

NORTH TEXAS ACTIVE TRANSPORTATION TRANSIT CONNECTIONS

Connecting The Region

PROJECT TYPE: Multimodal (bicycle, freight, pedestrian, roadway, transit)

LOCATION: Dallas-Fort Worth Metropolitan Area

AREA: Urban

REQUESTED:

AMOUNT: \$29,738,262 **DUNS NUMBER**: 102462256



















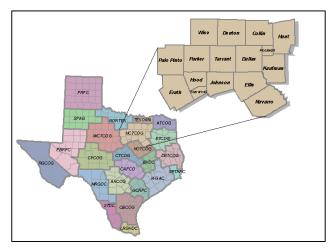


APRIL 2014

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I. PROJECT DESCRIPTION

The North Texas Active Transportation Transit Connections (NTATTC) project is being submitted by the Regional Transportation Council (RTC) of the North Central Texas Council of Governments (NCTCOG). The RTC is the independent policy body of 43 elected or appointed officials for the Metropolitan Planning Organization (MPO) of the Dallas-Fort Worth (DFW) region. The RTC is coordinating with all three regional transit agencies [Dallas Area Rapid Transit (DART), Denton County Transportation Authority (DCTA), and the Fort Worth Transportation Authority (FWTA)] and some of the metroplex's largest communities such as Dallas, Fort Worth, Arlington, Plano, and Irving, to close critical gaps in the MPO's Mobility 2035: The Metropolitan Transportation Plan for North Central Texas Regional Veloweb trail network (Appendix A). The Veloweb is the planned "superhighway" of 1,728 miles of off-street shared-use path/trail interconnected facilities providing alternative transportation for the region. This system looks to connect critical links for bicyclists and pedestrians between transit facilities and key destinations for major employment centers, housing, education, and other activity generators such as entertainment and retail hubs.



The DFW metropolitan area has many needs in an area that is geographically larger than nine states, has a population currently over 6.5 million, and is projected to grow to 9.8 million persons by 2035. Areas in the "sunbelt" are experiencing high population growth, but our transportation systems "grew up" around the car. This pattern has led to increasing challenges of rising congestion, poor air quality, sprawl, isolation, and growing division among communities and classes.

Transit cannot physically connect every home, job, and place we want to go, but the links created to transit by bicycle and pedestrian transportation access can be dramatic. The NTATTC project links communities to six light rail stations, five commuter rail stations, and numerous bus stops within the DFW region. To change recent trends and provide alternative transportation options seven critical projects are proposed that will leverage and enhance the billions of dollars of traditional transportation roadway investments and more innovative transit investments that have been made recently in DFW by providing the critical "last mile" connections.

President Obama highlighted in his January 18, 2014 weekly address that this was the "Year of Action." He discussed the proven ways to create jobs which "building infrastructure" through programs like TIGER clearly demonstrates but he also emphasized the need to "make America more attractive for the good jobs the growing middle class requires." Alternative transportation projects add to the "livability" of communities and they attract top industries and employers from across the country and across the globe. One of our proposed projects in Plano, TX highlights six million square feet of office space under construction. We know a critical decision for this private investment was the commitment of public investment such as the DART light rail and future multimodal connections such as trails in that part of the region. Providing workers options of how to commute and get around during short trips can meet one of the proposed policy suggestions on how to expand the middle

class which is making saving for retirement easier. The reduced cost of transportation can yield long-term savings for the public as they are spending less on fuel and auto costs and commuting by alternative modes. Our project looks to provide those choices and estimates that these enhanced bicycle and pedestrian modes will **reduce transportation costs through fuel savings by an estimated cost savings of \$6.7 million** (discounted at 7%).

The goal of the NTATTC project is to implement key components of a large and complex longrange integrated 12-county bicycle and pedestrian network, which would provide congestion mitigation by enhancing active transportation connections between the region's transit network and key destinations. These seven projects would add 33.1 miles of proposed bicycle facilities (32.55 mi. trails and .55 mi. on-street) and 6.9 miles of sidewalks. Using the radius defined in the Federal Transit Administration (FTA) Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law guidance of 3 mile impact radius for bikes and 0.5 miles for pedestrians, the impact would be that approximately 971,932 people that could connect to these specific facilities (see the Population Density Map in Appendix D) and there would be 1,167,351 jobs within those same areas that people would be able to access. Employment is a big focus of this application. Not only would more jobs be accessible but overall 771 large employers (over 150 persons) would benefit from these improvements. Those are employers we want to keep going strong with a viable work force and client base. There are also an estimated 2,552 short term and 1,278 long term jobs created through the design and construction of these facilities and through the continuing maintenance. These projects are also strongly focused on improving safety in the region. There have been over 1,900 reported bicycle and pedestrian crashes within these areas since 2008 and we are focused on reducing those numbers by installing safe dedicated bicycle and pedestrian facilities for all users.

