

# Micro-Urban Mobility Enhanced Development

*Champaign-Urbana, Illinois*

## Project Partners



Champaign-Urbana Mass Transit District



City of Champaign



City of Urbana



University of Illinois

Department of Transportation  
National Infrastructure Investments  
Further Continuing Appropriations Act, 2013

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## **Executive Summary**

Champaign-Urbana is a diverse and culturally rich community. Considered to be a "micro-urban" community, Champaign-Urbana offers an atmosphere not typically found in communities its size. The influence of the University of Illinois and Parkland College permeates the community. These institutions are not only places of higher learning, they are also economic engines, major employers, cultural center, and entertainment destinations. In the heartland of some of the most fertile farmland in America, the Champaign-Urbana community faces difficult questions and challenges regarding its future growth.

On behalf of the University of Illinois at Urbana-Champaign, and the Cities of Champaign and Urbana, the Champaign-Urbana Mass Transit District (CUMTD) is requesting the Federal Department of Transportation to provide a 45% match through TIGER funds and join these partners in creating the mobility infrastructure needed to facilitate a landmark effort that will shape land use, transportation, economic development, and the quality of life in this important and evolving metropolitan region.

The partners are committing \$16,173,287 and requesting TIGER funding of \$13,527,013 to complete a foundational mobility investment required to support and grow a micro-urban community. The total project cost is \$29,700,300.

The overarching goal of this project is to provide enhanced mobility choices to increase connectivity between the University District and surrounding communities that will serve as the bedrock for new economic development in and between the two downtowns of Urbana and Champaign and the University. The Cities and University are committed to creating a micro-urban environment in this designated core that encourages a diverse population in terms of income, age, ethnicity, and race that also supports a strong, varied job base.

The specific objective of this project is to increase population, economic growth, and cultural activity within this urban core by enhancing mobility diversity, facilitating "place making" to encourage development, and reducing the need for single-occupant vehicle travel.

To stimulate additional redevelopment in the micro-urban center requires three critical elements related to enhanced mobility which are the focus of this application:

- Rebuilt and redesigned "complete streets" infrastructure
- Provision of high quality mobility choices
- Creation of a high quality urban environment that is a desirable place to live

This lynchpin investment will have a profound impact on the future land use and economic development within and surrounding the metropolitan area. It reinforces and is absolutely essential to continue a highly successful transit service already producing significant results in terms of increased ridership. It expands key corridors within the project boundaries to improve pedestrian and bike mobility by creating complete streets that will improve safety while limiting the growth of single occupant vehicle travel and reducing environmental degradation.

Micro-urban development offers lifestyles necessary for recruiting and retaining the talent needed to continue and build the research capabilities of the University of Illinois. It

provides the opportunity for workforce housing to support the growing health care sector. It is an essential development to keep valuable farmland in production.

Most profoundly, it helps create the necessary infrastructure to encourage more development in the two downtowns and the University District.

This request for a TIGER investment is truly about shaping the future development of the greater Champaign-Urbana community. To make these development choices requires a deep understanding of the benefits and costs of continued historical development patterns to a Micro-Urban Mobility Enhanced Development pattern (M-U MED). To accomplish this comparison, we have modeled these alternative futures over a twenty year horizon using social costing methodology to measure benefits by the difference in future costs.

This chart introduces you to the investment.

<b>Category</b>	<b>Investment Changes – Their Impacts and Benefits</b>	<b>Reference</b>
Good Repair	Streets in all key corridors brought to acceptable complete street standards requiring less maintenance while expanding mobility options, reducing transit travel time, and improving safety.	Page 9
Economic Competitiveness	Along with complete streets come place making amenities, helping mobility serve as a development asset. This has already proven to increase investment in the urban core.	Page 10
Livability	The complete streets and associated amenities add to the feel of the built environment to create live, work, and play spaces while providing more mobility choices, decreasing the need for SOV travel.	Page 11
Housing Options	More cost-effective mobility choices translate into more resources for choosing housing locations. The lessening of infrastructure operating and capital costs translates into reducing the increase in tax burden.	Page 12
Economic Vitality	Improved and complete streets means enhancing a robust transit system, a crucial service on which to build a diverse urban community. Reduced infrastructure operating / capital costs make more desirable redevelopment opportunities and more investment in the urban core.	Page 12
Community Support	Reduced infrastructure carrying costs, along with less burdensome energy costs resulting from adopting the micro-urban form, creates and supports desirable neighborhoods while retaining critical productive farmland.	Page 14
Environmental Sustainability	Reduced emissions, more open space, less reliance on the auto, lower infrastructure carrying costs, and less energy consumption lead to greater sustainability.	Page 16
Safety	Redesign of the streets translates into fewer accidents. Increased street lighting means enhanced community safety.	Page 16

This chart shares the benefits derived over 20 years from creating a micro-urban community.

<b>The Key Benefits Quantified</b>	<b>The Value</b>
Infrastructure Operating Costs Savings	\$147,747,190
Infrastructure Capital Costs Savings	\$126,041,200
Accident Reduction Savings	\$2,207,775
Emission Reduction Savings	\$281,538
Transit Maintenance Savings	\$2,211,480
Non-Transportation Energy Costs Savings	\$178,798,646
Agricultural Land Production Retained	\$488,021,305
Transit Rider Travel Time Reduction Savings	\$24,539,558
M-U MED Project Cost	(\$29,700,300)
<b>Total Benefit</b>	<b>\$940,148,392</b>

The Champaign-Urbana partners are committed to expanding mobility options that provide residents and visitors with more choices while enhancing the livability and economic viability of the region and the urban core. Implementation of this M-U MED initiative is a vital element in that quest.

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## I. Project Description

This Micro-Urban Mobility Enhanced Development (M-U MED) project constructs pedestrian/bicycle/bus corridors that connect Downtown Champaign and Downtown Urbana with the campus of the University of Illinois via five (5) corridors.

- Armory Avenue – 4<sup>th</sup> Street to Wright Street
- Wright Street – Armory Avenue to White Street
- White Street – Wright Street to 2<sup>nd</sup> Street
- Green Street – Wright Street to Lincoln Avenue
- Green Street – 4<sup>th</sup> Street to Neil Street

While each corridor varies slightly in design, they all include complete street design components such as: reduced width vehicle lanes, on-street bicycle lanes, shared lane markings, bus lanes, curb bump-outs, ADA accessible curb ramps, enhanced bus stops, vehicle and pedestrian level street lighting, bus prioritization of traffic signals, and streetscape elements.



**Goodwin Avenue & Nevada Avenue  
Complete Street on University of Illinois Campus**

*Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.*  
**National Complete Streets Coalition**

A complete set of schematic design plans as well as detailed descriptions of the improvements for the first four corridors can be found in the [Schematic Plans\\_CUMTD\\_MUMED.pdf](#).

While the final cross-section has not been set for Green Street from 4<sup>th</sup> Street to Neil Street and schematic design plans are not available, the design will be similar in nature to the other four corridors and will include reduced width vehicle lanes, on-street bicycle lanes, sidewalks, street lighting, and enhanced bus stops.

