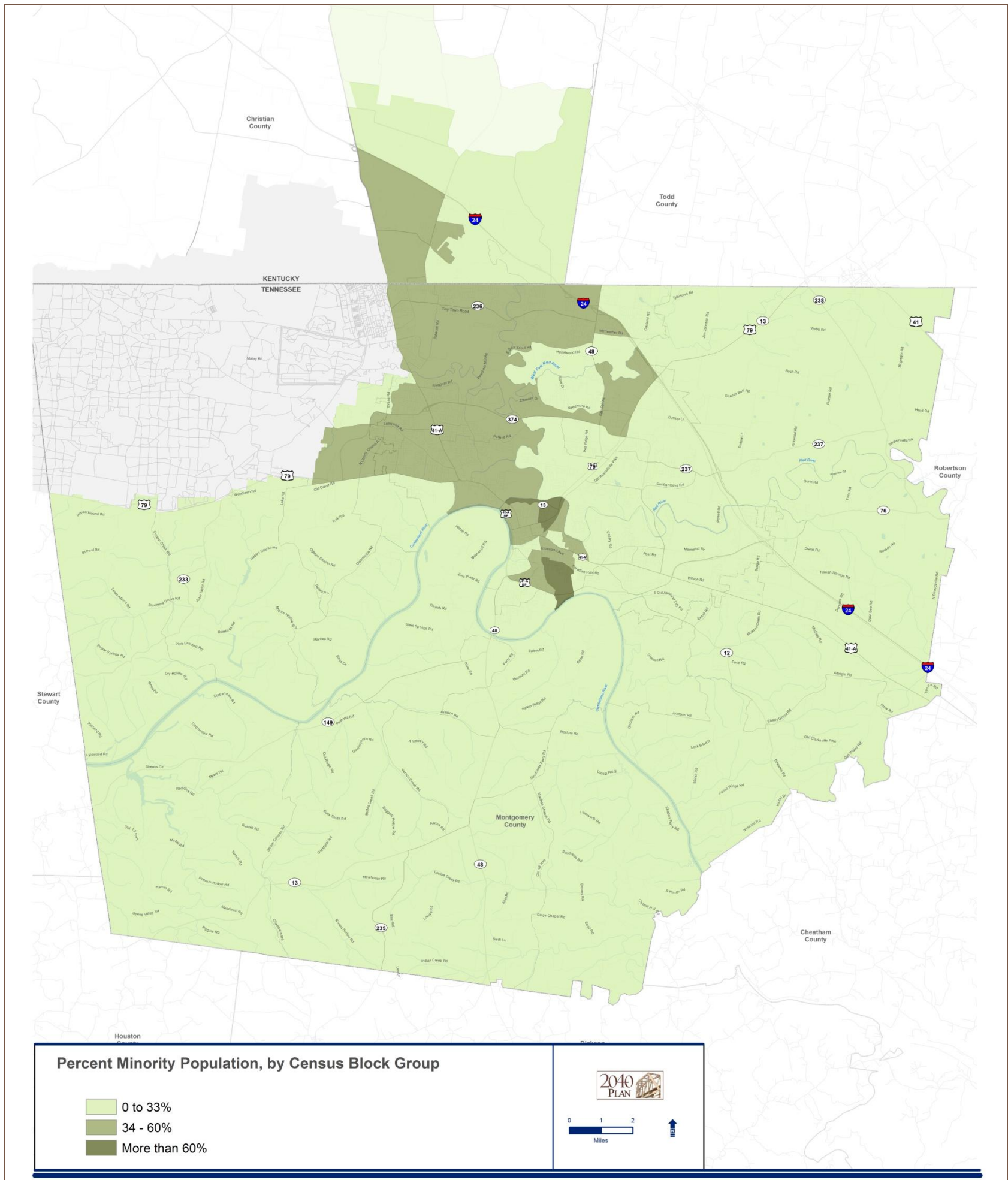
Minority persons, as defined by the U.S. DOT for purposes of environmental justice issues, includes persons of Hispanic ethnicity. The Hispanic population in the MPO area is about 8 percent. Since some Hispanic persons may have limited proficiency with English, CUAMPO follows federal recommendations in providing Spanish translations for all public notices involving the preparation and adoption of the Metropolitan Transportation Plan, the Transportation Improvement Program and the Public Participation Plan. The area’s Spanish-language newspaper, *El Crucero*, is also used by CUAMPO for public outreach efforts.

To identify communities of concern within the MPO area, concentrations of minority and low-income populations were mapped using Census block groups or tracts (depending on data availability) with percentages greater than the average of the MPO area. The determination of what is disproportionately high and adverse human health or environmental effect is context dependent. All block groups/tracts include some members of protected populations, and the approach used in the development of the Plan to identify communities of concern is only based on Census data and the proportion of protected populations that they contain. As each project enters the development process, additional local knowledge of individual neighborhoods should be used to identify potential communities of concern that might have been missed during this Census-based analysis.

The analysis of impacts on minority populations was performed using the MPO-wide average of 33.2% as a threshold; if the minority population of a Census block group is greater than this amount, the level of concern is assumed to be higher than in block groups below the threshold. As shown in **Figure 6-5**, using this approach it was determined that 40 of the 90 census block groups in the MPO area exceed this threshold and should be considered potential communities of concern.



Figure 6-5: Minority Population by Census Block Group



### **Low-Income Populations**

According to the 2010 Census, 13 percent of the MPO area population is considered to be low-income. Using this threshold, if the low-income population of a Census tract is greater than this amount, the level of concern is assumed to be higher than in Census tracts below the threshold. As shown in **Figure 6-6**, using this approach 19 of the MPO's 41 Census tracts exceed this threshold and based on this assessment should be considered potential communities of concern.

## **ALLOCATION OF FUNDS TO COMMUNITIES OF CONCERN**

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An analysis was performed to determine the level of investment proposed in the identified communities of concern.

### **Highway Projects**

Approximately \$1.5 billion in highway projects are planned throughout the MPO area as part of this Plan. Of these projects, \$968 million are totally or partially located in communities of concern. This represents approximately 65 percent of the total dollars invested in highway projects. The projects identified in this Plan that are located within minority and/or low-income areas are shown in **Table 6-5** and in **Figures 6-7** and **6-8**. For each of the projects an assessment of the likely impacts to residential properties, businesses, and community facilities was undertaken to determine a "Level of Concern". Because the majority of these projects involve widening or roadway extensions into primarily undeveloped areas, overall the level of concern for each of the projects is relatively low but will need to be studied in more detail as the specific designs for the projects are developed.

### **Roadway Safety and ITS Projects**

The roadway safety and ITS projects identified in the Plan are scattered throughout the MPO area and many of them may be developed in conjunction with proposed highway improvements. These improvements typically require little or no right-of-way acquisition and will have a significant positive impact on the residents and businesses as they address existing safety or traffic congestion problems.

### **Transit Projects**

The transit projects identified in the Plan involve continuing operating assistance for transit services and continuing capital assistance for the replacement of buses, replacement and upgrade of miscellaneous capital equipment, and to upgrade existing facilities. No major capital investment involving land acquisition is proposed. As noted in Chapter 4, most areas with the highest minority population are well-served by current transit routes and will benefit from the various service improvements and passenger amenities recommended in the Plan.

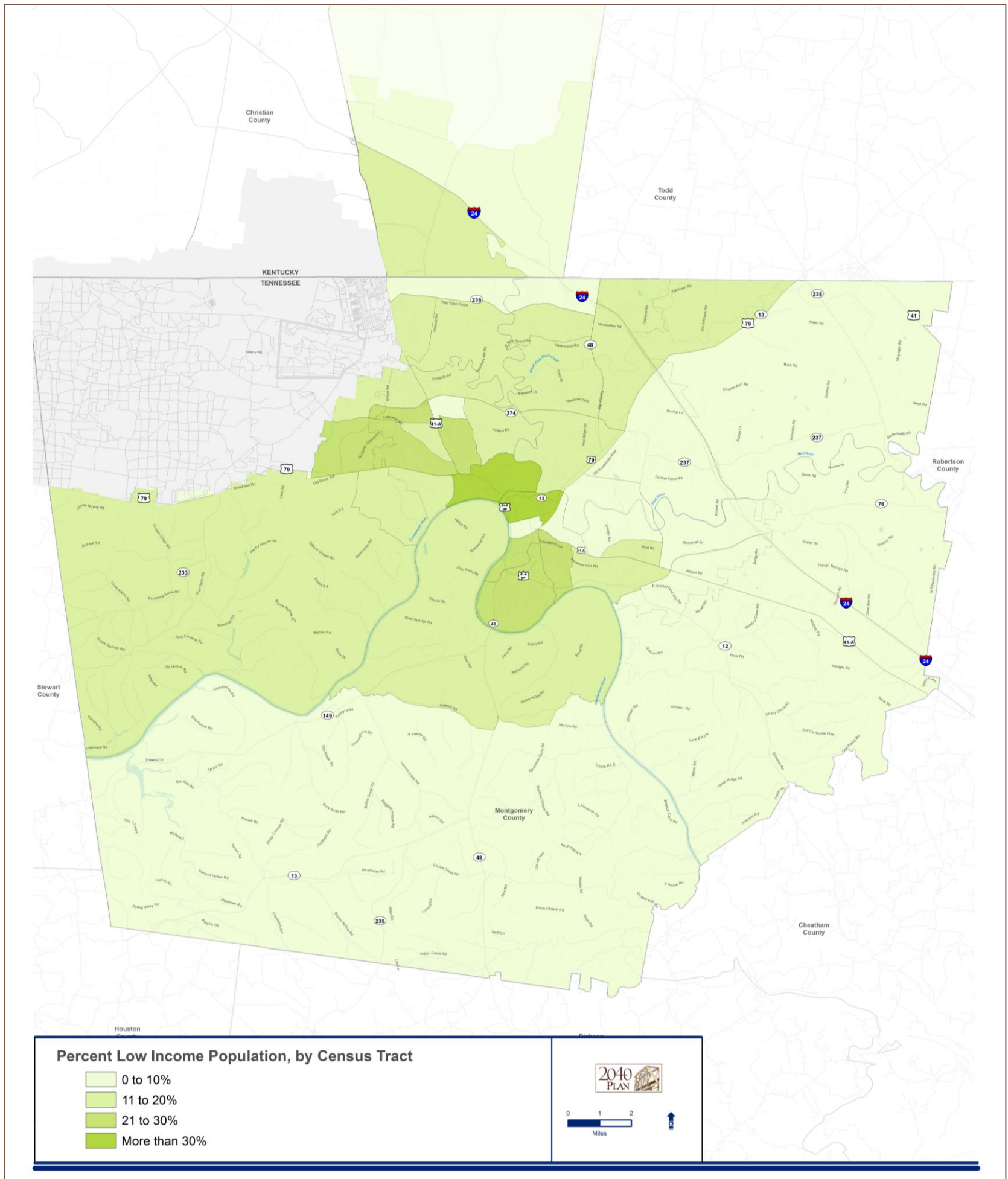
### **Bicycle and Pedestrian Projects**

The Plan recommends sidewalks along major commercial corridors, which will improve access to transit for many minority and low-income people. Adverse impacts are expected to be minimal. The bicycle and pedestrian projects identified in the Plan are scattered throughout the MPO area and most will likely occur in conjunction with proposed highway improvements. Where constructed as independent projects, they will require little or no right-of-way acquisition and are not expected to involve any displacements of businesses or residents.