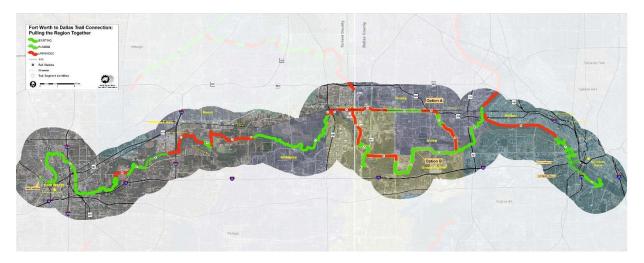
This network will impact communities located in the DFW urban core, first tier suburbs, and more conventional suburbs in the region. There are some communities within the NTATTC with high levels of environmental justice populations and these projects will improve access and connections to neighborhoods, employment centers, green space, and other important locations for these groups. Economically and ethnically diverse populations live and work throughout the DFW metroplex as they do in any large region. In some of the areas that would be effected by the NTATTC, the percent of minority population is as high as 91%. There are also multiple areas where over 50% of residences are below the poverty line. These vulnerable populations can be the most impacted by alternative transportation modes due to often having higher percentages of no car households. This network has the potential to serve over 67,856 workforce housing units that are within proximity to the projects (almost 11,000 of those received U.S. Department of Housing and Urban Development (HUD) assistance. Additionally within proximity to the projects there are 225 schools (143 elementary, 28 middle schools, 31 high schools, and 23 higher level educational institutions) that could benefit from alternative modes of transportation.

NCTCOG is looking to provide environmentally sustainable forms of transportation that are energy efficient and that generate no greenhouse gases or other pollutants. The NTATTC can provide congestion mitigation for key highway facilities in the region by improving access to commute alternatives that may parallel facilities such as those along the DART light rail system (IH 35E, US

75, US 114/John Carpenter Fwy), those near the Trinity Railway Express (TRE) commuter rail (US 183/Airport Fwy), and IH 35E which is adjacent to the DCTA A-Train commuter rail.

The impact of investment will be important to evaluate the success of the facilities, and the NCTCOG sees the NTATTC project as a demonstration to measure the change in the number of pedestrian and bicyclists accessing transit stations. "Before" and "after" bicycle/pedestrian user counts can be taken to look at performance measures of adding active transportation facilities to increase transit ridership. Mobile equipment to perform bicycle/pedestrian user counts to establish base line data and monitor trends over time was purchased in early 2014 as the result of a Federal Highway Administration (FHWA) peer exchange on developing a DFW regional bicycle and pedestrian user count program. The NTATTC project can be implemented quickly to meet all of FHWA requirements and will make a significant impact to the DFW region by enhancing alternative transportation modes and by creating greater access to existing modes of travel. The conservative net benefit of the projects, discounted to 2014 is approximately \$324 million dollars at a 7% rate. This level of economic benefit would have a significant impact on the region.

The NTATTC project has been enhanced from our regional submission in 2013. The project application retains the critical elements focusing on multimodal connections to transit and added two additional important segments to link communities and promote urban infill in the DFW region. In November 2013 NCTCOG hosted a meeting with the mayors from the five urban core communities of Arlington, Dallas, Fort Worth, Grand Prairie, and Irving. The mayors discussed the most effective means to connect downtown Fort Worth to downtown Dallas through a regional active transportation shared use path designated as the "Fort Worth to Dallas Regional Trail" connection. Once completed the project will be 64 miles in length, with connections to several TRE commuter rail stations. At the time of the November meeting, 40 miles of the system already existed or had funding commitments. Since late 2013, funding has been identified for 8.47 miles by the regional partners and the remaining 15.53 miles is included in the NTATTC application.



The project has a strong focus on transit with key connections, direct and indirect to the TRE commuter rail which provides service between downtown Dallas and downtown Fort Worth. The regional elected officials view the project as not only providing alternative transportation options, job access, and a means of congestion reduction in the DFW region, but also as a great stimulus to economic development and a catalyst for the growth of healthy communities.

The NTATTC project application will accomplish a great amount with the requested funds, 40 miles of active transportation facilities for \$54 million and help link our planning area which is the same geographic size as the State of Connecticut. The overall project cost averages \$1.35 million per mile of active transportation facilities to be constructed.

The DFW region has a history of using a utilitarian approach with public funds to provide the basic framework for the active transportation network. Rarely is a "platinum" level trail facility initially constructed. Instead, local communities form "Friends of" groups that fundraise and work within the community in a grassroots approach to fund enhancements to the basic infrastructure including landscaping, lighting, and other user amenities. Each local community determines the character and feel of "their" portion of the active transportation network and is very effective in assisting municipalities with ongoing maintenance and operations. This approach has allowed the North Texas region to build more with less public expense. There are numerous examples of this innovative approach in the DFW Region, which may not be found in other parts of the country where trails are initially constructed with public funds at a platinum level thus allowing for only incremental development of their active transportation network. As an example, in Dallas the Friends of the Katy Trail and the Friends of the Santa Fe Trail provide facility enhancements and ongoing maintenance through private donations and fundraising events.

Finally, a key element of the NTATTC project is <u>leveraged investment</u>. When preparing this TIGER application regional project partners identified funding that has been spent, funding committed for construction, and additional necessary funding for critical missing gap segments that are difficult to complete now that the "low hanging fruit" portion of the regional Veloweb has been implemented.

Appendix A identifies key regional Veloweb corridors and also highlights additional local investment underway by each of our partner agencies in proximity to the NTATTC projects.