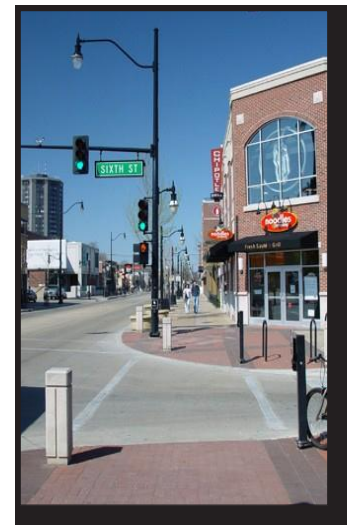
The overarching goal of this project is to promote compact mixed-use development to create a more walkable, sustainable, economical, and efficient development pattern that is safe for all users, consistent with the Champaign-Urbana urbanized area's Long Range Transportation Plan (LRTP).

***LRTP Mission***

*To provide a safe, efficient, and economical transportation system that makes the best use of existing infrastructure, optimizes mobility, promotes environmental sensitivity, sustainability, accessibility, economic development, and enhances quality of life for all users.*

The Partners are committed to evolving a micro-urban environment in the urban core that encourages a diversity of population in terms of income, age, and ethnicity that also stimulates a strong, varied job base. The vision includes: focusing more mixed residential and business development and redevelopment along the existing transportation network; utilizing complete streets design for new construction and reconstruction of roadways; expanding multi-modal transportation facilities for all transportation system users; increasing mode share with bicyclists, pedestrians and transit riders; reducing single-occupancy vehicle trips; and overall improvement of the efficiency of the transportation network.

The concept of a micro-urban community is evolving as a framework to describe the culture, attributes, and built environment that defines greater Champaign-Urbana. While there is no formal definition of micro-urban it is here used to describe a city of less than 250,000 that offers an urban style City center, diverse employment choices, and a vibrant cultural scene coupled with the quality-of-life so cherished by community residents.



**Green Street  
Mixed-Use Development**

View the [micro-urban video](#) to learn more about Champaign-Urbana.

Beyond this moniker serving as a branding tool, there are three primary reasons for focusing on mobility enhancements to support creating a more vibrant urban core.

1. The long-term infrastructure and carrying costs to the communities are less if growth is more balanced between urban and fringe development.
2. It provides more choices in terms of mobility, housing, and lifestyle.
3. It best supports the three key existing economic engines in the community ... the University, agriculture and healthcare by:
  - a. Attracting a diverse, younger population to live in Champaign-Urbana,
  - b. Saving up to 124,000 acres of farmland from being developed,
  - c. Providing more work force housing opportunities for skilled workers who now often live at a distance because of housing costs, and
  - d. Creating additional job opportunities to support recruitment of preeminent researchers and scholars to the University of Illinois.

## II. Project Partners

The streets within the proposed corridor are subject to three different jurisdictional agencies and four entities are directly involved in this project and contributing financially to this endeavor.

- *Champaign-Urbana Mass Transit District (CUMTD)*  
CUMTD is the lead agency applying for the TIGER Grant and will serve as the grantee responsible for project oversight. The agency has an outstanding record of grants management.
- *The University of Illinois at Urbana-Champaign (University)*  
The University has contracted with CUMTD to provide transit service for the campus for over 20 years. Armory Avenue from 4<sup>th</sup> Street to Wright Street is their jurisdiction.
- *The City of Champaign*  
The City of Champaign will be responsible for overseeing the project work within its jurisdiction, including Wright Street from Armory Avenue to White Street, White Street from Wright Street to 2<sup>nd</sup> Street and Green Street from 4<sup>th</sup> Street to Neil Street.
- *The City of Urbana*  
The City of Urbana will be responsible for overseeing the project work within its jurisdiction, including Green Street from Wright Street to Lincoln Avenue.

These partners have worked closely and cooperatively together through both the MPO framework and a unique collaboration, the Campus Area Transportation Study (CATS) since 1999.

The proposed design can be constructed within the existing roadway right-of-way and has received [endorsement](#) from all involved agencies.

In addition to the multi-modal missions of the LRTP, the proposed design took into account the various agency plans and policies already in place, such as

- City of Champaign Comprehensive Plan, *Champaign Tomorrow*
- City of Champaign Transportation Master Plan, *Champaign Moving Forward*, including the Bicycle Vision
- City of Urbana 2005 Comprehensive Plan
- City of Urbana Bicycle Master Plan
- University of Illinois Campus Bike Plan
- University of Illinois Wright Street Bike Path Feasibility Study (Crawford, Murphy & Tilly, Inc.)
- University District Bike/Transit Safety Study (T.Y. Lin International)
- Champaign-Urbana Mass Transit District Mobility Enhanced Development Studies





### III. Grant Funds and Sources/Uses of Project Funds

The total estimated cost for this project is \$29,700,300.

**Table: Cost Estimate**

PROGRAM DEVELOPMENT QUANTITIES		05.16.2013 Foth No. 12C007.00
CHAMPAIGN-URBANA MASS TRANSIT DISTRICT TIGER GRANT ARMORY AVENUE, WRIGHT STREET, WHITE STREET & GREEN STREET		
LOCATION	PAY ITEM	TOTAL
<b>ARMORY AVENUE - 4TH TO WRIGHT</b>		
	ROADWAY	\$1,058,670
	BUS ENHANCEMENTS	\$214,000
	CONTINGENCY ITEMS	\$685,455
	PROFESSIONAL FEES	\$391,000
<b>SUBTOTAL ARMORY AVENUE</b>		<b>\$2,349,125</b>
<b>WRIGHT STREET - ARMORY TO WHITE</b>		
	ROADWAY	\$5,500,375
	BUS ENHANCEMENTS	\$920,000
	CONTINGENCY ITEMS	\$1,414,810
	PROFESSIONAL FEES	\$1,550,000
<b>SUBTOTAL WRIGHT STREET</b>		<b>\$9,385,185</b>
<b>WHITE STREET - WRIGHT TO 2ND</b>		
	ROADWAY	\$2,224,560
	BUS ENHANCEMENTS	\$610,200
	CONTINGENCY ITEMS	\$880,000
	PROFESSIONAL FEES	\$880,000
<b>SUBTOTAL WRIGHT STREET</b>		<b>\$4,594,760</b>
<b>GREEN STREET - WRIGHT TO LINCOLN</b>		
	ROADWAY	\$1,856,230
	BUS ENHANCEMENTS	\$640,000
	CONTINGENCY ITEMS	\$900,000
	PROFESSIONAL FEES	\$700,000
<b>SUBTOTAL GREEN STREET</b>		<b>\$4,096,230</b>
<b>GREEN STREET - NEIL TO 4TH</b>		
	ROADWAY	\$6,125,000
	BUS ENHANCEMENTS	\$700,000
	CONTINGENCY ITEMS	\$1,225,000
	PROFESSIONAL FEES	\$1,225,000
<b>SUBTOTAL GREEN STREET</b>		<b>\$9,275,000</b>
<b>TOTAL PROJECT COST</b>		<b>\$29,700,300</b>

