1.0 PURPOSE AND NEED

Planning for a modern streetcar in Cincinnati has taken place over the past 10 years. The modern streetcar has been featured in a series of transportation plans developed for the City of Cincinnati, Southwest Ohio Regional Transit Agency (SORTA), and regional entities. The overall long-range transportation goal of the modern streetcar is to provide a safe, efficient, economical, attractive, and integrated transit connection that contributes to increased economic development within the central business district and contributes to reduced reliance on auto travel and reduced auto parking requirements.

The City of Cincinnati, on behalf of the Federal Transit Administration (FTA) is sponsoring the development of a streetcar transit system to serve as an urban circulator for the Downtown and Uptown districts and adjoining neighborhoods. The purpose of the streetcar project is to:

- Connect jobs and trip generators/attractions.
- Help attract redevelopment of adjacent properties.
- Stimulate business and activity along the corridor.
- Enhance the walkability and transit potential of the urban core.
- Provide a transit line to link with existing bus service, thereby creating a more comprehensive regional transit system.

The Cincinnati Streetcar project would implement a component of the 2030 Regional Transportation Plan, adopted by the Ohio Kentucky Indiana Regional Council of Governments (OKI), the metropolitan planning organization for the Cincinnati urbanized area, in 2008 and subsequently included in the region's FY 2008 – 2011 Transportation Improvement Plan (TIP).

This chapter describes the project study area; the purpose and needs that a modern streetcar would address; and the project goals and objectives.

1.1 Project Overview

The City of Cincinnati has identified streetcar transit as a potential tool for improving local circulation, supporting sustainable community and economic development, and complementing other components of the local and regional transportation system. The City assembled a turnkey design-finance-build strategy to develop the project. It will use innovative finance, delivery and construction methods with substantial local and private investment.

The modern streetcar is a mode of transit unique to Cincinnati that complements more conventional modes such as existing local and express bus services and potential future commuter rail, light rail, or bus rapid transit systems. These transit modes primarily serve longer haul travel such as commuter trips from outlying areas to employment centers. Streetcars, like short-haul local bus and shuttle service, primarily function as an urban circulator and as a

pedestrian accelerator, supporting "walkable urbanism" within downtowns and adjoining neighborhoods. National experience has shown that streetcars, with their permanent fixed guideway, prominent station stops and vehicles, frequent and attractive service, and high visibility tend to attract greater ridership than comparable bus service. This has been demonstrated in cities such as Portland, Oregon, Tacoma and Seattle, Washington and Little Rock, Arkansas. When supported by local planning, zoning and incentives, streetcars can also be part of an effective economic development strategy.

The Cincinnati Streetcar will connect Downtown employees, residents and visitors; Uptown employees, residents and visitors, and University of Cincinnati students; and employees and visitors in the Over-the-Rhine (OTR) neighborhood to workplaces and attractions in the urban core. Residents and visitors will also use the streetcar for lunch, dinner or social activities, trips between business locations for mid-day meetings; shopping; and trips between hotels and major destinations. In addition, the availability of the circulator will make it much more convenient and practical for users to take conventional transit for their work trip, or even to drive to work or other locations, "park once" and use the streetcar circulator for other trips. The "park once" opportunity would be a convenience for students traveling to the University of Cincinnati or visitors to the hospital or medical centers in the Uptown area.

1.2 The NEPA Process

The National Environmental Policy Act (NEPA) requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. For transportation projects, NEPA requires FTA and other transportation agencies to consider potential impacts to the social and natural environment. In addition to evaluating the potential environmental effects, FTA must take into account the transportation needs of the public in reaching a decision that is in the best overall public interest.

The NEPA statute and implementing regulations set forth a process to evaluate potential impacts along with as requirements for documentation of decisions resulting from that process. The key elements of the process include determining the project's purpose and need and the range of alternatives to be considered; determining potential environmental impacts; coordinating with relevant agencies; involving the public; determining mitigation for unavoidable impacts; and documentation of the analysis and decisions through an Environmental Impact Statement, an Environmental Assessment (EA), or a Categorical Exclusion supported by the administrative record.