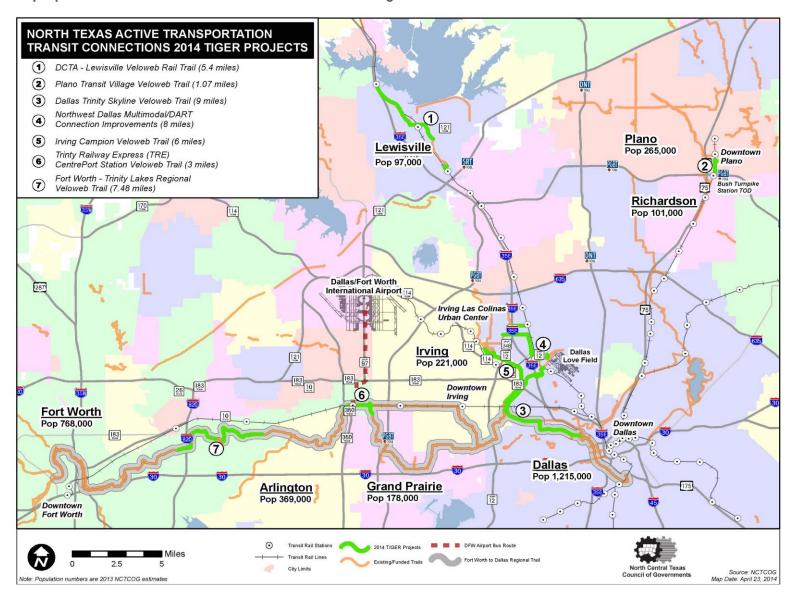
The DCTA Veloweb Rail Trail is an example of a regional active transportation facility linking multiple communities with rail transit stations in Denton County. The NTATTC project will complete a challenging critical gap in the regional Veloweb which in the future will connect downtown Denton to Irving and downtown Dallas.



This shared use path in Fort Worth is an example of the DFW region's utilitarian approach to constructing active transportation facilities that link population and employment centers with transit facilities. Local "Friends" organizations provide enhancements and help maintain the basic infrastructure constructed with public funds.

TIGER	
Outcome and Criteria	Active Transportation Transit Connections Network Summary
Net Benefit	 Net benefit of the overall project is \$324 million (discounted at 7%) / \$541 million (discounted at 3%)
	• Overall Benefit/Cost ratio at 7% is 8.08 and at 3% is 11.56
Preserve / Create Jobs	• A total of 2,552 short term jobs and 1,278 long term jobs are estimated to be created
Revitalization of Economically	 Construction jobs for workers in economically disadvantaged areas where 39% of the households within the project area are currently below the poverty line
Disadvantaged Areas	 Improved mobility for workers in the project area, Mobility Benefit of \$79.8 million (discounted at 7%) and \$128.9 million (discounted at 3%)
_	 Reduction in transportation costs to lower income households by improving bicycle and pedestrian connections to transit stations
Long Term Economic	 Long term economic benefit of \$73.7 million (discounted at 7%) and \$117.6 million (discounted at 3%)
Benefits	 Between \$1.60 (discounted at 7%) and \$2.30 (discounted at 3%) of economic benefits for every \$1.00 of TIGER investment
State of Good Repair	 Addition of safe alternative modes of travel will improve regional mobility and access to transit, provide relief to congested roadways, and mitigate deficiencies and delays in the current auto focused systems. Also repairs to existing facilities and bringing facilities up to Americans with Disabilities (ADA) compliance for certain parts of the project.
Economic Competitiveness	 Mobility Benefit of \$79.8 million (discounted at 7%) and \$128.9 million (discounted at 3%)
	 Economic Development Benefit of \$67.0 million (discounted at 7%) and \$106.9 million (discounted at 3%)
	• The project will improve access to over 711 large employers in the project area
Livability	• Fuel cost savings of \$6.7 million (discounted at 7%) and \$10.7 million (discounted at 3%)
	• Health benefit of \$12.5 million (discounted at 7%) and \$20.2 million (discounted at 3%)
	 Supports existing communities with higher concentration of lower income populations (39% below poverty)
Sustainability	• Reduces 27,154 tons of CO ₂ emissions between 2018 and 2038.
	• Reduces fuel use between 2018-2038 by 5.0 million gallons
C (.	Overall value of air quality benefits is \$1.2 million (discounted at 3%)
Safety	 Provides safe crossing under five congested freeways: IH 820, SH 360, IH 35E, Loop 12, SH 183, SH 114
	 Projects will provide a crash reduction benefit of \$293.5 million (discounted at 7%) and 468.1 million (discounted at 3%) over a 20 year horizon.
Transport	• Estimated reduction of 923 crashes over a 20 year time frame.
Innovation	 Improves non-motorized transportation and accessibility to transit facilities, including increased rail ridership
	 Network projects will look to pilot test clean construction specifications and green cement purchasing
Partnership	• 45% local and other sources match
	 Regional Partnership with MPO, five municipalities, one county, and three transportation authorities

The projects included in the NTATTC include the following:



1. DCTA - Lewisville Veloweb Rail Trail

5.4 Miles Regional Veloweb trail network gap closure from Hebron Station to Highland Village/Lewisville Lake Station

DCTA serves close to 700,000 people in the DFW region and was created in 2001 and approved by voters in 2002. Since constructing a 21-mile A-train commuter transit line, DCTA is focused on providing multimodal access to their six transit stations to complement their commuter rail service and provide alternate connectivity. The entire trail network that runs parallel to the rail is in the Regional Veloweb system. The three northern stations have completed or have design/construction underway for 14 miles of adjacent



multimodal connections in the City of Denton, home of the University of North Texas, which has an annual enrollment of around 35,000 students making it the fourth largest university in the State. This Lewisville Trail facility will connect the next three rail stations in Lewisville by adding another 5.4 miles and provide additional access to over 205,000 people. This corridor will also offer a travel alternative for many heavily traveled streets within Lewisville including Mill Street and Main Street and will tie into a planned pedestrian bridge across Lewisville Lake. Additionally the transit line and trail run parallel to the IH 35E corridor which is about to undergo 5+ years of reconstruction, making alternative routes even more vital.