Figure 6-6: Low-Income Population by Census Tract



**Table 6-5: Planned Roadway Projects in Minority and/or Low-Income Areas**

Project Number	Roadway	From	To	Length (Miles)	Type of Improvement	Current Lanes	Future Lanes	Cost (millions, in YOE)	Horizon Year	Potential Level of Concern
E+C 19	SR-374 Extension (Alternate C)	Dotsonville Rd.	US-79/SR-76 (Dover Rd.)	2.9	New road	0	2	E+C	2016	Low
E+C 21	KY-911 (Thompsonville Ln.)	US-41A	KY-115/Pembroke Rd.	1.8	Widening	2	5	E+C	2016	Medium
E+C 35	Oakland Rd	US-79/SR-13	Oakland Rd.	0.5	Realignment	2	2	E+C	2016	Low
K-06	KY-400 (State Line Rd.)	US-41A (Fort Campbell Blvd.)	KY-115 (Pembroke-Oak Grove Rd.)	1.4	Reconstruct - add center lane	2	3	\$16.2	2026	Low
K-07	KY-115 (Pembroke-Oak Grove Rd.)	TN State Line	I-24	2.9	Reconstruct - add center lane	2	3	\$28.2	2026	Low
K-12	Oatts-Riggins Rd. (New Roadway)	KY-400 (State Line Rd.)	KY-911 (Thompsonville Ln.)	1.5	New road	0	3	\$9.9	2026	Low
T-05A	SR-48 (Trenton Rd.)	Hazelwood Rd.	Tylertown Rd. (SR-236)	2.0	Widening	2	5	\$36.7	2026	Low
T-16	East-West Connector Phase 1	US-79 (Wilma Rudolph Blvd.)	Trenton Rd. (SR-48)	2.5	New road	0	4	\$34.1	2026	Low
T-22	Jack Miller Blvd. Extension	Tobacco Rd.	Peachers Mill Rd.	2.0	New road	0	4	\$29.5	2026	Low
T-29	Lafayette Rd.	Walnut Grove Rd.	Gate – Fort Campbell	0.4	Widening	2	5	\$8.2	2026	Low
T-43	SR-149/SR-13	Proposed SR-374	Zinc Plant Rd.	3.8	Widening	2	5	\$50.9	2026	Medium
T-33	US-79/SR-13/Guthrie Hwy.	I-24	Solar Way / International Blvd.	1.1	Widening	2/3	5	\$18.0	2026	Low
K-02	Hugh Hunter\Gritton Church Rd.	KY 911 (Thompsonville Ln.)	TN State Line	1.9	Reconstruction	2	2	\$24.2	2035	Low
K-05	Gate 4 Extension - Fort Campbell	US-41A (Fort Campbell Blvd.)	KY-115 (Pembroke-Oak Grove Rd.)	1.2	New road	0	2	\$19.4	2035	Low
K-10	KY-117 (New Roadway)	US-41A (Fort Campbell Blvd.)	KY-115 (Pembroke-Oak Grove Rd.)	3.0	New road	0	5	\$19.6	2035	Low
K-11	Gate 5 Extension - Fort Campbell	US-41A (Fort Campbell Blvd.)	KY-115 (Pembroke-Oak Grove Rd)	1.5	New road	0	2	\$26.9	2035	Low
T-05B	SR-48 (Trenton Rd.)	Hazelwood Rd.	Needmore Rd.	2.2	Widening	2	5	\$56.2	2035	Low
T-06	I-24	KY/TN State Line	SR-76	10.7	Widening	4	6	\$193.9	2040	Low
T-23	US-41A Bypass (Ashland City Rd.)	US-41A/SR-112	SR-13	5.5	Widening	2/3	5	\$134.3	2035	Medium
T-35	East-West Connector Phase 2	SR-48 (Trenton Rd.)	Peachers Mill Rd.	3.7	New Road	0	4	\$73.2	2035	Low
T-36	Peachers Mill Rd.	Pine Mountain Rd.	Stonecrossing Dr.	0.4	Widening	3	4	\$6.3	2035	Low
T-42	SR-374 Extension (Alternate C)	SR-149	Dotsonville Rd.	4.3	New Road	0	2	\$56.7	2035	Low
K-04	I-24	US-41A (Fort Campbell Blvd.)	TN State Line	7.8	Widening	4	6	\$112.0	2040	Low
T-01	Needmore Rd.	Hazelwood Rd.	SR-236 (Tiny Town Rd.)	0.9	Reconstruct - add center lane	2	3	\$13.6	2040	Medium
T-05C	SR-48 (Trenton Rd.)	SR-13/US 79 (Wilma Rudolph Blvd.)	SR-374/101st Airborne Division Pkwy.	1	Widening	2	5	\$25.0	2040	Low
T-18	Whitfield Rd./Old Trenton Rd.	Needmore Rd.	SR-374/101st Airborne Division Pkwy.	0.2	Reconstruct - add center lane	2	3	\$5.2	2040	Low

Notes: All projects in the 2014-2016 horizon have construction funds programmed in the MPO’s current fiscally constrained Transportation Improvement Program (TIP). These projects are distinguished by a project number that begins with “E+C,” meaning the project is either “existing” (already built) or “committed” (funds have already been programmed). The Cost column also shows “E+C” to indicate that the funds have already been committed. “YOE” is year of expenditure, meaning that estimated project costs have been inflated to the year in which they are expected to be funded.



Figure 6-7: Planned Roadway Projects in Minority Areas

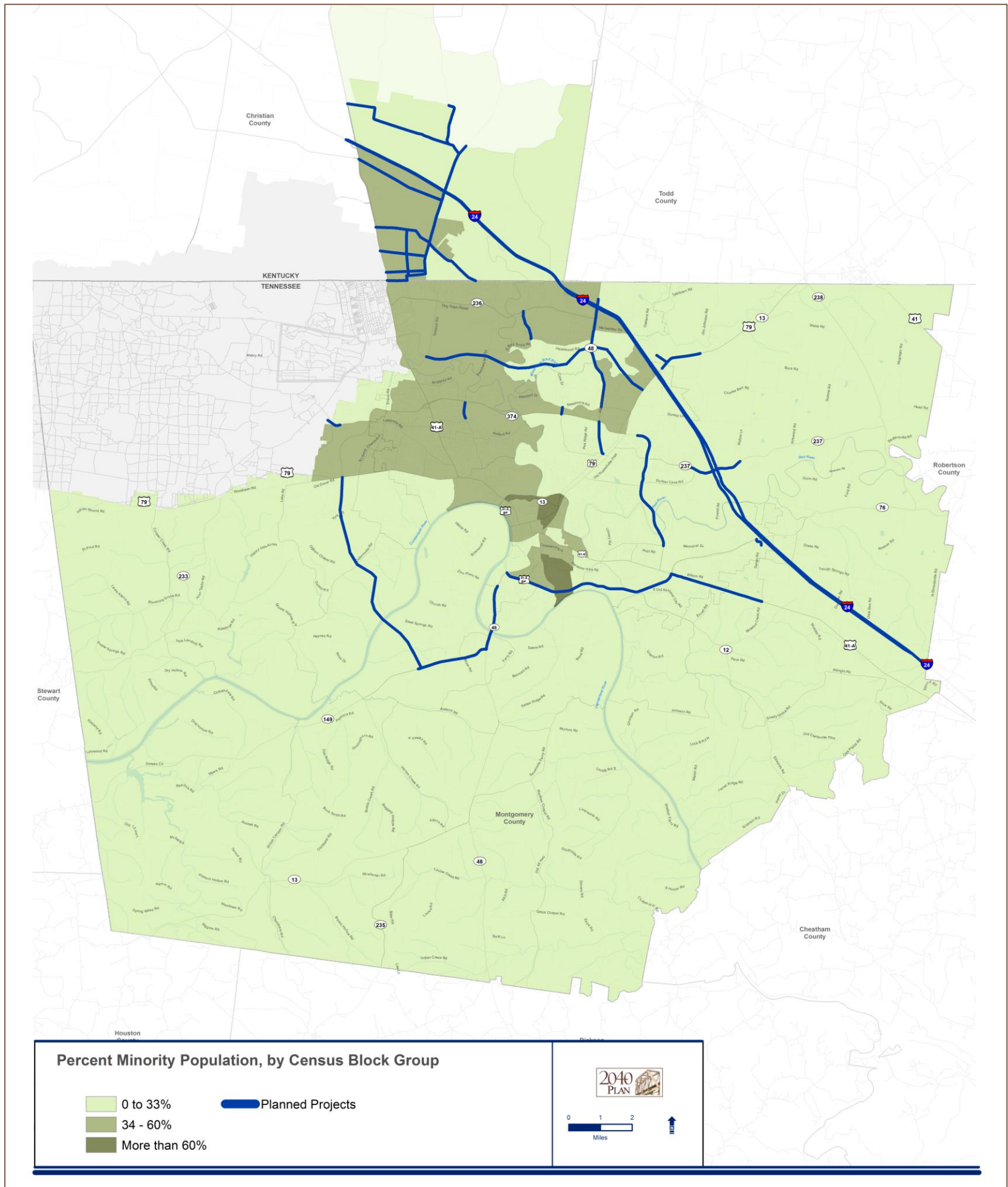
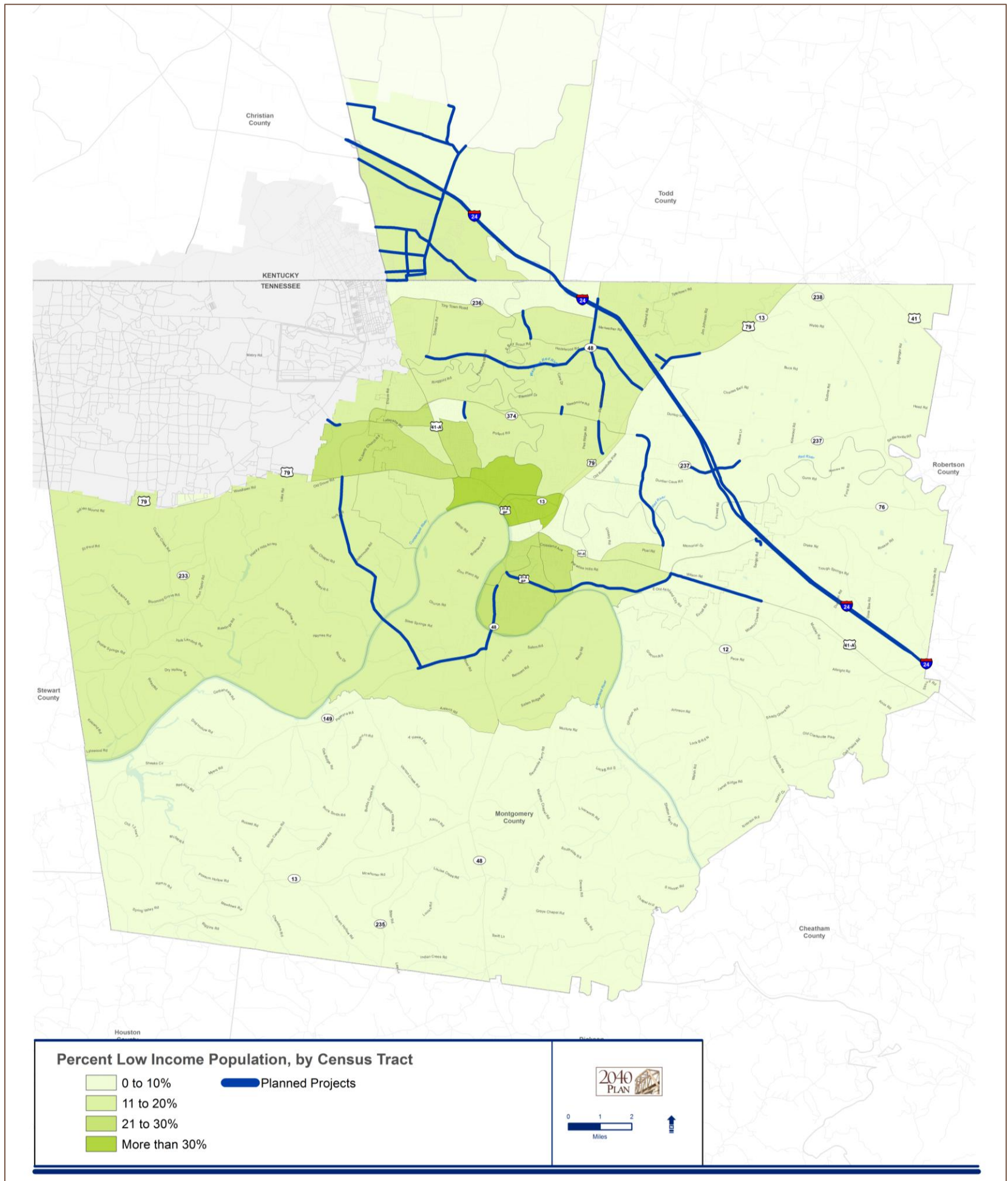