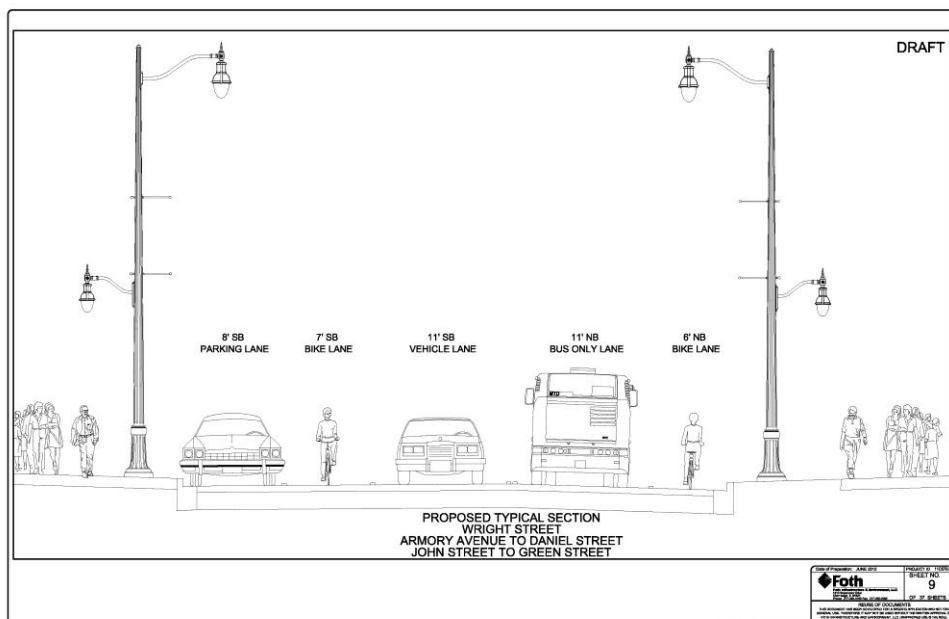
The Partners have committed to contribute \$16,173,287 to the project. This commitment to the project represents 55% of the total costs.

This grant application requests TIGER funding of \$13,527,013, representing 45% of total project costs.

**Table: Funding Sources for the Local Match by Agency**

Agency	Programmed Funds	Funding Source
City of Champaign	\$416,633	FY 14
	\$428,516	FY 14
	\$406,091	FY 15
	\$6,002,847	FY 16
	\$185,000	FY 16
	\$1,225,000	FY 17
	\$1,075,000	FY 18
	\$700,000	TIF
City of Urbana	\$650,000	FY 14
CUMTD	\$3,084,200	FY 14 - FY 18
University of Illinois	\$2,000,000	FY 14, FY 17, FY 18
<b>TOTAL</b>	<b>\$16,173,287</b>	

It is possible that the City of Urbana will contribute an additional \$750,000 as a local match for the project. The City has received \$900,000 in grant funding to make improvements at an intersection in the middle of the Green Street corridor. They have already committed \$150,000 of that funding to engineering and if the City is allowed to delay the construction to coincide with this project, the total project costs will increase to \$30,450,300 and the local match will increase to \$16,923,287.



## IV. Selection Criteria

### Employment Benefits

Per the [American Public Transportation Association](#) (APTA), approximately 74 percent of government funding for public transportation goes toward supporting hundreds of thousands of private sector jobs. It is estimated that every \$1 billion of public transportation capital investment creates 24,000 jobs. For this project, that would equate to 600 jobs. What is not quantifiable is the long term job creation of the project that will support the vision of the community expanding and enhancing its role as a world class center of research and technology.

#### a. Long Term Outcomes

##### i. State of Good Repair

Keeping public transportation infrastructure in a state of good repair is essential to sustaining existing transportation services, providing mobility, and supporting livable communities. Pavement condition has been shown to have a direct impact on vehicle operating costs in the form of increased wear and tear on vehicles and repair costs. Poor pavement can also impact travel time costs to the extent that road conditions force drivers to reduce speed, increasing fuel consumption. The ride quality of pavement also affects the comfort of travelers and traffic congestion. In addition, poor pavement conditions create hazards for bicyclists and pedestrians and discourage the use of these modes of transportation.

Recent examination of the corridors proposed for improvement in this project reveal that these streets fall short of a state of good repair and thus compromise the safety, capacity, and efficiency of the City of Champaign, City of Urbana, and University of Illinois street networks.

The Cities and University have rated the pavement conditions of the streets involved with this project as follows:

- Armory Avenue (4<sup>th</sup> Street to Wright Street) – good
- Wright Street (Armory Avenue to Springfield Avenue) – fair to poor
- White Street (2<sup>nd</sup> Street to Wright Street) – fair to poor
- Green Street (Wright Street to Goodwin Avenue) – poor
- Green Street (Goodwin Avenue to Gregory Street) – fair
- Green Street (4<sup>th</sup> Street to Neil Street) - fair to poor

This project will not only bring the pavement for these streets to a “very good” rating, it will upgrade them to meet the adopted complete streets standards, thus expanding the



**Wright Street  
Existing Pavement Condition**



**White Street  
Existing Pavement Condition**

mobility capacity of the urban core, making for a more accessible, safer, and inviting trip for all modes of transportation.

This investment will also eliminate a present cost to transit riders that cumulatively exceeds \$1 million annually and has additional maintenance and fuel costs of nearly \$150,000, as shown in the [Benefit-Cost Spreadsheets\\_CUMTD\\_MUMED.xlsx](#).

## **ii. Economic Competitiveness**

The Champaign-Urbana metropolitan area is not unlike other smaller cities that have experienced growth on the fringes at the expense of the viability of the center city area. This has been driven in part by the ease of “greenfield” development. The M-U MED initiative is designed to create a more balanced playing field giving homeowners, renters and business investors a wider choice of where to live based on the benefit and value of service and lifestyle tradeoffs.

In 2002, the City of Champaign invested in a complete street reconstruction of Green Street from 4<sup>th</sup> Street to Wright Street. That project has resulted in significant re-investment in commercial/residential buildings along the segment of the corridor. To date, 13 major projects have been completed, one project is currently in construction, and three projects are ready to break ground. These four major projects have a construction value in excess of \$100 Million. A summary of the completed, in-progress, and proposed projects can be found in the [Campus Development\\_CUMTD\\_MUMED.pdf](#).

With this development success, the City of Champaign instituted a Campus Commercial Overlay District along the entire corridor from Neil Street to Wright Street with development incentives to increase commercial space and residential density credits. The major points are:

- Increase in floor area allowances
- Floor Area Ratios that encourage an increase in number of building stories
- Setback and building façade directives
- Reduction in vehicular parking requirements (results in increased use of mass transit, and pedestrian and bicycle traffic)
- Density bonuses for Green Buildings with LEED certification ties to Floor Area Ratio bonuses

Based on the current development success, the partners agree the proposed M-U MED project will generate even more development/re-development in the urban core. As evidence, the City of Champaign is planning for [significant redevelopment](#) along the White Street Corridor.

Key to creating a more level playing field for development in the urban core than on the fringes is shifting the impetus for developers to invest in the urban setting. A key to that is place making that becomes attractive to broader and more diverse segments of the population. The complete streets treatment along with additional design and safety measures is critical to that place making.

The reward for changing the development dynamic is a very significant savings in public infrastructure capital and operating costs in excess of \$250 Million over 20 years, as shown in the [Benefit Cost Spreadsheets CUMTD MUMED.xlsx](#).

### iii. Livability

In 2009, the Environmental Protection Agency (EPA), U.S. Department of Housing and Urban Development, and U.S. Department of Transportation joined together to help communities gain better access to affordable housing, more transportation options, and lower transportation costs. This M-U MED initiative furthers the six livability principles developed as part of the Partnership for Sustainable Communities.