The Highland Village/Lewisville Lake station has significant local Transit-Oriented Development (TOD) impact with a residential, lakeside community development focus and a regional impact specifically of two major eco-tourism attractions — Lewisville Lake and the Lewisville Lake Environmental Learning Area. The Old Town Station offers access to key city facilities including City Hall, historic Old Town, high employment centers, and the city's new Arts Center as well as providing a safer route to elementary and middle schools in the area. Several office complexes and the Railroad Park will be served by the section of the trail between the Old Town and Hebron stations. The Hebron Station has a 90-acre mixed-use urban center under development that will benefit from the connection as well. The project will serve disadvantaged neighborhoods with a residential population consisting of 42% minorities and 17% currently living below the poverty line.



This project will offer more reasons for people to choose more environmentally friendly travel alternatives to work, school and to other key points along the A-train corridor. This project is important to connect the three transit stations in Lewisville with the two Denton stations, the IH 35E bridge, Lewisville Lake and other municipal trails. The project also provides access to over 88,000 jobs and that number is expected to grow significantly in the next 10-15 years to an additional 25,000 jobs. More detailed information is available in Appendix A.

2. Plano – Transit Village Veloweb Trail

1.07 Miles Regional Veloweb gap closure from DART Bush Turnpike Light Rail Station to Downtown Plano and the future Cotton Belt Commuter Rail Station

The City of Plano is the fourth largest city in the DFW metropolitan area with nearly 265,000 residents. Plano is located in Collin County, one of the fastest growing counties in the country with populations over 821,500. This segment of the NTATTC aims to complete a gap in the Regional Veloweb along the heavily congested US 75 corridor by providing an off-street trail to improve access to existing and future DART transit stations for residential neighborhoods and businesses. It will also improve safety and allow access under the President George Bush Turnpike (PGBT) which is a significant barrier for active transportation between Plano and Richardson.

The critical one-mile trail gap connection will extend from Downtown Plano to the DART Bush Turnpike Light Rail Station located on the south side of the PGBT. The northern end of the trail will connect with existing trail facilities that lead into the heart of downtown Plano, the Downtown Plano Light Rail Station, and the Plano government City Center. The northern end of the trail will have linkages to the soon to be completed *Junction 15* TOD mixed-use infill project near the Downtown DART station with 279 residential units above ground floor retail space.

At the southern end of the project is located a master planned mixed-use *CityLine* TOD under construction on the border of Plano and the City of Richardson. When completed, *CityLine* will have six million square feet of office space, almost 4,000 apartments and more than 300,000 square feet of shopping space. This is nearly 2.3 times more office square footage than the 2.6 million square foot, 110 story Freedom Tower ("One World Trade Center") in New York City. Our project's connections to this new employment hub provides alternative options to the "new" middle class communities looking to develop nearby.



This project provides access to rail by making a direct connection to 56,000 existing households, some of which are low income, historically underserved areas such as the Douglass and Vendome neighborhoods. Also important to the community is providing access to the Douglass Art Wall installation in the historic African-American Douglass neighborhood to which this project will connect. The project will serve disadvantaged neighborhoods with a population consisting of 44% minorities and 30% below the poverty line.

This project strongly focuses on access to jobs making links to the Southeast Plano Business Alliance area east of K Avenue which includes the Dallas North Industrial District, the Palisades Business Park, the 10th Street Business Park, and the Central Industrial Park which is **a key part of the more than 169,000** existing jobs located less than three miles from the project.

The project will provide an off-street bicycle and pedestrian path connection not only to the two existing DART light rail stations, but also to the future 12th Street station which will be critical for access to future commuter rail along the Cotton Belt. The Cotton Belt is a transit line being planned to connect with the TEX Rail project in the City of Fort Worth in the southwest portion of the region to the City of Plano which is in the northeast portion of the region with stops along the way, one of which is the DFW International Airport.

3. Dallas Trinity Skyline Veloweb Trail

9 Miles Regional Veloweb gap closure from Downtown Dallas (Sylvan Avenue) to Denton Drive with access to the DART Bachman and Burbank Light Rail Stations

The City of Dallas with over 1.2 million residents is located in Dallas County, the largest county in the DFW metropolitan area. In its efforts to reduce congestion, improve air quality, provide transportation options and improve quality of life, the City of Dallas is in various stages of implementing a combination of 16 miles of trails and supporting on-street facilities centered on downtown Dallas. These facilities form the spine of over 200 miles of trails identified in the Dallas Trail Network Plan. These on-street facilities and trails are located in the densest part of the city, which is currently experiencing rapid redevelopment through construction of mid- to high-rise buildings, bringing thousands of new residents and jobs to the core of Dallas.

TIGER funding will complete a critical nine-mile multi-purpose commuter trail gap in the regional Veloweb from Sylvan Avenue to Denton Drive, providing a linkage to an existing segment of the Campion Trail in Irving, TX as well as access to the DART Bachman and Burbank Light Rail Stations on the northwest side of Dallas Love Field Airport. The project will serve disadvantaged neighborhoods with a residential population consisting of 70% minorities and 54% below poverty.