Figure 6-8: Planned Roadway Projects in Low-Income Areas



## SUMMARY

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Although all segments of the population who live adjacent to roadway construction projects may endure some short-term construction related impacts related to visual changes, noise changes, and alterations in access, neither minority or low-income populations in the MPO area are likely to experience disproportionate impacts due to the projects proposed in the Plan.

Because populations shift and change, additional efforts to identify potential communities of concern should be undertaken as part of the future phases of each project. To ensure that all persons are involved, special outreach efforts are made by local and state agencies during the project development process to identify, and either avoid or help mitigate any adverse impacts and/or burdens from transportation improvements for those areas identified as communities of concern.

Many of the projects identified in the Plan will likely utilize federal funding, in which case documentation in compliance with the National Environmental Policy Act (NEPA) will be required. During the NEPA process, a variety of issues will be evaluated, including an EJ analysis pursuant to EO 12898. In addition, the development of the NEPA document will require public participation, and local coordination with potential environmental justice issues can be identified and addressed.





# Chapter 7

## Public Participation

CUAMPO seeks to proactively involve the public in all phases of the transportation planning process. The CUAMPO Executive Board has an adopted Public Participation Plan which describes the procedures the staff undertakes to collect public and stakeholder input and how that input is used in the development and adoption of its plans and programs, including the Metropolitan Transportation Plan, the Transportation Improvement Program, and the Unified Planning Work Program (UPWP).

This chapter outlines the process used to encourage involvement in the development of the 2040 Plan and summarizes the input and comments received from other agencies, stakeholders, the freight community, and the community at large.

### **PUBLIC PARTICIPATION PLAN**

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The CUAMPO Executive Board adopts and maintains a Public Participation Plan to ensure that all interested parties have reasonable opportunity to comment on the contents of the Metropolitan Transportation Plan.

In addition to participation from the general public, the Public Participation Plan includes the goal of involving freight shippers and providers of freight transportation services, representatives of public transportation employees, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties in the development of the Plan.

### **Consultation with Local, State, and Federal Agencies**

The MPO seeks to actively engage local, state, and federal agencies in regional transportation planning through a formal consultation process. This consultation includes, as appropriate, contacts with regional, local, and private agencies responsible for planned growth, economic development, environmental protection, airport operations, freight movements, land use management, natural resources, conservation, and historic preservation.

### **Metropolitan Transportation Plan**

The Public Participation Plan outlines the overall approach and steps taken to ensure that public review and comment are afforded during the development of the Plan. An initial public meeting is held when development of the Plan first begins, to invite the public to provide general comments about long-range transportation needs and priorities. Notice of the opportunity for public comment, including the date, time and location of the public meeting, is provided through all of the outlets described in CUAMPO's Public Participation Plan. This includes paid advertisements in local newspapers; posting notices on the



CUAMPO website, on CTS buses, and at public buildings including the CTS transfer center, CUAMPO office, Oak Grove City Hall and Hopkinsville City Hall.

CUAMPO staff also directly notifies a list of stakeholders and special interest groups, including representatives and locations that serve Environmental Justice communities (See Chapter 6). Anyone can request to be added to the list for direct notification. Notices are provided in both English and Spanish, and a paid advertisement is made in *El Crucero*, a locally available Spanish-language newspaper. Ads are also placed in the Fort Campbell Courier and the Eagle Post.

CUAMPO staff also obtains input from the Clarksville Transit System, Pennyriple Allied Community Services, Clarksville Regional Airport, Fort Campbell and other members of the CUAMPO TCC, chambers of commerce, members of the CUAMPO Executive Board, KYTC, TDOT, and other stakeholders. The CUAMPO staff uses this input, along with technical and financial analysis (summarized in earlier chapters of this document) to develop a draft Plan in consultation with stakeholders and interested parties.

The draft Plan is submitted to TDOT and KYTC for review and comments related to federal transportation planning requirements. CUAMPO staff makes any necessary revisions based on the states' comments. The draft Plan is then sent out to various resource agencies for comment and submitted for review by FHWA and FTA. After receiving comments from those parties, CUAMPO staff makes any appropriate changes before releasing the draft Plan for official public review and comments for a period of 30 days.

Notice of the opportunity for public comment is provided through paid media advertisements; posting notices on the CUAMPO website, and providing flyers on CTS buses and public buildings including the CUAMPO office. The notice specifies the dates, times, and locations of public hearings where the draft Plan will be presented and discussed to obtain comments and public input. This notice is published a minimum of thirty (30) days prior to the meeting date prior to its final consideration and adoption by the Executive Board. Additionally, an electronic version of the draft Plan is posted on the MPO website. After the public hearings, any comments received are incorporated into the draft Plan as appropriate. All public comments are compiled, along with a summary of their disposition. If the revised draft Plan is significantly different from the previous draft, it is released for another 14-day public comment period.

The final draft Plan is reviewed at a joint meeting of the CUAMPO's TCC and Executive Board which includes a final public hearing to receive any additional comments. The TCC recommends the final draft Plan to the CUAMPO Executive Board, which then votes on the Plan's adoption. Copies of the adopted Plan are forwarded to state, federal and local officials, published on the CUAMPO website, and made available on a continuing basis at the MPO offices.

## **PUBLIC PARTICIPATION**

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Opportunities for public input are not limited to those outlined above. During the development of the 2040 Plan, CUAMPO used a variety of outreach methods to seek the input of interested parties, which



are described below. Even after the adoption of the 2040 Plan, CUAMPO staff will continue to accept comments on an ongoing basis by letter, e-mail, fax, telephone, or through the MPO website.

### **Initial Public Meeting**

CUAMPO held a public meeting February 14, 2013 at the Clarksville Regional Airport's meeting room to invite general input from citizens and stakeholders about regional transportation concerns and relative priorities that should be considered in the 2040 Plan. The meeting was in an open house format with display maps showing the projections for future population and employment throughout the region, existing levels of service on area roadways, and future levels of service associated with the projected population and employment growth.

### **Public Comments at CUAMPO Executive Board Meetings**

Each CUAMPO Executive Board meeting held during the period of the 2040 Plan's development also included a time during which citizens were invited to make comments to the Board. At the April 18, 2013 meeting, the Executive Board received citizen comments suggesting some CTS service changes.

### **Public Survey**

During the initial period of the 2040 Plan's development, CUAMPO staff developed a brief survey on transportation needs and concerns. A copy of the survey form is included in **Appendix B**.

The survey was posted on the CUAMPO website and the link to access it was included in the notices that went out about the initial public meeting to gather citizen input. In addition, the City of Clarksville and Montgomery County used their social media tools to promote the survey, and copies were provided to local elected officials so that they could encourage their constituents to participate. Paper copies of the survey were also given to citizens who attended the initial public meeting to fill out or to send in at a later time, and copies were placed at the CUAMPO office and other public buildings.

The number of responses was small (31) but certainly comparable to the typical number of citizens attracted by public meetings. Notable survey findings are outlined below and in **Figures 7-1** through **7-3**.

- Almost 90% of those who responded to the survey said they drive to work or school; the remaining 10% were evenly split among walking, bicycling, or using public transit.
- Half the respondents were not aware of the new daily bus service between Clarksville and Nashville.
- About 50% said they never walk or ride a bicycle to get somewhere. About 20% said they do walk or bicycle, but only for exercise or recreation; almost 15% walk/bike at least twice a week.
- The age ranges of those who responded to the survey were fairly well-distributed except for ages 16 to 24 (for which no responses were received) and ages 65 and up, which accounted for 4% of the responses.
- 85% of the respondents said they work either in Christian or Montgomery counties. The others said they are retired or do not work, or they work elsewhere.