#### 1. Provide more transportation choices.

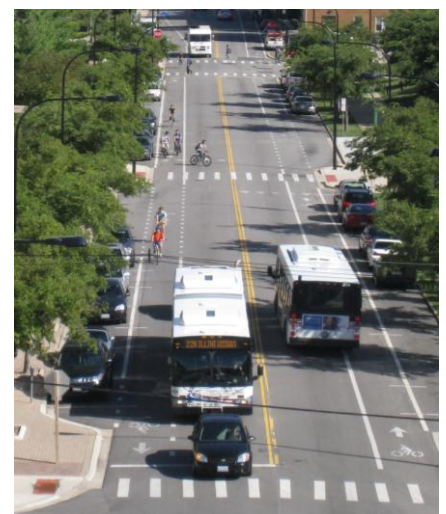
To many, the transportation system is often viewed as a network of streets and highways that allow for automobile and truck traffic within, to, and through Champaign-Urbana. In reality, roads make up only one component of the transportation system. Transit service, bicycle facilities, and pedestrian infrastructure are essential to a well-balanced multi-modal transportation system.



**Logan Street  
Complete Street  
City of Champaign**

There are already a number of alternative transportation modes available in the Champaign-Urbana community. All University of Illinois students and permanent employees have fare-free access to CUMTD buses. Access to service for all residents was made more affordable in 2009 by reducing the annual ridership pass cost from \$235 to \$60. At that same time, CUMTD did an “Extreme Makeover” of their service to expand services between the two downtowns and the University.

In 2009, the cities of Champaign and Urbana and the University of Illinois contracted with Zipcar to provide fuel-efficient vehicles for short trips in and around the community. To date, there are more than 1,000 members signed up and currently using the Zipcar program.



**Goodwin Avenue  
Complete Street  
University of Illinois Campus**

The M-U MED project is a multi-modal network of roads, on-street bike lanes, shared lane markings, bus-only lanes, and other transit services that will further enhance mobility for residents and visitors, particularly non-drivers, persons with disabilities, senior citizens and economically disadvantaged populations.

If suburban development patterns continue and reliance on the automobile increases, the number of vehicle trips, vehicle miles of travel, and congestion

also increase. Implementing the M-U MED pattern will develop the urban core and offer safe and economical transportation choices, decreasing household transportation costs, reducing our nation's dependence on foreign oil, improving air quality, reducing greenhouse gas emissions, and promoting public health.

2. Promote equitable, affordable housing.

The M-U MED vision of infill development and redevelopment will create complete neighborhoods that provide residents with a mix of affordable housing types in the urban core close to jobs, shopping, and services.

By locating housing close to jobs, shopping, and services, commuting distance is reduced. Reducing commuting distance gives people more options in how they travel--most notably public transportation, walking, and biking. Choosing transit, walking and bicycling reduces the expenses associated with daily commuting. APTA [research](#) shows that living in a transit-rich area can allow a two-car family to eliminate one of its vehicles, saving more than \$9,700 a year.

Lowering transportation costs would have a positive impact on individuals and families choosing to live in the urban core, as the combined cost of housing and transportation is reduced. The *Penny Wise Pound Fuelish* report ([Penny Wise Pound Fuelish\\_CUMTD\\_MUMED.pdf](#)) by the Center for Neighborhood Technology (CNT) confirms that households with access to high quality public transit spend less on housing and transportation as a portion of their income. CNT's H+T (housing plus transportation) index shows that housing costs may be higher in center cities, but savings to household transportation costs from using public transit balance out, and even exceed, the increase in housing costs.

CNT prepared a study for CUMTD in July of 2007 entitled [Creating an Affordable Future: Mobility Enhanced Development Opportunities for the Champaign-Urbana Region](#). While this study revealed that the most affordable transportation options in the community exist in the urban core, there is a lack of housing stock necessary to attract a diverse population. The investment in complete streets serves as a stimulus to create the greater diversity of housing stock, including workforce housing.

3. Enhance economic competitiveness.

Providing transportation choices goes hand-in-hand with improving economic competitiveness. Transit, walking, and bicycling provide communities with affordable means of mobility, offering individuals greater opportunity to better themselves and provide for their families. Spending less money on transportation allows residents to purchase more goods and services within the community, stimulating the local economy.

Per [APTA](#), investment in public transit generates business expansion and economic growth worth more than the monetary value of the initial investment. APTA estimates that every \$1 billion invested in public transportation produces \$3.6 billion in added business sales volume, which in turn generates nearly \$500

million in federal, state, and local tax revenues. For every \$1 invested in public transportation, \$4 in economic returns are generated.

In the Champaign-Urbana area, CUMTD transit services provide reliable and timely access to employment centers, educational opportunities, services, and other basic needs by workers, as well as expanded business access to markets. The TIGER grant funds are key to not only maintaining the quality and level of this service, the funds expand mobility opportunities by building complete streets that better connect the two existing downtowns with the University and expand the palette for business development and redevelopment.

CUMTD maintains 52 bus routes (not including one weekday, two evening, one Saturday, and one Sunday direct van services or Safe Rides). In 2012, approximately 91% of all residential land uses were within a quarter of a mile of CUMTD bus routes, an increase of 2 percentage points since 2009. The urbanized area has achieved its target of 90% transit service coverage of all residential land uses before 2014.

**Table: Land Uses within 1/4 Mile of Bus Routes (2012)**

Summary of Land Coverage by CU-MTD			
Category	Acreage in 1/4 Mile Buffer	Total Acreage	Pct. Total
Single Family Residential	5,496.3	6,126.1	89.7%
Duplexes	188.2	192.2	97.9%
Apartments	717.4	730.3	98.2%
Group Home - Fraternity - Sorority	38.9	38.9	100.0%
Mobile Homes	223.5	240.4	93.0%
Condominiums	86.3	92.9	92.9%
<b>Total Residential</b>	<b>6,750.6</b>	<b>7,420.8</b>	<b>91.0%</b>

Source: CCGISC; Champaign County Tax Assessor

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CUMTD ridership increased 15.8% from 2009 to 2012. This increase was above the target of a 5% increase to be achieved by 2014. Between fiscal years 2008 and 2012, CUMTD ridership increased by 20%.

CUMTD surpassed 10.5 million rides in July 2011 and has since reached new records. The highest ridership ever recorded for CUMTD occurred in 2012 with the highest monthly ridership of 1,391,576 in October 2012. Ridership increased every month in 2012 when compared with 2009 (Table 2). Ridership is projected to reach 12 million for 2013.

**Table: CU-MTD Annual Ridership (2008-2012)**

Month	2008	2009	2010	2011	2012
January	843,420	757,365	805,638	881,575	927,630
February	1,146,354	1,175,703	1,236,865	1,177,828	1,305,142
March	913,179	979,460	1,064,065	1,089,206	1,073,789
April	1,077,889	1,123,869	1,098,391	1,101,360	1,134,560
May	522,275	621,396	637,786	638,216	693,620
June	380,599	361,625	408,928	431,537	473,304
July	365,289	340,662	387,210	401,883	447,178
August	559,380	578,539	714,304	787,817	745,337
September	1,093,712	1,058,900	1,117,050	1,203,512	1,215,967
October	1,178,063	1,180,890	1,201,806	1,254,804	1,391,576
November	905,337	908,865	1,011,472	1,073,953	1,115,234
December	798,794	771,071	797,556	777,617	887,209
<b>Total</b>	<b>9,784,291</b>	<b>9,858,345</b>	<b>10,481,071</b>	<b>10,819,308</b>	<b>11,410,546</b>

Source: CU-MTD

4. Support existing communities.

Establishing the successful M-U MED pattern can provide many benefits to a community and its residents. The multi-modal transportation system provides an alternative to the typical, disconnected, auto-dependent developments that are often seen throughout the country. Focusing on more mixed-use residential and business development and redevelopment in the urban core locates housing close to shopping and jobs.