One mile of the Trinity Skyline Trail is completed southeast of IH 35E, with another three mile extension from Sylvan Avenue currently under construction using \$6.4 million of City of Dallas bond funds. The nine-mile trail extension west of Sylvan Avenue will provide direct connections to downtown Dallas, the businesses and employment district in the IH 35E corridor, the Southwest Medical District, and employment districts in the area around Dallas Love Field Airport supporting approximately 565,000 jobs and direct connection to over 117,000 households located less than three miles from the project.

The City of Dallas has an ongoing partnership with the US Army Corps of Engineers (USACE) for more than a decade on the Dallas Floodway Project including the completed, pending and proposed Trinity Skyline Trail phases. The nine-mile commuter trail gap closure project will leverage and connect with signature regional funded projects in the area (see Appendix A) including downtown on-street bicycle facilities (\$1 million), new IH 30 bridge including dedicated bicycle/pedestrian facilities (\$114.9 million), Continental Bridge conversion to bicycle/pedestrian facilities (\$8 million) and an associated trailhead at the end of the bridge (\$1.6 million), Trinity Strand trail connecting at Sylvan Avenue (\$4 million), Sylvan Avenue bridge reconstruction to include bicycle/pedestrian facilities (\$42 million), and reconstruction of Riverfront Boulevard to include a cycletrack and reconstruction of



Continental Avenue to include bike lanes (\$42.5 million). Once all phases are completed the trail in conjunction with funded dedicated on-street bicycle lanes will provide access to **four DART light rail stations and one station serving the TRE Commuter line**.

4. Northwest Dallas Multimodal/DART Connection Improvements

6.9 Miles of sidewalks, 0.55 miles of cycle track bicycle facilities, 0.6 miles of shared use paths, and grade separated bridge crossings providing access to the DART Bachman and Walnut Hill/Denton Light Rail Stations

The Northwest Dallas area is a major trade district with employment hubs located on both sides of IH 35E. This multimodal project will improve pedestrian and bicycle access between neighborhoods and employment center destinations and the existing transit stations supporting approximately 31,000 jobs and direct connection to over 4,000 households located less than one-half mile from the project.

This project will significantly improve the existing challenges of ADA accessibility, safety, access to rail transit facilities, access to employment, improving infrastructure, and alleviating congestion throughout the target area. The project will serve disadvantaged neighborhoods with a residential population consisting of 91% below poverty. 17% of households in the area are headed by females and 10% are zero car households.

The addition of 6.9 miles of sidewalks, 0.55 mi. cycle track, and 0.6 mi. shared use path facilities will be constructed by Dallas County to complete critical gaps in the active transportation facilities linking with the DART Bachman and Walnut Hill/Denton light rail stations. This area has a large concentration of warehouses and light industrial jobs and, as a result, a high percentage of heavy truck traffic. These improvements are located within the Dallas Asian District and currently residents and employees in this area have very limited mobility due to few existing pedestrian and bicycle facilities along area roadways and few safe connections to access the DART bus stops and rail stations.



The existing pedestrian and bicycle infrastructure is either non-existent or in extremely poor condition for much of the project area. Harry Hines Boulevard has no sidewalks between Bachman Station and Manana Drive. There are a few existing ADA accessible ramps at the intersections. Manana Drive west of Harry Hines Boulevard to Goodnight Lane has numerous gaps in sidewalks, and the physical condition of the existing facilities is not sufficient for safety or ADA accessibility. Most of the existing sidewalks along Manana Drive need to be replaced, while the remaining sidewalk gaps need to be completed. In addition, IH 35E is a significant barrier for pedestrians and cyclists to access DART rail stations in the area. The project will provide pedestrian access under IH 35E and bike/pedestrian access over Loop 12.

There are numerous other supporting pedestrian and bicycle facilities either funded or underway by the City of Dallas and Dallas County in the area that will enhance bicycle and pedestrian mobility (see Appendix A for additional detail).

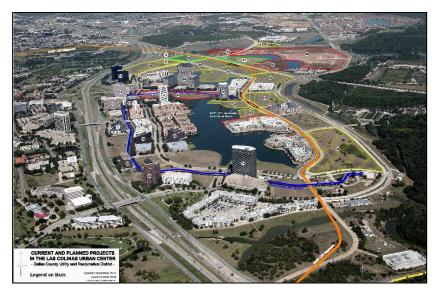
5. Irving Campion Veloweb Trail

6 Miles Regional Veloweb gap closure from Colorado Drive to north of TRE Rail Line

The City of Irving has over 220,000 residents and is located in Dallas County. The project will complete a six-mile gap in the regional Veloweb trail network along the Elm Fork branch of the Trinity River through Irving that when completed will provide connections between neighborhoods, regional employment centers, the University of Dallas campus, and the University of Dallas DART light rail station. The project will serve disadvantaged neighborhoods with a residential population consisting of 76% minorities and 60% below poverty. 10% of households in the area are headed by females and 6% are zero car households.

The project will connect with 6.5 miles of existing paved trail in north Irving along the Elm Fork branch of the Trinity River. It will also connect with four miles of existing paved trail which incorporates both the West and Elm Forks; another three miles of trail is in the planning stages to be constructed by 2015. This segment will tie the southern section into the City of Grand Prairie's Lone Star Trail system. This trail system, when complete, will connect the city of Irving with the Cities of Coppell, Farmers Branch, Dallas, and Grand Prairie.

The project will support access to approximately 357,440 jobs and connection to over 66,242 households and 178,000 people located less than three miles from the project. The northern portion of the project will improve safety and allow access under several significant freeways including SH 183, SH 114, and Loop 12. The project will be a resource to the University of Dallas campus located nearby. Their facility currently has about 4,000 students enrolled.