Figure 7-1: Survey Respondents' Ranking of Transportation System

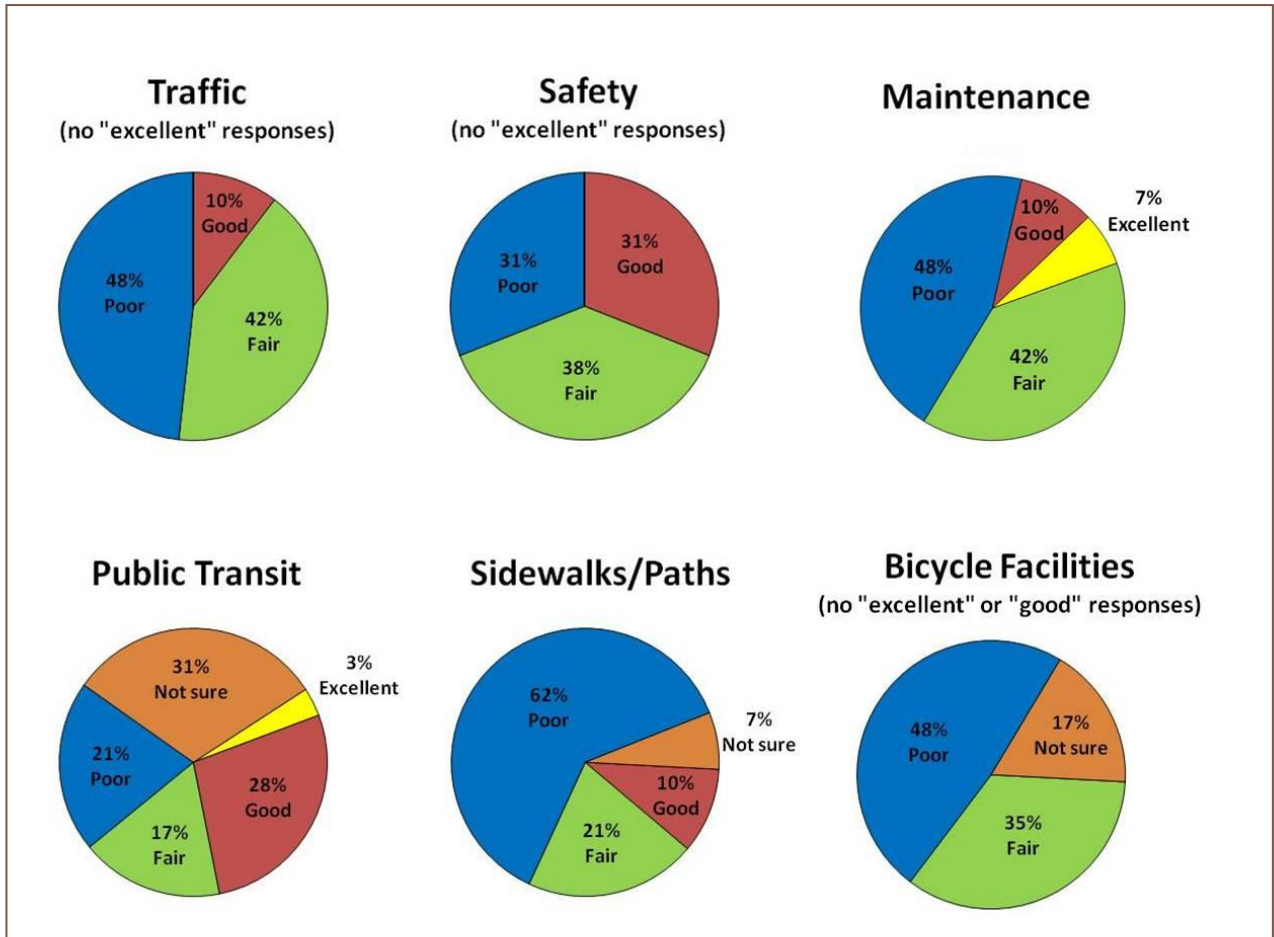
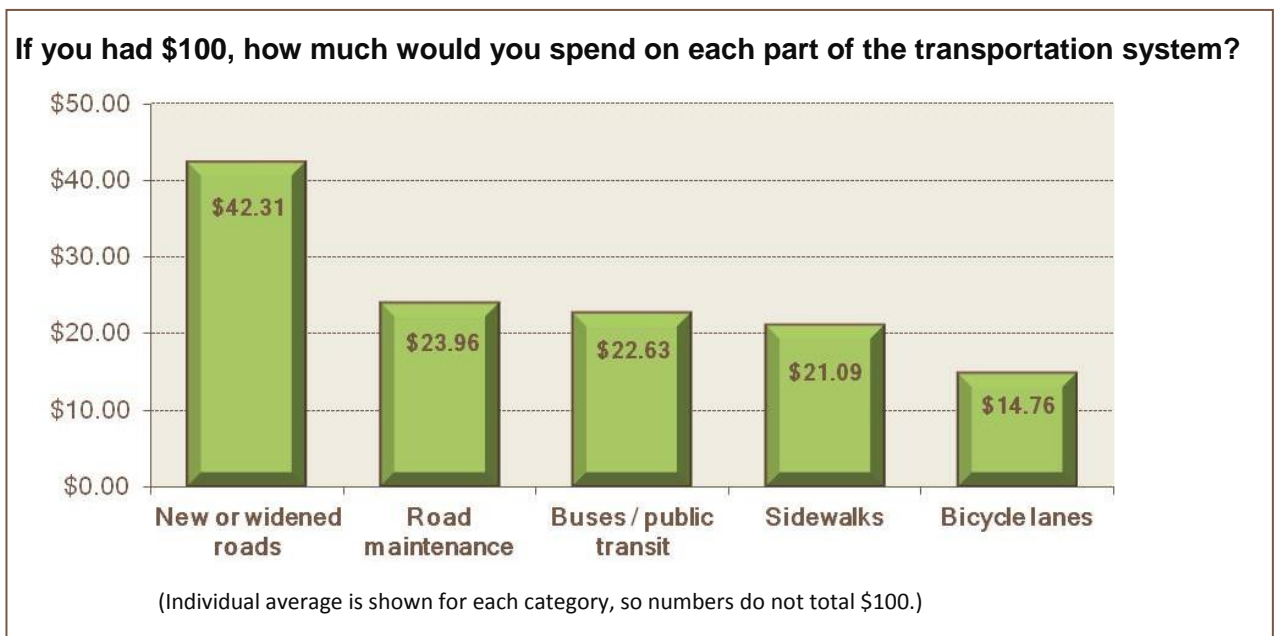


Figure 7-2: Average Expenditure Rate Proposed by Survey Respondents



As shown in **Figure 7-2** above, persons responding to the survey were asked how they would divide a hypothetical \$100 among various types of transportation system needs. (Since survey respondents volunteered as opposed to being part of a randomly selected sample, these results can be viewed as informative but are not statistically valid.) The resulting average, by category, seems to indicate interest in a moderate increase in the proportion of transportation spending on transit, sidewalks and to a lesser extent, bicycle facilities.

**Figure 7-3: Priority Road Needs Identified by Survey Respondents**

<b>Which roadway or intersection is your biggest concern, and why?</b>		
<b>Location</b>	<b>Issue</b>	<b>Pct. of Respondents</b>
* Riverside Drive and SR-48/13	Congestion, safety	14%
Trenton Road (SR-48)	Congestion; safety near Northeast High School	10%
Wilma Rudolph Blvd.	Congestion due to turns; safety	17%
* Madison St. (US-41A, SR-112) /Sango Rd.	Intersection safety	10%
Madison St. (US-41A) generally	Congestion, too many driveways; use of center turn lane for passing	13%
* Madison St. (US-41A) at the bypass (SR-76/ SR-12 /Ashland City Rd.)	Congestion	10%
Madison St. – other	Maintenance (visibility) near SR-76; bottleneck at Greenwood Ave.	14%
I-24 Exit 8 at Rossvie Rd. (SR-237)	Safety	3%
Tiny Town Rd. (SR-236)	Safety due to center turn lane	3%
Sango Rd.	Safety: bicyclists with no shoulder	3%
Crossland Dr. from Riverside Dr. to Madison St.	Safety; numerous lane shifts	3%

Several locations mentioned by citizens as an area of concern are programmed for improvements in the CUAMPO’s FY2014-2017 Transportation Improvement Program. These are identified with an asterisk in Figure 7-3. Lack of access management was cited by a significant number of survey respondents who mentioned safety concerns on major roads like Madison Street and Wilma Rudolph Boulevard.

### **Freight Survey**

CUAMPO developed a survey tailored to the interests of freight transportation stakeholders and distributed through local industrial council members to obtain input on ways to improve the movement of goods throughout the region. The response rate was minimal despite a number of followups. This may be in part because many companies are in the business/industrial park located off I-24 and US-79/Guthrie Highway, which has favorable access both by highway and shortline rail, as discussed in the freight section of Chapter 4. Traffic forecasts indicate that future operational improvements will be



needed at the I-24 /US-79 interchange. Some peak hour congestion issues are also anticipated to occur in the future on US-79/Guthrie Highway east of I-24 due to the amount of projected residential development along that corridor.

As discussed in Chapter 4, industries located south of SR-76 (Dover Road) near the Cumberland River may experience challenges accessing I-24 from their location because of the high volume of other local traffic using 101<sup>st</sup> Airborne Parkway (SR-374) and Wilma Rudolph Boulevard (US-79) for cross-town movements. While these businesses may be oriented toward barge transport, most goods must move to and from the river port by highway and/or rail. The proposed shortline rail improvements and general commodities port (described in Chapter 4) would help address some of these mobility issues.

## **PUBLIC COMMENTS**

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The draft 2040 Plan was released for public comment on January 3, 2014 and advertised and distributed in accordance with CUAMPO's public participation procedures as described above.

CUAMPO held public meetings January 14, 2014 at Oak Grove City Hall and January 16, 2014 at the Montgomery County Public Library to present the draft Plan and receive public comment. The meetings included a brief presentation followed by an open house with display maps and handouts highlighting the Plan's key findings and recommendations. CUAMPO staff also met with the Concerned Motorcyclists of Tennessee, Montgomery County chapter on February 3, 2014 to present and obtain comment on the draft Plan.

Citizens identified KY-115 (Pembroke-Oak Grove Road) and the Warfield Boulevard portion of SR-374 as high priorities for roadway widening projects, and Dunbar Cave Road as an additional route to consider widening if possible.

A number of comments were also received regarding the need for better and safer pedestrian facilities, particularly in areas with higher numbers of transit riders. Citizens noted the excellent pedestrian facilities along Peachers Mill Road and the number of people seen using them as a result. Suggested pedestrian improvements included sidewalks and crosswalks along US-41A (Fort Campbell Boulevard), including Cunningham Village, where citizens said they frequently see pedestrians attempting unsafe crossings. More bus shelters were recommended. Needmore Road was identified in particular as a route where current conditions do not provide an adequate place for bus riders to wait.

Public comments also focused on the need for enforcement of traffic laws on major commercial corridors such as US-41A (Fort Campbell Boulevard), SR-236 (Tiny Town Road), US-79/SR-13 (Wilma Rudolph Boulevard) and SR-112 (Madison Street). Citizens reported that drivers are using the center turn lanes on these routes as if they were merge lanes, driving along the center turn lane until they find an opening in traffic. The US-41A Bypass (Ashland City Highway) was also identified as a route where many drivers weave in and out of traffic, making abrupt unannounced lane changes.