Shortened distances between work, home, and shopping areas shift people away from cars and promote walking, bicycling, and transit use. These alternative modes of transportation can move more people in a smaller space on the street or along a corridor. For example, a single bus can carry 60 people and a high-capacity, high-frequency bus line can carry as many people as seven lanes of highway or 17 lanes of urban street. By moving more people into a smaller space, expenditures that would otherwise be dedicated to building, widening, and maintaining major roads can be used for sidewalks, bicycle facilities, transit facilities, and other improvements aimed at supporting alternative modes of transportation.

Redevelopment of the urban core requires less paving, fewer roads, and smaller extensions of utilities such as water, sewer, and electrical lines than greenfield development. The cities can provide the same amount of services to residents and businesses using less infrastructure because distances between points of interest are smaller with dense development. Cities can, therefore, achieve more growth for less money.

Implementing the M-U MED project will save over \$270 million in operating and capital infrastructure costs. It also has a significant impact on reducing energy costs, as shown in the [Benefit Cost Spreadsheets CUMTD MUMED.xlsx](#).



5. Coordinate and leverage federal policies and investment.

The Project Partners – CUMTD, City of Champaign, City of Urbana and University of Illinois – have a history of collaboration to plan for future growth of the community. Specifically through the Campus Area Transportation Study (CATS), they have worked together to identify transportation/circulation deficiencies and issues that exist within the campus area. They have a common mission “To better accommodate pedestrian, bicycle, transit, and vehicle movements in a more user-friendly environment”

6. Value communities and neighborhoods.

Champaign-Urbana is a micro-urban community that possesses a highly uncommon set of desirable attributes normally exclusively associated with much larger metropolitan centers. Among these are an internationally diverse population, a strong technology base, a vibrant arts/culture/entertainment scene, and a palpably animated public discourse on major societal and global concerns. The presence of such attributes within the context of a smaller population center—the size of which can provide advantages such as ease of transportation, more affordable living, and a stronger sense of community—positions micro-urban communities like Champaign-Urbana, as an attractive location to live.



Champaign-Urbana sees bicycling as an integral component of building an attractive, livable community. The Bicycle Friendly America program by the League of American Bicyclists (LAB) recognizes those leading the way in this effort. Both Champaign and Urbana are very proud of the fact that they have been named [Bicycle Friendly Communities](#) for actively support bicycling and welcoming cyclists by providing safe accommodation for cycling as well as encouraging people to bike for transportation and recreation. The University of Illinois has been recognized as a [Bicycle Friendly University](#) for promoting and providing a more bicycle-friendly campus for students, staff and visitors. CUMTD (along with four other local businesses) has been named a [Bicycle Friendly Business](#) for their efforts in promoting bicycling for transportation, recreation, exercise, and sport as well as for weaving bicycling into the business culture and giving employees the opportunity to be active stewards of their personal and environmental health through bicycling.



The community consists of a variety of neighborhood types to suit all interests. The goal of the M-U MED pattern is to focus on the urban core and provide a variety of housing types and densities, a mixture of different land uses, the essential civic elements, proximity to schools, parks, transit and shopping and an urban design that ensures long term viability.



Implementation of the M-U MED project will further enhance the overall quality of life of the community by enhancing transportation choices and mobility to all residents of the community. Multi-modal transportation options provide an alternative to automobile travel, resulting in reduced roadway congestion, better air quality, and improved quality of life through mobility choices.

#### **iv. Environmental Sustainability**

The cities of Champaign and Urbana, the University of Illinois and CUMTD have embraced the President's challenge to transform the way transportation serves the American people by encouraging transportation that is less carbon-intensive, such as transit, as well as active transportation that produces zero emissions, such as biking and walking. The project partners are committed to improving energy efficiency, reducing dependence on oil, reducing greenhouse gas emissions and benefitting the environment, as is evidenced with their existing plans and policies such as: [Champaign-Urbana Urbanized Area Transportation Study Long Range Transportation Plan \(LRTP\) 2035](#); [City of Champaign Comprehensive Plan](#); [City of Champaign Sustainability Plan \(Champaign Growing Greener\)](#); [City of Urbana Comprehensive Plan](#); [City of Urbana Climate Action Plan](#); and the [University of Illinois Climate Action Plan \(iCAP\)](#). [Read more](#) about each of those plans/policies and how they apply to the proposed improvements in this project.

The M-U MED project promotes development that is located and designed to be compact and contiguous to existing development and have a limited impact on the natural environment. Developing the community in a compact way using low-impact development techniques minimizes impact on the environment by protecting farmland and water quality.

Promoting development patterns that encourage walking, cycling and transit use will reduce auto dependency which will in turn ease fuel consumption and the reliance on fossil fuels. Reducing auto dependency will reduce the vehicle miles traveled, reducing local greenhouse gas emissions.

#### **v. Safety**

Roadway safety has been a primary focus of efforts in the C-U community for many years. Several safety benefits are expected with the implementation of the M-U MED initiative:

Safety benefits of reduced number and width of vehicle lanes:

- Decreased number of vehicle travel lanes for pedestrians to cross, therefore reducing the multiple-threat crash (when one vehicle stops for a pedestrian in a travel lane on a multi-lane road, but the motorist in the next lane does not, resulting in a crash) for pedestrians.
- Improved speed limit compliance (first car sets the speed).
- Decreased crash severity when crashes do occur (due to lower speeds).

Safety benefits of on-street bicycle lanes:

- Studies have shown that a simple white line is effective in channelizing both motorists and bicyclists and that both feel more comfortable with the line in place.
- In Chicago, where travel lanes are commonly narrowed to 10 ft. to install 5 ft. bike lanes, studies have revealed that average crash rates decreased at intersections by 9.9% and at mid-block by 15.4%.
- Adding bike lanes to narrow travel lanes reduces traffic speeds.
- Bike lanes create a buffer space between pedestrians and vehicles.
- Increased travel area is provided for bicyclists, pedestrians, and motorists. Safety is improved for bicyclists being passed by overtaking motorists and for motorists who will not have to travel out of the travel lane in order to pass bicyclists.
- Safety is improved for pedestrians due to the buffer space provided by bike lanes between sidewalks and traffic.

- Pedestrian safety is also improved because bicyclists are more likely to ride in bike lanes than on sidewalks.

Safety benefits of curb extensions:

- Encourages pedestrians to cross at designated locations.
- Increased pedestrian visibility at intersections through improved sight lines.
- Decreased pedestrian exposure to vehicles by shortening the crossing distance.
- Reduced vehicle turn speeds by physically and visually narrowing the roadway.
- Increased pedestrian waiting space.
- Reduced illegal parking at corner crosswalks and bus stops.
- Facilitated ability to provide directional ADA compliant ramps at each corner.

Beginning in 2000, the University of Illinois, CUMTD, the City of Urbana, the City of Champaign, and the Champaign Urbana Urbanized Area Transportation Study (CUUATS) created the Campus Area Transportation Study (CATS) based on recommendations in the Campus Safety Task Force Report and the Campus 2000 Report. CATS was the first transportation study in which all the agencies participated together to address campus area transportation problems. CATS has continued to work to identify a comprehensive approach to address transportation issues within the urban area.

In 2011, Champaign County Regional Planning Commission (CCRPC) received a grant from the Illinois Department of Transportation (IDOT) to conduct the University District Traffic Circulation Study (UDTCS) for CATS. This study aims to provide transportation systems that will contribute to a pleasing environment for individuals who attend, work at, and visit the University, as well as those who live in the adjacent neighborhoods. This study also aims to enhance pedestrian and bicyclist safety on and around campus.