It will also provide access to mixed-use planned development areas around those freeways in the Irving Urban Center which is a redevelopment, mixed-use area that at full completion will include approximately 9,500 housing units, 7.3 million square feet of office and over 500,000 square feet of retail Appendix **A**). existing trail extending north from the project has linkages with the **DART light rail**

stations at Las Colinas Urban Center and the Irving Convention Center which are major DFW regional employment, entertainment, convention, and housing destinations.

6. TRE CentrePort Station Veloweb Trail

3 Miles Regional Veloweb gap closure to CentrePort TRE Station from the River Legacy Trail in Arlington on the west and from Trinity Boulevard in Fort Worth on the east

The CentrePort Station Veloweb Trail will **complete a three-mile gap by providing bicycle and pedestrian access** from four of the largest cities in the metropolitan area to the TRE Commuter Rail line (Cities of Arlington, Fort Worth, Grand Prairie, and Irving) located in two counties. The Veloweb Trail will provide an active transportation connection to the rail station which is currently only accessible by bus and passenger vehicles.



CentrePort/DFW Airport Station is a TRE commuter rail station located south of DFW International Airport. The TRE station serves the CentrePort business park which includes multi-family housing, and various employment areas including the new headquarters of American Airlines. In addition the Station is served by FWTA Route 30 CentrePort Circulator, DART Route 500 to DFW Airport Terminal Α, and MetroArlington Xpress (MAX) Downtown Arlington Entertainment District which includes the venues for the

Texas Rangers and Dallas Cowboys. It also connects to the University of Texas at Arlington which has an enrollment of 33,000 students.

The CentrePort Business Park employment center alone has over 30,000 employees. This employment center is composed of 8.5 million square feet of office, retail and industrial space, with a total projected build-out of 14.2 million square feet. In addition, 2,000 multifamily units are currently located in the area, and a 300-room Marriott Hotel.

The project will connect to the west with seven miles of the existing paved River Legacy Trail in Arlington. It will also provide an eastward linkage along the TRE rail line to Trinity Boulevard where it will connect with a planned trail segment in Irving along the TRE to the West Irving TRE station. The trail will also continue to the southeast along Trinity Boulevard to employment centers in Grand Prairie. In addition, the project will link with a network of existing, funded, and planned on-street bicycle facilities and off-street shared use sidepaths planned by the City of Fort Worth for the greater CentrePort area (see Appendix A). The project will allow access under the SH 360 freeway which is a significant barrier to connectivity and access.

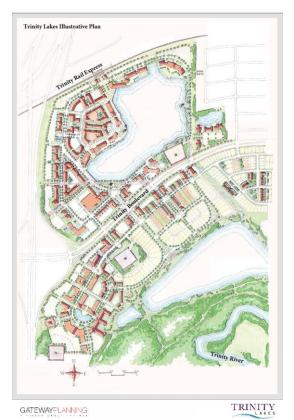
The project will serve disadvantaged neighborhoods within three miles of the project with a residential population of over 124,000 consisting of 60% minorities and 30% below poverty. Improving access from these neighborhoods and employment centers to the TRE rail station will link them to employment and destinations throughout the region through bus transit connections offered by DART, FWTA, and the MAX.

The project will support access to approximately 118,000 jobs and connection to over 58,908 households located less than three miles from the project.

7. Fort Worth Trinity Lakes Regional Veloweb Trail

7.48 Miles Regional Veloweb gap closure from Handley Ederville Road to the River Legacy Trail near Trammel Davis Drive

The City of Fort Worth with over 767,000 residents is located in Tarrant County, and is the second largest city in the DFW metropolitan area. TIGER funding will complete a critical 7.48 mile gap in the regional Veloweb from Handley Ederville Road to Trammel Davis Drive and the River Legacy Trail in Arlington and provide connections to over 189,000 people residing less than three miles from the project. It isn't only connections to what is there that make this project so integral but it is providing a framework and system for what is coming. The Veloweb Trail extends through the Trinity Lakes mixed-use development area of Fort Worth, which is currently under development east of IH 820 and south of the TRE.



At full build out the Trinity Lakes development area will include nearly 2.7 million square feet of commercial/multi-family mixed use development and 1,146 single family homes, accommodating nearly 4,900 jobs and 4,900 residents (see Appendix A). Additionally within less than three miles, several existing neighborhoods employment centers will benefit from access to the Regional Veloweb trail including Riverbend Estates (220 homes), Trinity Lakes Development, (1,350 homes), River trails Housing Addition (1,400 homes), Bell Helicopter (Headquartered in Fort Worth), Riverbend Business Park (a 3 million square foot business park with over 5,000 tenants and employees), and the University of Texas at Arlington's Automation and Robotics Institute.

Linkages to the Trinity Lakes Regional Veloweb Trail are planned throughout the Trinity Lakes development and include both on-street bicycle facilities and off-street shared use paths. These facilities will provide access to the Richland Hills TRE Station and the Hurst/Bell TRE Station, as well as eastern Fort Worth and adjacent communities.

The project will complete a critical gap in the Fort Worth to Dallas regional trail intended to link downtown Fort Worth with downtown Dallas. The project will support access to approximately 117,000 existing jobs and connection to over 86,896 existing households. The western portion of the project will improve safety and allow access under the IH 820 freeway which is currently a significant barrier to connectivity and access.