Citizens asked for improved maintenance, specifically more visible pavement markings throughout the City of Clarksville. They also suggested operational improvements in the form of signal adjustments at two intersections on SR-236 (Tiny Town Road) that would allow more time for southbound traffic on US-41A to turn east onto SR-236, and for northbound traffic on Needmore Road to turn west onto SR-236. Ringgold Road was mentioned as needing maintenance attention, and it was noted that the road is being used as an alternative to US-41A (Fort Campbell Boulevard) to and from SR-374 (101<sup>st</sup> Airborne Division Parkway).

The 2040 Plan includes the roadway widening projects mentioned by citizens as their highest priority and emphasizes pedestrian improvements on corridors with transit routes as recommended by citizens who provided comments on the draft Plan. CUAMPO staff has also shared public comments and requests related to traffic law enforcement, maintenance and near-term operational needs with the local agencies who are responsible for these activities on the specific routes that were mentioned.



# APPENDIX A

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## Documentation of the CUAMPO Travel Demand Model Update

(Not included in this copy, but posted as separate downloadable file.)

# APPENDIX B

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## Public Participation in the 2040 Plan



**Give your input now on transportation needs for the Clarksville region.**

Our future prosperity depends on our ability to keep people and goods moving safely and efficiently within, and through, the greater Clarksville area.

Between now and the year 2040, the population of this region is expected to increase about 50 percent, reaching a total of more than 250,000 people. In addition, as the “baby boomer” generation grows older, senior citizens will make up nearly 15 percent of the region’s population by 2040. These changes will impact travel patterns, and will also affect the types of transportation facilities and services that our citizens need.

We are starting to update the 25-year Metropolitan Transportation Plan, which addresses travel by all modes, including streets and highways, bikeways and walkways, public transportation, aviation, rail and waterways. The Plan is developed to meet U.S. DOT requirements in order to spend federal transportation dollars that are allocated each year to the Clarksville region. It must be updated every four years to verify whether conditions have changed and provide the opportunity to re-evaluate proposed plans, programs and projects. The Clarksville Area Metropolitan Planning Organization (MPO) is the governing entity that is charged with carrying out this process for the Clarksville Urbanized Area.

This is the beginning of a year-long effort which will look at current deficiencies, growth trends, and anticipated long-term needs. The final recommendations will include a list of transportation projects and programs to be adopted jointly by local elected officials for Clarksville, Montgomery County, Oak Grove, Hopkinsville, and Christian County, as well as the Clarksville Transit System, Tennessee Department of Transportation and Kentucky Transportation Cabinet.

Our choices about future transportation investments will be guided by these regional goals:

- *Enhance and Maintain an Efficient, Safe, and Secure Highway and Street Network*
- *Manage the Local Thoroughfare System to Minimize Congestion*
- *Maintain and Enhance the Region’s Economic Vitality*
- *Develop an Integrated Multi-Modal Transportation System that Serves the Needs of Both Passenger and Freight Traffic*
- *Develop a Transportation System that Preserves the Natural and Cultural Environment*

The Plan must be based in financial reality. It will include only the projects and programs that can be funded with the amount of revenue reasonably expected to be available over the next 25 years. This may mean difficult choices must be made – so it is important for you to participate in the discussion of needs and priorities.

Our initial public meeting will be held **Thursday, Feb. 14 from 5 to 7 p.m.** at Outlaw Field, 200 Airport Road, Clarksville. Citizens and other stakeholders are invited to make comments and suggestions about regional transportation concerns, desired improvements, funding, and related issues. Input is also being collected through [this on-line survey](#).



After this initial round of public input, we will develop a technical analysis and evaluate various solutions to address the transportation needs that have been identified in the region. The final list of recommendations will be the projects and programs that are projected to achieve the greatest reductions in traffic congestion; reduce crashes for drivers, pedestrians and cyclists; generate the least possible amount of air pollution, and consume as little energy as possible.

We will present the draft Plan recommendations at public meetings in **December 2013**. The final Plan is scheduled for adoption by the MPO in **January 2014**.

***Plan Implementation***

The 25-year Plan is implemented gradually as projects are selected for short-term funding in the MPO's Transportation Improvement Program (TIP). This document lists the specific projects and programs to receive federal funding over a four-year period. It includes major transportation improvements – like constructing a new bridge or road – as well as small-scale improvements such as intersection changes. The MPO is also updating the TIP this year, and is accepting public input at the same Feb. 14 meeting.





**Give your input now on transportation needs for the Clarksville region!**

[Click here](https://www.surveymonkey.com/s/CUAMPO) or copy and paste this link into your browser: **<https://www.surveymonkey.com/s/CUAMPO>**

Our future prosperity depends on our ability to keep people and goods moving safely and efficiently within, and through, the greater Clarksville area.

Between now and the year 2040, our population will grow about 50 percent, reaching a total of more than 250,000 people. This growth will influence travel patterns and the types of transportation facilities and services that our citizens need.

Your input is needed as we update the 25-year Metropolitan Transportation Plan, which addresses travel by all modes, including streets and highways, bikeways and walkways, public transportation, aviation, rail and waterways.

The Plan will include only the projects and programs that can be funded with the amount of revenue expected to be available over the next 25 years. This may mean difficult choices must be made – so it is important for you to participate in the discussion of needs and priorities!

To see what projects were recommended by the last plan (2009), click [here](#).

<http://www.cuampo.com/files/2035%20MTP%20Exec%20Summary%20English%20Final%20031010.pdf>



Available on-line at: <https://www.surveymonkey.com/s/CUAMPO>

## Transportation Needs in the Clarksville Region

### 1. How do you usually get to work/school?

- Drive personal vehicle
- Ride bus or other public transit
- Carpool/vanpool
- Bicycle
- Walk

Other (please specify)

### 2. How would you rank the Clarksville region's transportation system in each of these areas?

	Excellent	Good	Fair	Poor	Not sure
Traffic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Road maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bus / public transit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sidewalks and paths	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bicycle lanes and routes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 3. Which roadway or intersection is your biggest concern?

### 4. Why did you choose this roadway (or intersection) as your greatest concern?

- Safety
- Traffic congestion/bottleneck
- Maintenance

You can add further detail in this box.



**5. How often do you ride the bus or use other public transit?**

- Every day
- At least twice a week
- Once a week
- Once a month
- Never

Any comments?

**6. Did you know there is now daily bus service between Clarksville and Nashville?**

- Yes
- No

**7. How often do you walk or ride a bicycle in order to get somewhere?**

- [Click here if you only walk or bike for exercise / recreation.](#)
- Every day
- At least twice a week
- Once a week
- Once a month
- Never

Any comments?

**8. If you had \$100 dollars, how much would you spend on each part of the transportation system?**

New or widened roads	<input type="text"/>
Road maintenance	<input type="text"/>
Buses / public transit	<input type="text"/>
Sidewalks	<input type="text"/>
Bicycle lanes	<input type="text"/>

**9. Please tell us a few things about your regular travel.**

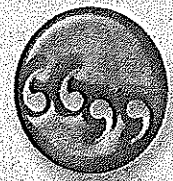
	Yes	No
Do you drive?	<input type="radio"/>	<input type="radio"/>
Do you own a vehicle?	<input type="radio"/>	<input type="radio"/>
Do you work in either Montgomery or Christian County?	<input type="radio"/>	<input type="radio"/>

**10. Here's the last question.**

	Gender	Age	Zipcode where you live
---	<input type="text"/>	<input type="text"/>	<input type="text"/>



certain without further publication, upon announcement at the time and place for the sale set forth above. All right and equity of redemption, statutory or otherwise, homestead, and dower are expressly waived in said Deed of Trust, and the title is believed to be good, but the undersigned will sell and convey only as Substitute Trustee. The Property is sold as is, where is, without representations or warranties of any kind, including fitness for a particular use or purpose. RECONTRUST COMPANY, N.A. IS ATTEMPTING TO COLLECT A DEBT. ANY INFORMATION OBTAINED WILL BE USED FOR THAT PURPOSE. RECONTRUST COMPANY, N.A., Substitute Trustee 2380 Performance Dr, TX2-984-0407 Richardson, TX 75082 Tel: (800) 281-8219 Fax: (866) 681-5002 Registered Agent: CT Corporation System 800 South Gay Street, Suite 2021 Knoxville, TN 37929 Tel: (865) 342-3522 TS#: 12-0074473 FEI # 1006.17038.1 01/11/2013, 01/18/2013, 01/25/2013



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**Business For Sale**

**Public Meeting Announcement:** The Clarksville Metropolitan Planning Organization (MPO), which is responsible for transportation planning for the area that includes Clarksville/Montgomery County, Oak Grove and southern Christian County, will hold a public meeting on Thursday, February 14, 2013, from 5:00pm to 7:00pm at the Outlaw Field Airport upstairs conference room, 200 Airport Road, Clarksville, TN 37042. The purpose of the meeting is to solicit comments and suggestions on needed transportation improvements in the region, both short and long term. Comments provided at the meeting will help guide the development of the 2040 Metropolitan Transportation Plan, which is being updated this year. The plan serves as a blue print for long-term transportation investments on streets and highways, public transportation, sidewalks and bike paths, as well as for airports, railroads and waterways in the Clarksville region. Comments are also being accepted on existing and potential projects to be considered for the FY2014-FY2017 Transportation Improvement Program (TIP), which is also being updated this year. Any new projects considered for the TIP will be prioritized based on adopted criteria. By federal law, the number of projects in the TIP is limited by the amount of available funds. Individuals unable to attend the meeting are encouraged to provide written comments and suggestions via e-mail at Stan.Williams@cityofclarksville.com or via US mail to Clarksville: MPO, 329 Main Street, Clarksville, TN 37040.

**Anuncio de Reunión Pública:** La Organización Metropolitana de Planeación (MPO) de Clarksville responsable por la planeación de transportación para el área que incluye el Condado de Clarksville/Montgomery, Oak Grove y la parte sur del Condado de Christian, conducirá una reunión pública el día Jueves, Febrero 14, 2013, de 5:00pm a 7:00pm en el salón de conferencias del segundo piso en el Outlaw Field Airport, 200 Airport Road, Clarksville, TN 37042. El propósito de esta reunión es solicitar comentarios y sugerencias sobre la necesidad de mejoras a largo y corto plazo en transportación de la región. Los comentarios proporcionados en la reunión ayudaran a guiar el desarrollo del Plan Metropolitano de Transportación 2040, que será actualizado este año. Este plan sirve como guía para inversiones a largo plazo en calles y carreteras, transportación pública, aceras y rutas para bicicletas; así como para inversiones en aeropuertos, ferrocarriles y vías fluviales en la región de Clarksville. Igualmente se están aceptando comentarios referentes a proyectos existentes y proyectos potenciales que serán considerados para el FY2014-FY2017 Programa para Mejoras de Transportación (TIP), que también será actualizado este año. La prioridad para cualquier proyecto nuevo considerado para el TIP se dará en base al criterio adoptado. Por ley federal, el

es to the accident at the intersection of 41A & Concord Dr. on Dec 25, 2012 at 7:30 PM. (931)220-1035

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NICE 2 BDRM, optional w/d \$550mo+dep. credit check & ref. No pets. Off Dover Rd. 931-648-2125

OLD ASHLAND CITY HWY Area, 1 bdrm, 1 ba, full garage. \$425 mo. \$300 dep. 931-591-3037

PEACHERS MILL RD. Large 1 Bdrm furnished apt.