Intersection and segment crashes from 2006 to 2010 were analyzed as part of the UDTCS to identify existing safety and operational issues within the study area. The crash analysis also involved an examination of crashes involving pedestrians and bicyclists to determine if there are safety issues that cause higher crash frequencies for these modes of transportation. This crash analysis can be found in Section 2.6 of the [University District Circulation Study Draft 09/14/12](#).



There were four fatalities related to traffic crashes within the University District between 2006 and 2010, but traffic crashes within the University District showed a declining trend since 2007. However, bicycle crashes showed an increasing trend between 2007 and 2009. The Green Street corridor experienced the highest number of transit, pedestrian and bicycle crashes. The number of crashes along the major corridors generally showed declining trends.

A number of intersections with the highest crash frequency are in the corridors included in this TIGER grant application and the improvements that would result from implementation of the project would greatly enhance safety for all modes of travel.

Diversion of single occupant vehicle travel to alternative modes of transportation reduces vehicle miles traveled which, in turn, reduces accident rates. As shown in the [Benefit Cost Spreadsheets CUMTD MUMED.xlsx](#), the accident reduction savings are approximately \$2.2 million.

## vi. Project Readiness

### (a) Technical Feasibility:

In 2012, CUMTD hired Foth Infrastructure & Environment, LLC to study a pedestrian/bicycle/bus corridor to connect Downtown Champaign and Downtown Urbana with the campus of the University of Illinois. The intent of this study was to propose a design that is consistent with the CATS mission “To better accommodate pedestrian, bicycle, transit, and vehicle movements in a more user-friendly environment” as well as to take into account the various agency plans and policies already in place, such as:

- [City of Champaign Comprehensive Plan, Champaign Tomorrow](#)
- [City of Champaign Transportation Master Plan, Champaign Moving Forward](#), including the Bicycle Vision
- [City of Urbana 2005 Comprehensive Plan](#)
- [City of Urbana Bicycle Master Plan](#)

The following projects and plans related to campus transportation in the proposed project core were also consulted during schematic design development. For more information on these plans see the [University District Circulation Study Draft 09/14/12](#).

<b>Project/Plan Title</b>	<b>Sponsoring Agency</b>	<b>Completing Agency</b>	<b>Completion Year</b>
Campustown Action Plan	City of Champaign	City of Champaign Planning Department	April 1999
University of Illinois Campus Area Traffic Circulation Study	Cities of Champaign and Urbana, IDOT, University of Illinois, CUMTD	Butcher, Willis & Ratliff Corporation	June 1999
Campus Area Transportation Study Phase II	University of Illinois, Cities of Champaign and Urbana, CUMTD	Clark-Dietz, Inc.	July 2005
Multi-Modal Transportation Study	University of Illinois	Martin Alexiou Bryson	March 2007
University of Illinois Campus Master Plan Update	University of Illinois	Sasaki Associates, University Office for Facilities, Planning and Program, UIUC	March 2007
Transit Analysis	University of Illinois	Martin Alexiou Bryson	May 2008
Wright Street Bike Path Feasibility Study	University of Illinois	Crawford, Murphy & Tilly, Inc.	June 2009
University District Bike/Transit Safety Study	CUMTD Transit District	T.Y. Lin International	August 2011
Campus Bike Plan	University of Illinois	University of Illinois	Incomplete

Foth Infrastructure & Environment, LLC developed the improvements as proposed in this TIGER grant application for Armory Avenue from 4<sup>th</sup> Street to Wright Street, Wright Street from Armory Avenue to White Street, White Street from Wright Street to 2<sup>nd</sup> Street and Green Street from Wright Street to Lincoln Avenue. Quantities were calculated for major items of work and detailed cost estimates were prepared for the project based on unit prices from currently bid projects. As the design is schematic and campus projects are complex due to unknowns, a 20% contingency was added to the costs.

The City of Champaign developed the cost estimate for Green Street from 4<sup>th</sup> Street to Neil Street. The project is an extension of a 2002 project in the same corridor and therefore costs were calculated based on a lineal foot for the type of project. Again, a 20% contingency was added to the cost estimate, based on the level of design being schematic.

Find a complete description of the improvements in each corridor of the project as well as plan sheets and detailed cost estimates [here](#).

*(b) Financial Feasibility:*

As noted in Section III. Grant Funds and Sources/Uses of Project Funds, the total estimated cost for this project is \$29,700,300. The partners have committed to contribute \$16,173,287 to the project. A breakdown of the funding commitments by agency is also included in Section III.

CUMTD will be the lead agency for this project. CUMTD operates an annual operating budget in excess of \$34 Million and has managed a variety of complex capital projects. The last three audits may be downloaded from the [CUMTD website](#) for additional background to demonstrate corporate financial competencies.

All of the agencies involved in the project have received federally funded grants in the past and have experience managing them successfully.

This project will be constructed in three (3) phases. The following table lists the budget for each individual phase broken down between TIGER and non-federal sources.

**Table: Project Budget by Phase**

	<b>Location</b>	<b>Jurisdictional Agency</b>	<b>Project Cost</b>	<b>TIGER</b>	<b>Local Match</b>
Phase 1 2014-2015	Green Street – Wright Street to Lincoln Avenue	City of Urbana	\$4,096,230	\$2,806,230	\$1,290,000
	White Street – Wright Street to 2 <sup>nd</sup> Street	City of Champaign	\$4,594,760	\$799,560	\$3,795,200
Phase 2 2016	Green Street – 4 <sup>th</sup> Street to Neil Street	City of Champaign	\$9,275,000	\$1,320,913	\$7,954,087
Phase 3 2017-2018	Armory Avenue – 4 <sup>th</sup> Street to Wright Street	University of Illinois	\$2,349,125	\$135,125	\$2,214,000
	Wright Street – Armory Avenue to Springfield Avenue	University of Illinois / City of Champaign	\$9,385,185	\$8,465,185	\$920,000
<b>TOTAL</b>			<b>\$29,700,300</b>	<b>\$13,527,013</b>	<b>\$16,173,287</b>

*(c) Project Schedule:*

This project will be constructed in three (3) phases. All necessary pre-construction activities for Phase 1 will be complete to allow for the grant funding awarded to be obligated no later than June 30, 2014.

Once the TIGER funds are approved, engineering work will commence immediately.

The project partners own the majority of the adjacent property/right-of-way in the project area. It is expected that the project can be constructed within existing right-of-way and no property and/or right-of-way acquisition will be necessary.

Because portions of this project are located on the campus of the University of Illinois, special consideration must be made regarding the schedule. For road construction projects on campus, it is desirable to have construction occur between mid-May and mid-August, when the majority of the student population is gone.

The requirement that any potential grant funding awarded be obligated no later than June 30, 2014 set the schedule for Phase 1. Design would begin immediately upon notice of funding and proceed steadily and expeditiously toward a June 2014 bid letting. Because of this late summer start date, construction is expected to suspend during the winter and resume for completion by the following spring/summer.

The project schedule for Phase 2 assumes a January 2016 bid letting for a May 2016 construction start date.

The project schedule for Phase 3 assumes a January 2017 bid letting for a May 2017 construction start date. This phase of the project is the longest and most complex and therefore is expected to take two construction seasons.

These schedules assure that work will be fit into other ongoing construction demands within the two cities and University without disruption or delays.