The City of Cincinnati, on behalf of FTA, the lead federal agency, has prepared this EA for the Cincinnati Streetcar project pursuant to 23 C.F.R. 771.771.130(c). This EA has been prepared to determine the project's potential social, environmental, and economic impacts in accordance with the NEPA. This EA assesses the No Build and two Build Alternatives for the proposed action. Three potential sites for a maintenance and storage facility (MSF) are also assessed in this EA.

The Build Alternatives are two alignments which follow possible streetcar routes through the study area. The two Build Alternatives are the result of coordination and integration of various transportation projects and studies over a span of 10 years. Chapter 2, Section 2.4 and Appendix A describe these projects and plans. Chapters 3 and 4 describe the trackway, stations, vehicles, traction power substations, and MSF. Chapter 5 describes potential social, environmental, and economic impacts. Chapter 6 describes agency coordination and the public involvement process. Chapter 7 provides conclusions and recommendations of the alternatives.

The No Build Alternative is retained as a baseline for evaluation of the Build Alternatives. It includes existing and programmed improvements in the OKI Fiscal Year 2008-2011 TIP for transit and roadways in the Cincinnati Streetcar project study area, specifically Freedom Way and other roads, sidewalks, signals and lighting within The Banks street grid project.

1.3 Study Area

The Cincinnati Streetcar project study area is located in the Central Business District (CBD) and adjacent neighborhoods in Cincinnati, Ohio. The study area for assessing impacts is approximately 4.9 miles in length. It extends from the Cincinnati riverfront area to the Uptown area (Figure 1). The southern limit of the study area is Theodore M. Berry Way, on the riverfront; the northern limit is Calhoun Street, in Uptown. The eastern and western limits of the study area extend one-half block in each direction from the proposed alternative alignments, as follows:

- One-half block on each side of Theodore M. Berry Way between Main and Walnut streets.
- One-half block on each side of Main and Walnut streets between Theodore M. Berry Way and 12th Street
- One-half block on each side of 12th Street and Central Parkway between Main and Elm streets
- One-half block on each side of Elm and Race streets between Central Parkway and McMicken Avenue.
- One-half block on each side of Clifton Avenue between McMicken Avenue and Calhoun Street.
- One-half block on each side of Vine Street between McMicken Avenue and Corry Street.
- One-half block on each side of Calhoun Street between Clifton Avenue and Vine Street.