\$500 deposit. W/D incl. 931-601-4441

2 BDRM, Clean! No Pets! \$550 mo. 931-624-6822 [www.buckrentals.com](http://www.buckrentals.com)

SANGO AREA Townhome, easy access to I-24, 2 Bdrm, 1.5 BA, private patio w/outside storage. \$600 deposit. \$600 month. 931-624-4253, lve msg.

ST. B, Nice 2 Bdrm, 1.5 Ba townhome, \$550 mo. \$400 dep. 931-206-0998

**Duplexes**

CLARKSVILLE, 2 Bdrm, 1 BA duplex & apt. near Post, lease, no pets. \$450 mo. 931-552-9153

CLARKSVILLE, near NY High. 20 min to Post. 2 bdrm, 1 BA, hookups. No pets. \$550, mo, \$550, dep. Must have good credit. Travis/Dot 931-237-7369 or 237-7368

NEW PROVIDENCE 1 bdrm, 1 BA, Furnished or Unfurnished. \$360/mo or \$460/mo With Utilities. No Pets. 931-362-9935

**Homes For Rent**

1st Choice Real Estate Apts & Homes \$375-\$1200. 931-552-7565. Move now! 1st-choice-realestate.com

4 BDRM, Clean! No Pets! \$475 mo. 931-624-6822 [www.buckrentals.com](http://www.buckrentals.com)

BEL AIR SUBDY, 3 bdrm, 1 BA, hardwood flrs, fire-place. Nice carpet & garage. \$775 mo. Avail now. Call 931-237-8097

CLARKSVILLE, 228 Mark Spliz. 3 BDRM, 2 BA. New Appliances & Carpet. Perfect Inside & Out. Rent ready. Fenced yard. No pets. \$750 mo. + \$750 dep. Call 615-672-0924

CLARKSVILLE 2 homes for rent. 3 bdrm 1 ba. 1 house w/bonus room, 1 house w/1 car gar. No pets. \$750 + dep. All section 8 welcome. 931-237-1863

CLARKSVILLE, 3432 Oak Lawn Dr. 3 bdrm, 2 BA. 1 car garage, fenced back yard. 10 min to Gate 4. Call 270-886-4595

CLARKSVILLE, 3 bdrm, 1.5 ba, appliances, no pets. \$750 mo + \$500 dep 931-378-1831

CLARKSVILLE, 3 bdrm, 1 1/2 BA. \$750, mo \$750, dep. 931-551-9205

CLARKSVILLE 3 Bdrm, 1 BA, Den, LR, appliances, w/d hookups, fresh paint, hardwood floors. \$800 mo. + \$800 dep. Section 8 welcome. Call 931-624-3756

CLARKSVILLE, 3 bdrm, 2.5 ba, across from the country club, 5000 sq ft, no pets. \$1500 mo. \$500 dep. 931-378-1831

CLARKSVILLE 3 Bdrm 2 BA w/central gas heat, air, 1 car garage, fenced back yard. North side of town. \$875 mo. plus \$875 dep. NO smokers. 731-333-6270

CLARKSVILLE 3 Bdrm, lg den, carpet, fenced backyard, \$875 mo. Pets neg. 931-980-1225

CLARKSVILLE - ST B 3 Bdrm, 2 BA, river bluff lot with view. Hardwoods, \$1250 mo. 931-472-9175

**Check It Out**

CLARKSVILLE, TN 1353 Bruceton Dr. Large 3 bdrm, 2 bathrm home w bonus in Fields of Northmead. Open plan w wood floors, granite and

\*All Sizes And Prices. You Can Move In Today. Call for Details **CHEROKEE PROPERTIES** 931-552-1891 [www.cherokeepropertymanagement.com](http://www.cherokeepropertymanagement.com)

**Mobile Homes/Lots For Rent**

3 BDRM Clean! No Pets! \$575 mo. 931-624-6822 [www.buckrentals.com](http://www.buckrentals.com)

CLARKSVILLE 2 & 3 BDRM Mobile Homes near Post & Downtown. No pets. \$375 & up. 931-278-0863

CLARKSVILLE, 2 bdrm, 1 BA, \$325, mo and up. \$400, dep. 931-551-9205

CLARKSVILLE AREA 3 BDRM, 2 BA, \$550/mo. \$400 dep. 931-378-1831

**LAFAYETTE RENTALS** 2 & 3 Bedrooms 931-551-9212

OAK GROVE, 2 bdrm, 1 BA, \$400, mo \$400, dep. 931-551-9205

Homes - Area 71-77

**219 Sherwood** \$835.00

1,056 Sq. Ft. ALL Appliances: Stove, Fridge, Dish Washer and Dryer 1 Car Garage Spacious Backyard Conveniently Located



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1 Log on to our website and use our online ad placement tool to create, preview and schedule your classified ad at your convenience.

2 Call one of our Classified Representatives between 7:30am and 5:00pm Monday through Friday.

3 Email or fax your ad to us and one of our Classified Representatives will contact you to complete your order.

ANNOUNCEMENTS EMPLOYMENT BUSINESS SERVICES PETS, FARMING TRANSPORTATION MERCHANDISE REAL ESTATE

Advertisements for various services including: Announcements, Notices, Help Wanted (Customer Service, Warehouse Associate, Receptionist, Dental Office), Pets (Pomeranian, Utility Trailer), Sporting Goods (Gun Show, PACESTER PRINTING), Antiques (Vintage Radio, Dishwasher), Building Materials (Metal Storage, Sawmills), and Home Electronics (25" Sanyo, Toshiba TV).

Advertisements for various services including: Meet Singles Right Now, Need More Response?, Drivers-CDL-A No Gimmonds, Security Officers, Sew & Sew Upholstery, ATVs, Couch, 4-Wheeler, Auto Services/Supplies, Camper Shell, Pets (Pug Pups, Beagle), Browning Shot Gun, and Public Notices.

Advertisements for various services including: Found, Drivers- No Experience?, Flatbed Drivers, Gypsum Express, 35 Driver Trainees, Act Now, FIND IT CLASSIFIED, HOME WEEKENDS, and Tennessee Health Careers LLC.

Advertisements for various services including: Find The Kind Job You Want In The Fort Campbell Courier Classifieds, Tennessee Health Careers LLC, and 20 years of helping miracles happen!

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Toll Free: 877-INERSA Fax: 270-887-3222 Email: classified@theeaglepost.com www.clickads.com

THE Eagle POST Connecting All Things For People and Surrounding Communities www.theeaglepost.com

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PLACING A CLASSIFIED AD IS AS EASY AS 1, 2, 3...

1 Log on to our website and use our online ad placement tool to create, preview and schedule your classified ad at your convenience.

2 Call one of our Classified Representatives between 7:30am and 5:00pm Monday through Friday.

3 Email or fax your ad to us and one of our Classified Representatives will contact you to complete your order.

Grid of classified advertisements including sections for Announcements, Notices, Help Wanted, Business Services, Motorcycles, Hunting/Fishing, Home Electronics, Apartments for Rent, and various other services and real estate listings.

Just a call does it all! Dial 887-3250 THE Eagle POST CLASSIFIEDS

20 years of helping miracles happen! KENNY CROOK GOLF CLUB

TRUST IN LIFE Digital Trust Insurance Plan

Public Meeting Announcement: The Clarksville Metropolitan Planning Organization (MPO), which is responsible for transportation planning for the area that includes Clarksville/Metropolitan County, Oak Grove and Southern Christian Community College (SCC) areas, is holding a public meeting on Thursday, February 14, 2013, from 5:00pm to 7:00pm at the Oakdale Field Airport parking conference room, 200 Airport Road, Clarksville, TN 37042.

click for ads.com

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Toll Free: 877-4ENERA
Fax: 270-887-3222
Email: class@harrisnewera.com
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1 Log on to our website and use our online ad placement tool to create, preview and schedule your classified ad at your convenience.

2 Call one of our Classified Representatives between 8:00am and 5:00pm Monday through Friday.

3 Email or fax your ad to us and one of our Classified Representatives will contact you to complete your order.



Apartments For Rent

1 Bedroom
Apartment, includes washer, \$135 rent and deposit 270-348-2344

1 Bedroom
Upper apartment. No smoking. No pets. AD location. \$175/month. Call 270-498-6512

2 Bedrooms
Great location. Area and town homes. \$135-\$175. \$500 deposit. Utilities not included. No pets. Call for showing 270-887-4813

Calvin Manor Apartments
Conveniently located near factories and shopping centers. Spacious units with all effects included in rent. Contact Pat 270-885-8425

Campbell Place Apartments
\$399 total move in. (That quality renter pays) 2 bedrooms starting at \$500. Pet friendly. 270-885-8105

Chapel House Friendship House
Income based studio, 1 bedroom, and handicap accessible apartments for seniors age 62 plus. Call 270-885-8105

2 Bedroom House For Rent
2 bedrooms home for rent in Hopkinsville. Price range \$425-475. Call 270-498-5149

206 Morningside Dr.
Great neighborhood, 2 bedrooms, 1 bath, large central heating, \$550 rent/deposit. Call 270-881-3165

Large
2 bedroom, full electric washer/dryer hookups. 270-881-2654

Laurel Cove
One Bedroom, furnished or unfurnished. Utilities included. Laundry facility. Short or long term lease. Located at 2511 Fort Campbell. Bolivar. 270-886-0712

Non Smoking Home
55 and older, 2 bedroom, 1 Bath, Newly Remodeled yard work and maintenance included. No deposit 270-498-1387

Apartments For Rent

Moving Now January Rent Free
Austin Acres
55 and older Community. \$550 rent. Includes cable, laundry room on site. Individual garage. Call 270-727-0077

Spacious Townhomes With Garages
SPACIOUS LIVING AT AN AFFORDABLE PRICE! 2 and 3 Bed townhomes. Call 270-727-0077

3 Bedroom Home For Rent
3 bedroom home for rent in Hopkinsville. Range \$425-450. Call 270-727-0077

Duplexes For Rent
1238 Sanderson Dr
2 Bedrooms, 1 Bath, Utility room. Central gas. Call 270-887-4813

Very Nice
Four Bed Apartments in Crutcher. 2 Bedrooms, 1 Bath. Call 270-887-4813

14 Cross St. Cadiz Ky
Amazing location. 2 bedrooms, 1 bath. Call 270-887-4813

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Houses For Rent

Home For Rent
Hopkinsville
3471 Penick Rd. Industrial Park Area. 4 Bedrooms, 2 Bath with basement and large yard. Call 270-355-4519

Hopkinsville Houses For Rent
\$450 to \$600 a month. Call 270-887-4813

3 Bedroom Home For Rent
3 bedroom home for rent in Hopkinsville. Range \$425-450. Call 270-727-0077

Duplexes For Rent
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Non Smoking Home
55 and older, 2 bedroom, 1 Bath, Newly Remodeled yard work and maintenance included. No deposit 270-498-1387

Homes For Sale

Rural America Homes
New Home Construction. Up to 100 Percent financing. Call 270-355-4519

NEW TODAY!
20+ Acres
North Todd, Ky. 270-377-3199

Horn Sell Farms
To Sell or Buy. Call 270-887-4813

Notice To Our Advertisers
Countful or false checks or being used in a growing number of fraudulent schemes.