**Table: Phase 1 Schedule**

**Green Street – Wright Street to Lincoln Avenue  
White Street – Wright Street to 2<sup>nd</sup> Street**

<b>Project Task</b>	<b>Date of Completion</b>
Intersection Design Study	Mid-September 2013
Environmental Survey Request (ESR)	Mid-September 2013
Draft Project Development Report (PDR)	Mid-November 2013
Pavement Design	Late-November 2013
Final Project Development Report (PDR)	Late-December 2013
Preliminary plans/specs/cost estimate	Mid-February 2014
Joint Agreement	Mid-February 2014
PS&E – District Office	Mid-March 2014
PS&E – Central Office	Mid-April 2014
Final Joint Agreement	Late-April 2014
Bid Letting	June 2014
Begin Construction	July 2014
End Construction	July 2015

**Table: Phase 2 Schedule**

**Green Street – 4<sup>th</sup> Street to Neil Street**

<b>Project Task</b>	<b>Date of Completion</b>
Intersection Design Study	Mid-April 2015
Environmental Survey Request (ESR)	Mid-April 2015
Draft Project Development Report (PDR)	Mid-June 2015
Pavement Design	Late-June 2015
Final Project Development Report (PDR)	Early-August 2015
Preliminary plans/specs/cost estimate	Mid-September 2015
Joint Agreement	Mid-September 2015
PS&E – District Office	Mid-October 20145
PS&E – Central Office	Mid-November 2015
Final Joint Agreement	Mid-November 2015
Bid Letting	January 2016
Begin Construction	May 2016
End Construction	August 2016

**Table: Phase 3 Schedule**

**Armory Avenue – 4<sup>th</sup> Street to Wright Street  
Wright Street – Armory Avenue to White Street**

<b>Project Task</b>	<b>Date of Completion</b>
Intersection Design Study	Mid-April 2016
Environmental Survey Request (ESR)	Mid-April 2016
Draft Project Development Report (PDR)	Mid-June 2016
Pavement Design	Late-June 2016
Final Project Development Report (PDR)	Early-August 2016
Preliminary plans/specs/cost estimate	Mid-September 2016
Joint Agreement	Mid-September 2016
PS&E – District Office	Mid-October 2016
PS&E – Central Office	Mid-November 2016
Final Joint Agreement	Mid-November 2016
Bid Letting	January 2017
Begin Construction	May 2017
End Construction	August 2018

*(d) Assessment of Project Risks and Mitigation Strategies*

Given that all the partners in this project have an excellent working relationship and have amply studied the area, there was a consensus that the most significant risk is obtaining solid project capital costs. The project team is satisfied that the pre-engineering planning conducted by Foth Infrastructure & Environment, LLC has adequately addressed this risk and provided ample reserves to cover any possible disruption or problem that might arise.

The project team has identified two additional potential risks that have been addressed in the initial planning phase.

1. Project Oversight

CUMTD will be the grantee of record and ultimately responsible for the successful completion of the project and answerable to DOT. However, the actual work will be handled by the City and University partners, each responsible for their own right-of-ways. This includes the final engineering, contracting for services, and oversight of the actual work.

To assure continuity and compliance with all grant obligations, a Partner Oversight Committee will be established to coordinate all activities. CUMTD will establish performance contracts with each of the partners to further assure compliance.

2. Possible Environmental Challenges

All the project partners have reviewed likely environmental impacts. Given that the project impacts all occur in existing street right-of-way, the partners believe that the NEPA review will confirm there are no environmental impacts that will either stop or slow the project. The NEPA review will be completed by December, 2013, and should there be any unexpected issue, there will be ample time to resolve it.

*(e) Federal Participation a Critical Element*

To achieve the objectives inherent in creating a micro-urban environment requires creating an expanded mobility network. The Federal participation through TIGER funding allows this project to build a complete streets network that otherwise the communities could not achieve. While the high-capacity transit network already in place would continue service, the corresponding infrastructure (sidewalks, lighting, bike lanes) necessary to serve as a place making attractor for desired development would not be completed.

The innovative transit service developed and proven by CUMTD to expand ridership and create the basis for a robust mobility network in the micro-urban core contains the irony of making it difficult to qualify for the only other readily available Federal Funding source, a Small Starts Grant. There are two primary reasons: The high frequency transit service creates a transit network of corridors rather than a linear corridor and the service has already been implemented.

Should the TIGER grant funding not be forthcoming the only other option for the project partners will be to seek a FTA Small Starts Grant.



## **b. Innovation**

### **Project Concept:**

As the corridors within the project area are subject to three (3) different jurisdictional agencies, the M-U MED concept can only be developed as a result of innovative, multi-stakeholder collaboration. The project partners having been working together since 1999 to create a multi-modal, sustainable, and efficient development pattern that is safe for all transportation users.

### **Technology:**

CUMTD currently utilizes STOPwatch communications technology to improve on time service and improve real time information services for its customers. In real time, the STOPwatch system tells customers how many minutes it will be before their bus departs. This information is based on the actual location of the vehicle, as tracked by a GPS system, and can be accessed via kiosks at more than a dozen on-street locations, on-line, and via text messaging and smart phone applications.

This grant will greatly expand real-time information throughout the entire urban core, at the same time creating additional bus kiosks that serve as anchor points along the corridors to enhance place making.

### **Service Design:**

To enhance mobility services, CUMTD has created transit routes that interconnect and provide high capacity service to multiple corridors between and within Downtown Champaign, Downtown Urbana, and the University of Illinois. The impact of this innovation is highlighted in Section iii. Livability. The approach to create a micro-urban area serviced by multiple corridors was chosen by the project partners over investing in a single corridor to be serviced either by rail or Bus Rapid Transit. This innovation is a model that other similar-sized cities could emulate to expand mobility options and decrease single occupancy vehicle use.

## **c. Partnership**

As has been demonstrated throughout this document, the TIGER application is truly a capstone project resulting from close and ongoing collaboration over more than 10 years between all the partners represented in CATS. Along with the MPO, this collaboration has resulted in a major expansion of mobility services that has resulted in the decrease of single occupancy travel and is creating the foundational infrastructure upon which to increase residential and business activity in the greater urban core that represents the University and the two downtowns.

Each partner jurisdiction is pursuing its future with its own unique approach, thus offering vitality to the greater community through diversity. However, there is a mutual underlying commitment to land use strategies that encourage a level playing field for development in the urban core and the expansion of mobility options to support this effort that is reflected in the region's Long Range Transportation Plan and in the various plans of all the partners.

This collaboration and commitment is translated into action by the investments all the partners have already made. The partners' commitment is further evidenced by their ongoing collaboration and by providing a 55% local share funding for this project.

#### d. Results of Benefit-Cost Analysis

Given that the TIGER investment is a critical element in creating a more balanced development pattern for the Champaign-Urbana Metropolitan area, the Benefit-Cost analysis is based on projecting the major social costs associated with land use development over the twenty year planning horizon by comparing the continued historical development patterns (Reference Model) to the M-U MED pattern.

To make this comparison, the MPO, which is recognized for their technical modeling capabilities, was retained to model these scenarios by integrating their CUBE Travel Demand Models and a localized Land Use Evolution and Assessment Model (LEAM). Based on these two scenarios projected out to 2035, the MPO used a Social Costs of Alternative Land Development Scenarios (SCALDS) model to establish the relative social costs of the alternative futures. The [CUUATS Micro-Urban Mobility Enhanced Development Analysis](#) (CUUATS MUMED Analysis\_CUMTD\_MUMED.pdf) was an integrated land use-transportation scenario analysis designed to estimate the changes in vehicle miles travelled (VMT), mode split, and travel times between major activity nodes resulting from targeted development. The [CUUATS Micro-Urban Mobility Enhanced Development Social Costs Analysis](#) (CUUATS MU MED Social Costs Analysis\_CUMTD\_MUMED.pdf) built on the land use-transportation analysis previously conducted to estimate the monetary and non-monetary costs associated with each development scenario.