II. PROJECT PARTIES

The NTATTC TIGER application is a multijurisdictional effort by local municipalities, counties, transportation authorities, and NCTCOG. Serving as the MPO, the NCTCOG's Department of Transportation is responsible for the regional planning process for all modes of transportation. It serves a metropolitan region with 12 counties, 169 cities, and three transit agencies.

NCTCOG is the applicant for the regional grant submission and will serve as the grantee and lead agency for coordination of the NTATTC TIGER grant. As the lead agency, NCTCOG will be responsible for facilitating and coordinating TIGER implementation, and also monitoring progress and impact. Individual cities and/or transit authorities will construct individual segments with NCTCOG oversight and they will maintain ownership and maintenance responsibilities.

Application Partnerships	
North Central Texas Council of Governments	Lead Applicant / Grantee
City of Arlington	Construction / Ownership – Maintenance
City of Dallas	Construction / Ownership – Maintenance
City of Fort Worth	Construction / Ownership – Maintenance
City of Irving	Construction / Ownership - Maintenance
City of Plano	Construction / Ownership - Maintenance
Dallas County	Construction / (Ownership & Maint. – City of Dallas/TxDOT)
Denton County Transportation Authority (DCTA)	Construction / Ownership - Maintenance
Fort Worth Transportation Authority (FWTA)	Property Easements / Project Coordination
Dallas Area Rapid Transit (DART)	Property Easements / Project Coordination
Texas Department of Transportation (TxDOT)	Project Coordination
Federal Highway Administration (FHWA)	Project Coordination

Additional detail on each individual entity is available in **Appendix A**. Throughout the coordination of this project and others, NCTCOG and the communities represented work with a multitude of public and private entities. These partnerships provide critical funding, right-of-way, technical expertise and community support of efforts to create a seamless network of non-motorized transportation alternatives for residents and visitors to the DFW Region.

III. GRANT FUNDS AND SOURCES/USES OF PROJECT FUNDS

The NTATTC TIGER application is requesting a total of \$29,738,262 from the TIGER grant program, out of a total project cost of \$54,123,282. The percent of total project costs paid by **TIGER** is 55%, with 45% provided by local match and other sources for a total of \$24,385,020. The budget will be allocated to different project areas identified in the table on the following page.

Matching funds in the amount of \$18,051,846 (33%) are secured from partners and are provided through Dallas County Capital Improvement, City of Dallas bonds, City of Irving bonds, City of Plano bonds, City of Arlington Park Impact Fees, City of Fort Worth bonds, and DCTA capital programs funds. Additional funding is being leveraged that includes \$6,333,174 of funds from Transportation Enhancement (TE) and Congestion Mitigation Air Quality (CMAQ) funds.

Grant Funds and Sources/Uses of Project Funds (See Appendix B for Detailed Project Budgets)

Project	Total Project Costs*	Grant Funds Requested	Percent Paid By TIGER	Local Match and Other Sources	Agency	Percent of Project	Uses
1. DCTA - Lewisville Veloweb Rail Trail	\$6,000,989	\$1,820,643	30%	\$980,346 \$3,200,000	- DCTA FHWA (TE)	30.3% ¹ 16.4% ¹ 53.3%	C C D,C
2. Plano Transit Village Veloweb Trail	\$2,369,214	\$725,751	31%	- \$725,751 \$917,712	COP FHWA (CMAQ)	31% ² 31% ² 39%	C C D,C
3. Dallas Trinity Skyline Veloweb Trail	\$9,000,146	\$5,850,095	65%	- \$3,150,051	COD	65% 35%	C D,C
4. NW Dallas Multimodal / DART Connection Improvements	\$16,286,888	\$8,143,444	50%	- \$5,927,982 \$2,21 <i>5</i> ,462	- DalCo Other Local	50% 36% 14%	C C D,C
5. Irving Campion Veloweb Trail	\$11,156,920	\$7,251,998	65%	- \$3,904,922	- COI	65% 35%	C D,C
6. CentrePort Regional Veloweb Trail	\$3,971,625	\$2,476,956	62%	\$500,000 \$994,669	- COA COFW	62% 12.6% 25.4%	C D,C D,C
7. Fort Worth Trinity Lakes Veloweb Trail	\$5,337,500	\$3,469,375	65%	- \$1,868,125	- COFW	65% 35%	C D,C
Total	\$54,123,282	\$29,738,262	55%	\$24,385,020 (45%)		100%	

¹ The balance of the project cost after subtracting \$3.2 million Transportation Enhancement Funds is split 35% by local matching funds (DCTA) and 65% by TIGER funds.

² The balance of the project cost after subtracting \$917,712 CMAQ funds is split 50% by local matching funds (City of Plano) and 50% by TIGER funds.