Commercial Property For Rent
270-887-4813

Building For Lease
4400 Sq Ft. New Carpet. Call 270-887-4813

Office Space
Quality location first month free. Call 270-887-4813

Homes For Sale
139 South Sunset Circle
A lot for the money! 3 bedrooms, 3 baths, full kitchen, large rooms.

Need To Sell ASAP
2 bedroom, 2 bath large home. Call 270-498-5149

Meet Singles

No jail operation. Just real people. Browse profiles, exchange messages and connect. Call 270-887-4813

Lost A Pet?
From Christian or Todd. Call 270-887-4813

Found
A 2004 Ford Focus. Call 270-887-4813

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A 2004 Ford Focus. Call 270-887-4813

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Act Now

Mid American Truck Driving School. Call 270-887-4813

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Drivers

CDL-A, \$5,000 SIGN ON BONUS. Call 270-887-4813

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Flatbed and Heavy Duty. Call 270-887-4813

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Flatbed and Heavy Duty. Call 270-887-4813

This Week's Deed Transfers & Building Permits

- Margaret Hale, 1.47 Acres Cavanah Lane and U.S. Highway 41-N, No Sale.
Fannie Mae and Federal National Mortgage Association, to David and Susan Gardner, 215 Country Club Lane, \$40,000.
Samuel H. and Mary Susan Hancock to Philip A. Gargel, 160 Acres Christian County, \$540,000.
Federal Home Loan Mortgage Corporation to Douglas C. and Amy L. Montgomery, 1130 Sanderson Dr., \$150,000.
Helen Marie Cannon to Dennis Adrian and Theresa H. Cannon, 3 Tracts KY 1682 (Antioch Road) 118 Acres, \$180,000.
Michael and Penny Spears to Richard T. and Ginger K. Wilkins, in Crofton, \$21,000.
Tyler and Amy Smithhart to Tabitha S. Hoover, 686 Winchester Dr., \$113,000.
Suzanne Mosier to Dale and Evelyn Yerton, 1101 Walnut Ct., \$183,500.
John Derek Davis to Gilbert Clyde and Dora Reece Candler, 204 Deepwood Dr., \$232,500.
MYC Rantals, LLC, to Paul and Tracy Johnson, 110 Tonya Way, \$179,900.
HSBC Mortgage Services, Inc. to Kurt E. McCormick, Sr., 517 Indian Ave., OG, \$58,000.
Jenkins Land & Cattle, LLC, to Kenneth L. and Joanna K. Miller, Property Dogwood Kelly Road and State Route #107, 369 Acres, \$1,439,490.
William J. III and Sallie T. Watson to James G. and Mary Elizabeth Poirer, 111 Pemberton Place, \$285,000.
Ruby L. Ellis to Wendy Diane and Philip Charles Roland, 1/2 Acre Lafayette Pike, No Sale.
Adcorp, Inc., to Porta Carport, Inc., Property Old Concord Lane, No Sale.
Rodney Lamonte Blane to Michael W. Blane, Parcel One - 298 Acres Butler Road, One Hundred and Twenty-Nine and One-Half Acres Christian County, 3 Tracts 96 Acres Christian County, Parcel Two - 35.79 Acres KY, 508 (New Butler Road), Parcel Three - Property Butler Road, Property Christian County, 33-1/3 Acres Butler Road, No Sale.
Nancy A. Robertson to Jo Ellen Stephens and Patrick Jackson, 167 N. Madisonville Rd., Crofton, \$35,000.

# PUBLIC MEETING ANNOUNCEMENT

The Clarksville Metropolitan Planning Organization (MPO), which is responsible for transportation planning for the area that includes Clarksville/Montgomery County, Oak Grove and southern Christian County, will hold a public meeting on Thursday, February 14, 2013, from 5:00pm to 7:00pm at the Outlaw Field Airport upstairs conference room, 200 Airport Road, Clarksville, TN 37042. The purpose of the meeting is to solicit comments and suggestions on needed transportation improvements in the region, both short and long term.

Comments provided at the meeting will help guide the development of the 2040 Metropolitan Transportation Plan, which is being updated this year. The plan serves as a blue print for long-term transportation investments on streets and highways, public transportation, sidewalks and bike paths, as well as for airports, railroads and waterways in the Clarksville region.

Comments are also being accepted on existing and potential projects to be considered for the FY2014-FY2017 Transportation Improvement Program (TIP), which is also being updated this year. Any new projects considered for the TIP will be prioritized based on adopted criteria. By federal law, the number of projects in the TIP is limited by the amount of available funds.

Individuals unable to attend the meeting are encouraged to provide written comments and suggestions via e-mail at Stan.Williams@cityofclarksville.com or via US mail to Clarksville MPO, 329 Main Street, Clarksville, TN 37040.

## ANUNCIO DE REUNIÓN PÚBLICA:

La Organización Metropolitana de Planeación (MPO) de Clarksville responsable por la planeación de transportación para el área que incluye el Condado de Clarksville/Montgomery, Oak Grove y la parte sur del Condado de Christian, conducirá una reunión pública el día Jueves, Febrero 14, 2013, de 5:00pm a 7:00pm en el salón de conferencias del segundo piso en el Outlaw Field Airport, 200 Airport Road, Clarksville, TN 37042. El propósito de esta reunión es solicitar comentarios y sugerencias sobre la necesidad de mejoras a largo y corto plazo en transportación de la región.

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**Public Notices**

**0101705166**  
**Notice of Public Meeting**  
The Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) which is responsible for transportation planning for the area that includes Clarksville/Montgomery County, Oak Grove and southern Christian County, will be hosting public meetings on January 14, 2014, from 5:00 - 7:00 pm at the Oak Grove City Hall, 8505 Pembroke Rd. and January 16, 2014, from 6:00 - 8:00 pm at the Montgomery County Public Library, 350 Pageant Ln. Ste. 501.

The purpose of the meetings is to solicit comments and suggestions on needed transportation improvements in the region, both short and long term. Comments provided at the meetings will help guide the development of the Draft 2040 Metropolitan Transportation Plan, which is being updated this year. The Plan serves as a blueprint for investments on streets and highways, public transportation, sidewalks and bike paths, as well as for airports, railroads and waterways within the region.

Public comment period is from January 3 thru February 1, 2014. Documents are available for public review during normal business hours at the Regional Planning Commission, 329 Main St. Clarksville, Oak Grove City Hall, Hopkinsville City Hall 101 N. Main St., Ft. Campbell Library 38 Screaming Eagle Blvd., Montgomery County Library and available at [www.cuampo.com](http://www.cuampo.com) under Plans & Reports. Individuals unable to attend the meetings are encouraged to provide written comments via email at [stanwilliams@cityofclarksville.com](mailto:stanwilliams@cityofclarksville.com) or [jillhall@cityofclarksville.com](mailto:jillhall@cityofclarksville.com) and/or fill out the survey on the website.

In accordance with the "Americans with Disabilities Act," if you have a disability, for which the MPO needs to provide accommodations, please notify us of your requirements at least 3 days before the meeting. This request does not have to be in writing. It is the policy of the MPO to ensure compliance with Title VI of the Civil Rights Act of 1964; 49 C.F.R. part 26; No person shall be excluded from participation in or be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal funds on the grounds of Race, Color, Sex or National Origin.

Continued from last column  
**Public Notices**

for Montgomery County, Tennessee, to secure the indebtedness therein described, and the entire indebtedness having been called due and payable as provided in said deed of trust, and said payment not having been made, and the lawful owner and holder of said indebtedness having appointed the undersigned, David G. Mangum, as substitute trustee by written instrument recorded in Book 1542, page 2189, in the above mentioned Register's Office, notice is hereby

from Raleigh L. Tyrell herein by deed dated 10/28/80 and recorded 10/31/80 in Deed Book 310 at Page 102, said Register's Office. **SUBJECT** to any and all existing easements, setbacks lines and restrictive covenants of record in said Register's Office, including but not limited to **All matters** on the Plan of record in Plat Book 10, Page 35, Plat 35, as well as subject to Power of Attorney of Raleigh Tyrell of record in Book 438, Page 1575, said Register's Office. This description was taken from

T.C.A. § 35-5-117 have been met. The failure of any high bidder to pay the purchase price and close the sale shall, at the option of the Substitute Trustee, be cause for rejection of the bid, and, if the bid is rejected, the Substitute Trustee shall have the option of making the sale to the next highest bidder who is ready, willing, and able to comply with the terms thereof. The proceeds derived from the sale of the property will be applied as provided for in said deed of trust.

Mickle Lane point being south corner of and the western of Tract 4 south 75 58 minutes in seconds 679.16 feet; south 1: 18 minutes seconds 78.67 feet; north 8 18 minutes second 714.10 point in margin Lane; north 12 minutes second 1209.8 point; along having 18 minutes seconds. 889.6 arc of a circle, 146.3 a circle north 56 seconds 52.6 point; Montgomery County Clerk & Master, 2011 property taxes of Clarksville, 2011-2012 property taxes Energy Services Department, fixture filing Clarksville Department of Electricity, fixture filing UCC Direct Services, fixture filing Capital Bank, N.A., judgment lien City of Clarksville, build-

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**Public Notices**

**Public Notices**

**NOTICE TO FURNISHERS OF LABOR AND MATERIALS TO:**  
Vanderbilt Landscaping, LLC  
PROJECT NO.: 98300-4166-04  
CONTRACT NO.: CNM812  
COUNTY: Montgomery  
The Tennessee Department of Transportation is about to make final settlement with the contractor for construction of the above numbered project. All persons wishing to file claims pursuant to Section 54-5-122, T.C.A. must file same with the Director of Construction, Tennessee Department of Transportation, Suite 700 James K. Polk Bldg., Nashville, Tennessee 37243-0326, on or before 01/24/14. TN-01017042204

**NOTICE TO FURNISHERS OF LABOR AND MATERIALS TO:**  
Vanderbilt Landscaping, LLC  
PROJECT NO.: 98300-4271-04  
CONTRACT NO.: CNM835  
COUNTY: Montgomery  
The Tennessee Department of Transportation is about to make final settlement with the contractor for construction of the above numbered project. All persons wishing to file claims pursuant to Section 54-5-122, T.C.A. must file same with the Director of Construction, Tennessee Department of Transportation, Suite 700 James K. Polk Bldg., Nashville, Tennessee 37243-0326, on or before 01/17/14.