These analytical tools allow a fair comparison between the alternatives. The difference in cost between the two represents the benefit of investing in one or the other future. Based on constant dollars, it became overwhelming clear that the benefits accrued by adopting micro-urban development strategies justified investment in the infrastructure to shape that future.

The following summary shows the net benefits from the M-U MED growth scenario.

<b>Benefits / net value</b>	
<b>SCALDS Based Cost Analysis</b>	<b>Net Benefits</b>
Operating Costs	\$147,747,190
Infrastructure Costs	\$126,041,200
Non-Transportation Energy Costs	\$178,798,646
Agricultural Land Production	\$488,021,305
Accidents	\$2,207,775
Emissions	\$281,538

This analysis may be accessed in the [Benefit Cost Spreadsheets\\_CUMTD\\_MUMED.xlsx](#) that provides the backup work. The one addition made in evaluating the social costs was to value the production of agricultural land. The value placed on it was derived from the net production value of an agricultural acre in Champaign County in 2007.

The reason for monetizing this social cost is it becomes the surrogate measure for which of the two scenarios will emerge over the coming twenty years and it indicates where private dollars will be invested. This becomes a more realistic assessment of the real value of development than the traditional way of trying to project property values other than on

historical grounds. Dollars not invested in agricultural land for residential and commercial development are more likely to flow to the micro-urban core.

The additional benefit-cost analysis relates directly to the provision of transit services. Given that high capacity service is already in place in the MED critical corridors, the question is whether there are significant improvements in the corridor that would enhance the existing service. Two measures, travel time and maintenance, have been quantified.

### Transit Specific Analysis

Transit Maintenance	\$2,211,480
Transit Rider Travel Time	\$24,539,558

While the system benefits clearly outweigh the cost, including the TIGER investment, the question becomes how much of those benefits should be allocated to the impact of improved mobility that includes facets of each of the SCALD social costs. Understanding that the type of mobility investment is as critical to future land use as are other infrastructure systems and services, this analysis takes a reasonable person approach and measures what level of discounted benefits would need to be allocated to justify the TIGER investment. The analysis demonstrates that only 10% of the total benefits need be applied to achieve a positive benefit-cost ratio with a 7% discount. This meets a reasonable person test, leaving ample benefits to justify additional non-mobility investments that will also be required to fully realize the micro-urban future for Champaign-Urbana.

Total Net Benefits	\$940,148,392
Discount 7%	\$314,624,611
Discount 3%	\$582,139,883
Mobility Value Contribution	\$94,014,839
7% Discount	<b>\$31,462,461</b>
3% Discount	<b>\$58,213,988</b>

## V. Planning Approvals

### NEPA Status:

To meet the NEPA requirements for the TIGER Grant application, an environmental review of the project corridor is currently underway and will be completed by December, 2013. The project corridor is completely developed and the proposed improvements (pedestrian, bicycle, and bus corridor improvements) are entirely within the existing ROWs. In February 2013, the Federal Transit Administration (FTA) published new categorical exclusions (CEs) tailored specifically to transit projects in an effort to provide a more straightforward and efficient environmental review process. With this new guidance, FTA aims to assist agencies and stakeholders in applying specific categorical exclusions to FTA projects.

The CE revisions were prompted by enactment of the “Moving Ahead for Progress in the 21<sup>st</sup> Century” (MAP-21) law signed by President Obama on July 6, 2012. Per the Council on Environmental Quality (CEQ) guidance “Establishing, Applying, and Revising Categorical Exclusions under the National Environmental Policy Act” (Nov. 2012), the CEs in 23 CFR §771.118 are now presented as general categories that include limitations, as appropriate, and provide an informative (but not exhaustive) list of project examples that could qualify for a CE. Section §771.118 is now reserved exclusively for FTA actions and section §771.117 is

now reserved exclusively for FHWA actions, although the new updates are a joint procedure. CEs listed in the previous 23 CFR §771.117 (2012) should no longer be used or referenced for FTA's action on projects.

These section updates direct rulemaking to establish a CE for any project (as defined in 23 U.S.C. 101(a)) within an existing operational right-of-way. Based on the nature of the proposed improvements (pedestrian, bicycle, and bus corridor improvements) and that they are entirely within the existing ROWs, a CE under 23 CFR 771.118(c)(3) is anticipated for this project.

To date, no known NEPA review has been conducted for this project corridor although the corridor has had many transportation studies completed. Categorical exclusions are not exemptions or a waiver of NEPA review; they are simply one type of NEPA review. A CE under 23 CFR 771.118(c)(3) includes "Construction of bicycle and pedestrian lanes, paths, and facilities." The additional activities (i.e., acquisition, rehabilitation, improvement, and limited expansion) are within the realm of construction and, therefore, consistent with the current CE.

To meet the documentation requirements for a CE under 23 CFR 771.118(c)(3), an environmental review is currently being conducted. Included in this review will be:

- *Cultural Resources (database review and consultation letter to obtain concurrence with the State Historic Preservation Office (SHPO) regarding Section 106 of the National Historic Preservation Act)*
- *Threatened/Endangered Species (a database review of the U.S. Fish and Wildlife Service regarding Section 7 of the Endangered Species Act)*
- *Jurisdictional Wetlands or Waters of the State*
- *Floodplains/Waterways*
- *Prime or Unique Farmland*
- *Park Lands (Section 4(f) Resources)*
- *Section 6(f) Lands*
- *Hazardous Materials*
- *Noise Impacts*
- *Air Quality*
- *Title VI Communities*
- *Visual Impacts*
- *Energy*
- *Safety and Security*
- *Agency and Public Concerns*
- *Utilities*
- *Mitigation Measures (if needed)*

Based on the type of CE applicable for this project, no further review or approval by FTA or DOT modal administration field office regarding compliance with NEPA is warranted. The CE will be kept for historical project reference. Since the project improvements are entirely within existing ROWs, it is anticipated that there will be no environmental, cultural, social or economic impacts; therefore, no mitigation measures are anticipated other than utilizing best management practices (BMPs) during construction.

#### Legislative Approvals:

There are no legislative barriers to a timely completion of the proposed improvements. The project has received endorsements from all involved agencies, which includes the City of Champaign, City of Urbana, Champaign-Urbana MTD, and the University of Illinois.

#### Consistency with Local and State Plans:

The proposed improvements are consistent with the Champaign-Urbana's metropolitan area Long Range Transportation Plan (LRTP) and the Campus Area Transportation Study (CATS) mission. The project is included in the Transportation Improvement Program (TIP) for Fiscal Years 2014-2017, draft document, prepared by the Champaign-Urbana Urbanized Area

Transportation Study, a program of the Champaign County Regional Planning Commission. It is included in Table 31: Illustrative Projects. Illustrative projects are projects that local agencies would like to see implemented, but for which they do not yet have funding sources. The projects listed in this table have no particular prioritization as of June 2013.

## **VI. Federal Wage Rate Certification**

CUMTD has signed the [federal wage rate certification](#) stating that it will comply with Subchapter 31 of Title 40 of the United States code.