1.4 Purpose and Need

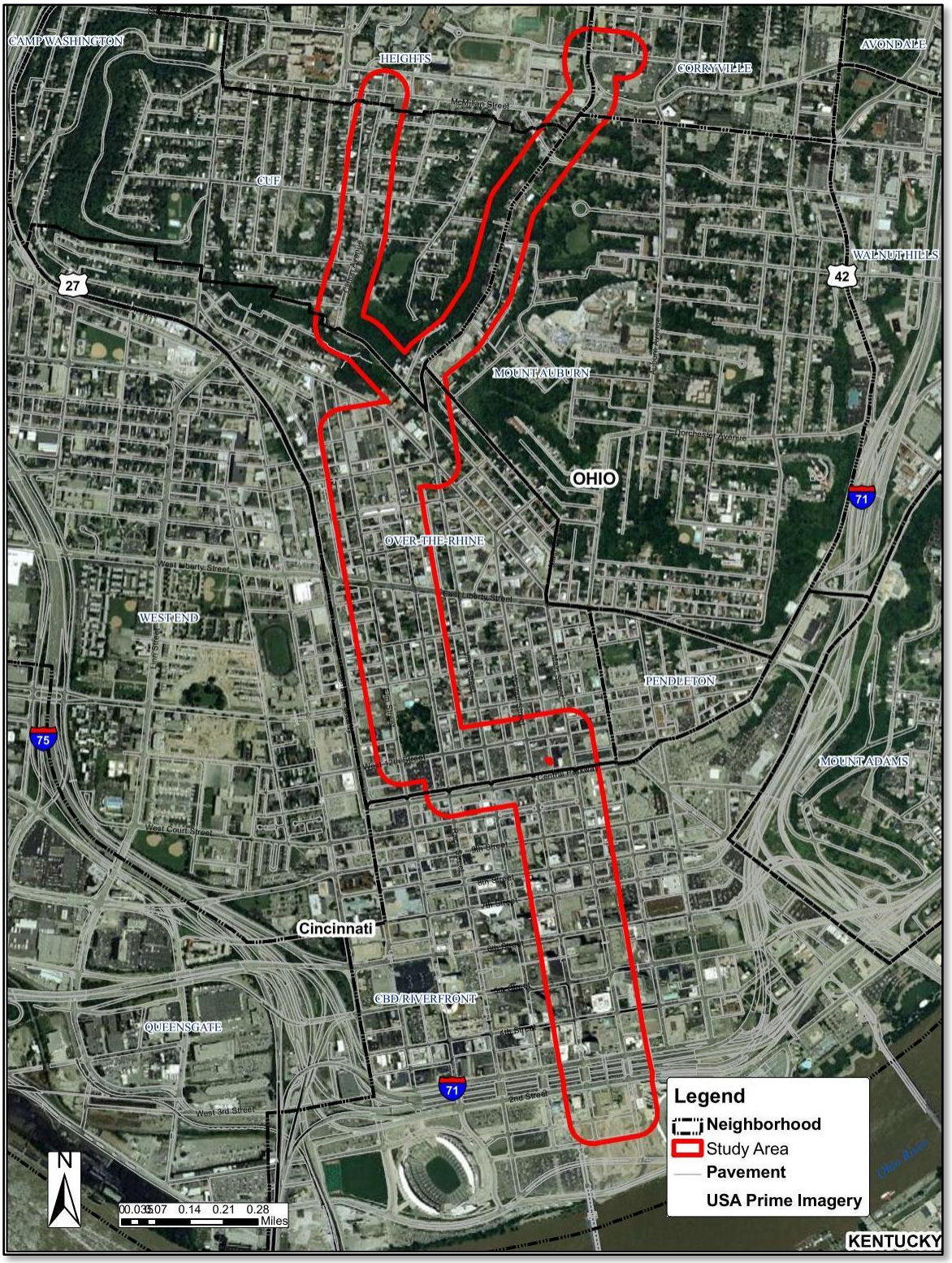
The study area (Figure 1), consisting of the Downtown, Uptown and OTR areas, is rapidly changing. Rapid change has resulted in new travel needs and patterns that are not effectively addressed by the current transportation system:

Connectivity and mobility is lacking between the region's two largest activity centers—downtown Cincinnati and Cincinnati's Uptown district.

There are currently approximately 60,000 workers in Downtown Cincinnati and 40,000 workers in Uptown, with hundreds more in OTR locations between Downtown and Uptown. In addition, there are approximately 35,000 students in Uptown and several thousand high school students in Uptown and OTR, and several thousand residents throughout.

All three neighborhoods feature an array of retail, social, governmental, cultural, entertainment, recreation, and sporting facilities and activities that are unparalleled in the region. Given the scale and intensity of these activities, a high level of interaction and synergy within the urban core can be expected.

Figure 1. Study Area



However, travel within the urban core is time-consuming and inconvenient. Inconvenience inhibits potential travel. This inhibits the urban core from achieving a higher level of commerce despite the intensity and quantity of activities. Interaction for the core's 100,000+ workers and other means relying almost exclusively on the car. This condition places great demands on the roadway network and parking. It is also costly for both the individual (need for a car, parking costs, etc.) and the community (maintenance of the roadway system, need to use valuable land for parking facilities). Unless origins and destinations are close enough to walk, mobility within the urban core means getting in a car and finding a place to park—and repeating this process for the return trip-- or choosing not to make the trip at all because of the hassle, time and cost.

The existing transportation system is not designed to support new development and a livable community.

Although the number of workers has fluctuated and decreased in recent years due to the global economic situation, Downtown remains the region's largest and most prominent employment center. Downtown is a strong government and corporate center. Private sector employment appears to be stabilizing. The current construction of the Great American Tower at Queen City Square, the first major new office building built downtown since the 1990's, and relocation of several thousand Procter & Gamble employees from the suburbs to its downtown headquarters illustrate this trend.