Terms of Sale:  
Cash  
Substitute Trustee: David G. Mangum, Substitute Trustee  
2303 Franklin Road Nashville, TN 37204  
Phone: (615) 255-8690  
Interested Parties: Montgomery County Trustee, 2012 property taxes Montgomery County Clerk & Master, 2011 property taxes of Clarksville, 2011-2012 property taxes Energy Services Department, fixture filing Clarksville Department of Electricity, fixture filing UCC Direct Services, fixture filing Capital Bank, N.A., judgment lien City of Clarksville, build-

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@bhs.com

KRS 157.620 and regulated by 702 KAR 1:001.

Public Notice

Public Notice

Public Notice

**Notice of Public Meeting**

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**JAMES R. C**  
 728 AUCTIONEER & REAL ESTATE  
 FANCY FARM, KY- 270-6  
 TN LIC # 930 FIRM

**ABSOLUTE REAL ESTATE**

**Tuesday, December 17th 2013**  
**304 Country Club Lane, Hopkinsville**

From The Pennyrile Parkway:  
 Take Exit 7 To US-41 A/Fort  
 Campbell Blvd. And Follow North  
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## Public Notice

## Public Notice

## Public Notice

### Notice of Public Meeting

The Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) which is responsible for transportation planning for the area that includes Clarksville/Montgomery County, Oak Grove and southern Christian County, will be hosting public meetings on January 14, 2014, from 5:00 - 7:00 pm at the Oak Grove City Hall, 8505 Pembroke Rd. and January 16, 2014, from 6:00 - 8:00 pm at the Montgomery County Public Library, 350 Pageant Ln. Ste. 501.

The purpose of the meetings is to solicit comments and suggestions on needed transportation improvements in the region, both short and long term. Comments provided at the meetings will help guide the development of the Draft 2040 Metropolitan Transportation Plan, which is being updated this year. The Plan serves as a blueprint for investments on streets and highways, public transportation, sidewalks and bike paths, as well as for airports, railroads and waterways within the region.

Public comment period is from January 3 thru February 1, 2014. Documents are available for public review during normal business hours at the Regional Planning Commission, 329 Main St. Clarksville, Oak Grove City Hall, Hopkinsville City Hall 101 N. Main St., Ft. Campbell Library, 38 Screaming Eagle Blvd., Montgomery County Library and available at [www.cuampro.com](http://www.cuampro.com) under Plans & Reports. Individuals unable to attend the meetings are encouraged to provide written comments via email at [starrwilliams@cityofclarksville.com](mailto:starrwilliams@cityofclarksville.com) or [fillhall@cityofclarksville.com](mailto:fillhall@cityofclarksville.com) and/or fill out the survey on the website.

In accordance with the "Americans with Disabilities Act", if you have a disability, for which the MPO needs to provide accommodations, please notify us of your requirements at least 3 days before the meeting. This request does not have to be in writing. It is the policy of the MPO to ensure compliance with Title VI of the Civil Rights Act of 1964; 49 CFR part 26. No person shall be excluded from participation in or be denied the benefits of, or be subjected to discrimination under any program of activity receiving federal funds on the grounds of Race, Color, Sex or National Origin.

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## CONVOCATORIA A LA JUNTA PÚBLICA

La Organización de Planificación Metropolitana del Área Urbanizada de Clarksville (CUAMPO) que es responsable de la planificación del transporte para el área que incluye el Condado Clarksville/ Montgomery, Oak Grove y el sur del Condado Christian, será el anfitrión de las reuniones públicas el 14 de enero de 2014, de 5:00 - 7:00 pm en el City Hall de Oak Grove, 8505 Pembroke Road. y el 16 de enero de 2014, de 6:00 - 8:00 pm en la Biblioteca Pública del Condado de Montgomery, 350 Pageant, Ln. Ste. 501.

El propósito de las reuniones es para solicitar comentarios y sugerencias sobre las mejoras de transporte necesarios en la región, tanto a corto como a largo plazo. Los comentarios formulados en las reuniones ayudarán a guiar el desarrollo del Plan de Transporte Metropolitano del Proyecto de 2040, que está siendo actualizado este año. El plan sirve como una guía para las inversiones en las calles y carreteras, transporte público, aceras y senderos para bicicletas, así como de los aeropuertos, ferrocarriles y vías fluviales de la región.

Período de comentario público desde enero 3 a febrero 1, 2014. Los documentos están disponibles para revisión pública durante el horario normal de la Comisión Regional de Planificación, 329 Main St. Clarksville, Oak Grove City Hall, Hopkinsville Ayuntamiento 101 N. Main St, Ft. Campbell Library

38 Screaming Eagle Blvd., Biblioteca del Condado de Montgomery y disponible en [www.cuampo.com](http://www.cuampo.com) bajo Planes e informes. Se recomienda a las personas que no puedan asistir a las reuniones de formular observaciones escritas por correo electrónico a [stanwilliams@cityofclarksville.com](mailto:stanwilliams@cityofclarksville.com) o [jillhall@cityofclarksville.com](mailto:jillhall@cityofclarksville.com) y / o llenar la encuesta en el sitio web.



De acuerdo con el "Americans with Disabilities Act", si usted tiene una discapacidad, para las que el MPO debe proporcionar alojamiento, por favor notifique a nosotros de sus necesidades por lo menos 3 días antes de la reunión. Esta solicitud no tiene que ser por escrito. Es la política de la MPO para asegurar el cumplimiento con el Título VI del Acta de Derechos Civiles de 1964, 49 PPC part26; Nadie podrá ser excluido de participar en, o ser negado los beneficios de, o ser sujeto a discriminación bajo cualquier programa o actividad que recibe fondos federales por motivos de raza, color, sexo u origen nacional.

Continued from last column

County, Tennessee.

All persons, resident and non-resident, having claims, matured or unmatured, against said estate are required to file the same with the Clerk of the above-named Court within the earlier of four (4) months from the date of the first publication of this notice, or twelve (12) months from the decedent's date of death, otherwise their claims will be forever barred.

This 17th day of December, 2013, LEWIS DUDLEY BUMPUS - EXECUTOR Attorney for the Estate: JILL BARTEE AYERS 121 SOUTH THIRD STREET CLARKSVILLE, TN 37040 Clerk: JHHINKLE  
 Dates: 1/10/14 & 1/17/14

0101710376  
**IN THE CHANCERY COURT OF MONTGOMERY COUNTY, TENNESSEE AT CLARKSVILLE PROBATE DIVISION**  
 CASE NO. MC CH CV PB 13-0000282  
**NOTICE TO CREDITORS**

ESTATE OF LUNDY HUDGIN, (Deceased)  
 Notice is hereby given that on the 17th day of December, 2013, Letters of Testamentary in respect of the Estate of LUNDY HUDGIN, who died 11/23/13.

Continued from last column

CLARKSVILLE, TN 37040  
 Clerk: JHHINKLE  
 Dates: 1/10/14 & 1/17/14

0101710491  
**PUBLIC NOTICE**  
 Anyone knowing the whereabouts of Melinda Grezaffi please contact Joni M. Buquoi, Attorney at Law, L.L.C., at 1212 East Worthey Street, Suite B, Gonzales, Louisiana 70737 or 225-647-8500.

Continued from last column

Trust. **NOW, THEREFORE,** notice is hereby given that one of the Substitute Trustees or a designated agent for any one of the Substitute Trustees, pursuant to the power, duty and authority vested in and imposed upon the Trustee in said Deed of Trust and applicable law, will on **Thursday, February**

Continued to next column

0101710963  
**Notice of Public Meeting**  
 The Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) Executive Board will be meeting on Thursday February 20, 2014 beginning at 11:00 a.m. Said meeting will be at the Regional Planning Commission (RPC), 329 Main Street, Clarksville, TN 37040. Business includes the review and adoption of Resolution 2014-01 for the Final 2040 MTP. Said documents are available for public review during normal business hours at the MPO and available online @ [www.cuampo.com](http://www.cuampo.com). The discussion of air quality and other routine business may be conducted. Anyone having questions or comments concerning these items should contact Stan Williams or Jill Hall at 931-645-7448 or email [stan.williams@cityofclarksville.com](mailto:stan.williams@cityofclarksville.com) or [jill.hall@cityofclarksville.com](mailto:jill.hall@cityofclarksville.com) and/or attend this meeting. In accordance with the "Americans with Disabilities Act", if you have a disability, for which the MPO needs to provide accommodations, please notify us of your requirements by February 14, 2014. This request does not have to be in writing. It is the policy of the MPO to ensure compliance with Title VI of the Civil Rights Act of 1964; 49 CFP part 26; No person shall be excluded from participation in or be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal funds on the grounds of Race, Color, Sex or National Origin.

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## **CONVOCATORIA A JUNTA PÚBLICA**

La Organización de Planificación Metropolitana para Área Urbanizada de Clarksville (CUAMPO), el Consejo Ejecutivo se reunirá el **jueves 20 de febrero de 2014 comenzando a las 11:00 am.** La reunión será en la Comisión Regional de Planificación (RPC), 329 Main Street, Clarksville, TN 37040. Agenda incluye la revisión y aprobación de la Resolución 2014-01 para el Final 2040 PPM.

Dichos documentos están disponibles para revisión pública durante horas hábiles, en las oficinas de MPO y online en [www.cuampo.com](http://www.cuampo.com). La discusión de la calidad del aire y otros negocios de rutina se puede realizar. Cualquier persona que tenga preguntas o comentarios sobre esos puntos debe ponerse en contacto con Stan Williams o Jill Hall at 931-645-7448 o por correo electrónico [stan.williams@cityofclarksville.com](mailto:stan.williams@cityofclarksville.com); [jill.hall@cityofclarksville.com](mailto:jill.hall@cityofclarksville.com) y / o asistir a esta reunión .

De acuerdo con el "Americans with Disabilities Act", si usted tiene una discapacidad, para las que el MPO debe proporcionar alojamiento, por favor notifique a nosotros de sus requisitos el 14 de febrero de 2014. Esta solicitud no tiene que ser por escrito. Es la política de la MPO para asegurar el cumplimiento con el Título VI del Acta de Derechos Civiles de 1964, 49 parte de la PPC 26; Nadie podrá ser excluido de participar, o ser negado los beneficios de, o ser sujeto a discriminación bajo cualquier programa o actividad que reciba fondos federales por motivos de raza, color, sexo u origen nacional.





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CUAMPD



# Clarksville Urbanized Area MPO

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# Clarksville Urbanized Area MPO

met w

Clarksville 2040 Metropolitan Transportation Plan  
Concerned Motorcyclists of TN Public Meeting  
Montgomery County Public Library  
Thursday, January 16, 2014  
Monday, 2.3.14

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