Changes in office employment have been partially off-set by the growth of Downtown as a residential neighborhood (Section 2.2). Despite the downturn in the economy, the development of new residential units has kept a steady pace. Where there were less than 3,800 residential units in 2005, this number grew to nearly 4,300 units in 2009. This trend is forecasted to continue, possibly reaching over 5,200 residential units in 2012. Part of the projected short-term growth will be accommodated at "The Banks," a new, mixed-use development currently under construction near the riverfront, within the study area. Phase 1 of The Banks is scheduled to be completed in June 2011. It will consist of apartments, shops and restaurants, an office building and hotel, designed within a pedestrian- and transit-oriented focus. Despite new construction, such as at The Banks, most residential growth has been accommodated by the conversion of existing "Class B" and "Class C" office space and vacant commercial structures to condominiums and loft apartments. Class B office buildings are those that compete for a wide range of users with rents in the average range for the area. Class C buildings are aimed towards "tenants requiring functional space at rents below the average for the area.

The surge in residential growth, along with the retention of Cincinnati's professional sports teams in the Downtown area via the construction of new facilities and the revitalization of the Fountain Square area, has turned Downtown into a center for restaurants and nightlife. New and renovated cultural institutions have also enhanced Downtown's attraction as a regional entertainment destination.

OTR has experienced a similar revitalization (Section 2.2.2). This historic district and neighborhood has been characterized by poverty and abandonment. The neighborhood has 97 acres of vacant land and approximately 280 vacant buildings. In recent years, a concerted effort to convert existing structures to market-rate housing has resulted in an influx of young professionals and other new residents. Like Downtown, the surge in residential development has stimulated significant growth in nightlife and cultural venues and events.

In Uptown, the University of Cincinnati is a major, stable presence of employment and activity (Section 2.2.3). Implementation of a campus master plan was completed this decade, creating

a more walkable, pedestrian-oriented environment. Uptown's medical center complex remains a stable base of employment but has sustained significant growth that is projected to continue. Development of new residential and commercial facilities surrounding the University of Cincinnati and medical centers has occurred in response to the improvements in the area. However, major parcels remain underdeveloped or undeveloped.

The transportation system needs to support neighborhood revitalization and economic development. The stimulus of a fixed transit investment is required to support the revitalization of the urban core to attract those seeking affordable and market rated development, as well as spinoff retail, entertainment and other activities and services.

The existing transportation system has not been able to evolve to respond to, and encourage, changes in travel patterns and needs. These include travel to and from locations within Downtown, OTR, and Uptown. An example is grocery shopping. The historic Findlay Market is able to fulfill nearly all the food shopping needs of core-area residents, but requires an auto and associated parking facilities to do so. This makes it difficult for residents with no vehicle to access nearby shopping. For new and potential residents, the attraction of "Downtown living" is unfulfilled.

Because of its near total dependence on auto-oriented mobility, the existing transportation system requires provision of parking. Parking is costly to construct and maintain. Without alternative means of mobility, developers are required to provide parking in quantity and availability of what is similar to in suburban areas. Because development in the urban core is more expensive than in outlying areas, the parking factor can make it less competitive than in the suburbs or even infeasible at worst. The result is enormous but inhibited development potential.

The existing transit system is ineffective due to inconvenient access from the region to activity centers in Downtown, OTR and Uptown.

While public bus transportation is operated within the core, it lacks fixed guideways, and any dedicated local area circulator service. It is designed primarily as a commuter system and is difficult to use for connectivity within the core. The existing system performs reasonably well by taking commuters from outlying areas to the CBD during weekday peak periods. The rest of time it provides the important function of transporting transit-dependent persons to jobs and opportunities within the City of Cincinnati, with a focus on Downtown.

Currently, 45 percent of Downtown and OTR residents have annual household incomes of $20,000 or less; 50 percent of OTR households have no cars. Transit improvements should improve mobility and provide access to the opportunities that the urban core provides in terms of jobs, shopping and social services.

The current system does not provide convenient or attractive connections within or between the Downtown, OTR and Uptown areas. There are currently two local bus routes that generally operate between Downtown and Uptown. Neither route is designed to function as a Downtown-Uptown connector. They were designed to connect outlying neighborhoods to Downtown, with alignments that happen to traverse limited portions of Uptown along the way.

Route 46 Avondale operates from the early morning hours to late night with service every 20 minutes during peak periods and 30-50 minutes during the off-peak period. This is much less frequent than the proposed 10 minute peak/20 minute off-peak service planned on the streetcar.

Unlike the planned streetcar alignment, Route 46's alignment does not provide a direct connection between Findlay Market and the Music Hall area to Uptown, which is an important trip generator connection along the streetcar line.

Route 78 Vine Street also operates from the early morning hours to late night with service every 15 minutes during peak periods and 30-50 minutes during the off-peak period. This is also much less frequent than the proposed 10 minute peak/20 minute off-peak service period planned on the streetcar. Unlike the planned streetcar alignment, Route 78's alignment does not provide a direct connection between Findlay Market and the Music Hall area to Uptown, nor does it connect the Downtown Cincinnati office core and Government Square transit hub with Uptown.

Routes 46 and 78 do not operate south of Fifth Street Downtown and do not provide connections to the central riverfront area and The Banks development.

Because of the gaps within the existing Metro bus network, a transfer from one route to another is necessary to access many of the activity centers in the urban core. While existing routes traverse the Downtown, they are not consistent with the perceived need for highly visible, more frequent service using permanent guideways that connect existing activity centers and the new and dense development that the City of Cincinnati is seeking for these neighborhoods.

1.5 Goals and Objectives

The goals and objectives for the Cincinnati Streetcar reflect the needs of the urban core and are based on a set of guiding principles that developed in the Cincinnati Streetcar Feasibility Study (July 2007).

Goal 1: Improve mobility and connectivity within Downtown Cincinnati.
Objectives:

- Provide convenient access and local circulation between Uptown and Downtown Cincinnati for major employment, commercial, recreational, and cultural activity centers.
- Provide better connectivity between neighborhoods such as OTR, Corryville, and Clifton and activity centers such as Music Hall, Findley Market, and the Cincinnati Zoo.
- Provide an attractive means of transportation for residents, workers, customers, and visitors.
- Improve access and opportunities for transit-dependent populations such as the residents of OTR. OTR is a low income community, residents have annual household incomes of $20,000 or less and 50 percent of these households do not own cars.

Goal 2: Support existing and proposed development in Downtown and surrounding neighborhoods in the City of Cincinnati, creating a more livable and walkable environment.
Objectives:

- Consider transit investment that supports the existing and planned built environment and minimizes adverse impacts. The development of new residential, office and commercial space in Cincinnati continues to expand despite the downturn in the economy. The Banks and the Great American Tower at Queen City Square are two examples of this growth.

- Consider transit investment to help shape urban form through reinvestment along selected corridors and neighborhoods such as OTR. Its proximity to Downtown and major transportation corridors, along with its relatively low property values and rents, has attracted new commercial and residential development, primarily along the Vine Street and 12th Street corridors.
- Encourage neighborhood revitalization and livable and walk-able communities through development of good streetscapes and pedestrian environment.
- Link key destinations in the study area such as activity centers, which include three major employment districts (Riverfront/CBD, OTR and Uptown); several regional entertainment, tourist, and shopping destinations; two major institutions of higher education; and three regional medical centers. Capture the economic benefit resulting from improved transit service and mobility in these areas.
- Maximize energy efficiency of the transit operation and minimize negative impacts on historic, archaeological, traditional cultural places, parklands, and other public recreation areas.

Goal 3: Maximize the efficiency and effectiveness of the local and regional transit system.
Objectives:

- Attract new riders to the local and regional transit system by providing a convenient, frequent, and attractive streetcar transit service.
- Integrate the planned streetcar line or lines with the overall transportation system, complementing and ensuring compatibility with the existing and planned street and roadway network and transit system.
- Provide convenient access to the transit system using various modes and means of travel (e.g., pedestrian, bicycle, bus, automobile).
- Develop safe, comfortable, and convenient transit facilities, including stations and stops.
- Provide viable mobility options to discourage increased single occupancy vehicle use in the CBD and congested roadway network.
- Complement previous planning studies and planned multimodal operations.
- Identify suitable sites for a streetcar maintenance and storage facility.

Goal 4: Provide a transit investment that is affordable, in terms of capital and operating expenses, and is implemented on a fast track.
Objectives:

- Select and implement the most effective streetcar starter line that is affordable and manageable while yielding significant transportation and development benefits.
- Minimize capital costs (e.g., not design elaborate stations and systems, generally street running operation, no grade separations, no park and ride lots).
- Develop sustainable systems which maximize revenues and minimize net operating and maintenance costs.
- Fast track the planning and design period.
- Leverage other public and private funding whenever possible.
- Maximize public-private partnership opportunities.