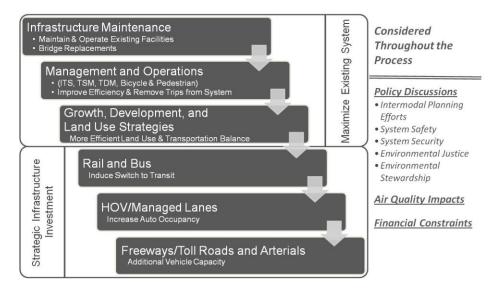
Uses K	Tey							
D	Design/Engineering		С	Construction				
Agency Key and Source of Funds								
COA	City of Arlington (Park Impact Fees)	СОР	City of Plano (Bond funds)					
COD	City of Dallas (Bond funds)			Dallas County (Capital Improvement Program funds)				
COFW	City of Fort Worth (Bond funds)		DCTA	Denton County Transportation Authority (Capital Program funds)				
соі	City of Irving (Bond funds)		FHWA	Federal Highway Administration (Transportation Enhancement and CMAQ funds)				

IV. SELECTION CRITERIA

A. Primary Selection Criteria

1. State of Good Repair

Improving the condition of existing transportation facilities and systems is an important focus for NCTCOG. Because the transportation needs of the region far outweigh the available funds, strategic investments in infrastructure are required. Mobility 2035 - 2013 Update, the long range transportation plan for the region, has recommendations that attempt to balance between meeting the most critical mobility needs while making a variety of transportation options available. The regional plan places infrastructure maintenance as a top priority (see below), followed closely by the development of other management and operations type projects like alternative transportation facilities for bicyclists and pedestrians.



The addition of safe alternative modes of travel is viewed as a way to improve resiliency and to mitigate deficiencies and delays in the current auto-focused systems. Congestion in the DFW region is projected to continue increasing as the maps in **Appendix D** indicate. Relief to our roadway systems can be made by filling in the gaps of certain bike trails and sidewalks to enhance overall network efficiency, the accessibility and mobility of people, and it can promote economic growth. These projects also address the needs of vulnerable people groups that are not served by auto infrastructure especially in the Dallas County lead NW Dallas Multimodal/DART Connection Improvements project that is providing 0.75 miles of sidewalk replacement and upgrades to meet ADA standards.

Local communities will be constructing and maintaining these projects and they are utilizing local capital revenue funds for maintenance and asset management. Additionally there are sustainable sources of revenue that are available for operations and maintenance such as park fees and advertising revenues at trail heads of various trail systems. City general fund accounts from property tax and other fees will also continue to fund maintenance needs. The City of Dallas alone has an annual parks budget of over \$25 million for maintenance.

2. Economic Competitiveness

The assistance of federal funding for the project will substantially improve the economic competitiveness of the project areas and the region by facilitating investment in key locations for projects that create sustainable and active transportation options for current and future residents.

By helping to create a more complete bicycle and pedestrian network with connections to public transit, the project will enhance the efficiency and productivity of commuters in two key ways. First, it will encourage mode shift to walking, bicycling, and the use of public transit – three cost-efficient transportation choices. Second, it will reduce congestion for drivers on parallel routes.

The results of the Benefit-Cost Analysis (BCA) outlined in **Appendix C**, include the following factors related to the economic competitiveness of the proposed project:

- Movement of Workers (Mobility Benefit)
- Economic Development Benefit
- Job Creation and Accessibility to Jobs Benefit

<u>Movement of Workers</u>: The Mobility Benefit estimates the number of work commuters for each facility to provide a total Mobility Benefit of \$79.8 million (discounted at 7%) and \$128.9 million (discounted at 3%) for the overall NTATTC project.

<u>Economic Development</u>: The Economic Development Benefit in the BCA considers factors like increased land values, sales tax revenues, and other benefits due to increases in economic activity after building bike and pedestrian amenities such as trails and sidewalks. The BCA estimates a total Economic Development Benefit for the project of \$73.7 million (discounted at 7%) and \$117.6 million (discounted at 3%).

<u>Job Creation and Accessibility to Jobs</u>: The proposed project combines multiple projects that will create both short and long term employment benefits in the DFW region. The BCA estimates that a total of 2,552 short term jobs and 1,278 long term jobs will be created as a result of this project. Additionally, this translates into a cumulative spending benefit over the next 20 years of \$16.1 million as a result of the short term jobs created and an annual spending benefit of \$64.6 million as a result of the long term jobs created.

These benefits are likely to have a major impact in the proposed project areas and throughout the region. The percentage of households in the overall project area currently below the poverty line is approximately 40%, which is above the regional average of 36%. Poverty is also displayed geographically in Appendix D. The job creation potential of the proposed project will contribute to mobility and economic revitalization in these areas. Appendix D contains a map that highlights major employers and the proposed bicycle and pedestrian connections that will improve accessibility to employment centers.

3. Quality of Life

The proposed project promotes the following Livability Principles developed by the U.S. Department of Transportation (DOT) in coordination with the HUD, and U.S. Environmental Protection Agency (EPA):

<u>Provide more transportation choices</u>: The project proposes to develop safe, reliable and economical transportation choices through bicycle and pedestrian transportation facilities connecting to existing transit stations in the DFW region. Bicycle and pedestrian modes reduce transportation costs through fuel savings by an estimated cost savings of \$6.7 million (discounted at 7%) and \$10.7 million (discounted at 3%).

Active transportation options promote health of the users which amounts to a **health benefit of \$20.2 million** (discounted at 3%) across the next 20 years. The transit ridership within the project areas are projected to increase by about 1,562 riders due to the proposed bike and pedestrian connections. See **Appendix C** Benefit-Cost Analysis.

<u>Promote equitable, affordable housing:</u> Approximately 32% of housing within the proposed project location areas are categorized as affordable (median housing value below 30% of median household income), see **Appendix D** for detailed demographic breakdowns. The NTATTC projects connect affordable housing to existing transit stations to lower the combined housing and transportation costs. **Appendix D** also shows the median household income within the project area and it is easy to see that household income varies widely, so the needs of users are very diverse.

Enhance economic competitiveness: The project increases economic competitiveness of the project areas through improving access to over 711 large employers (with 150+ employees) in the area as shown in **Appendix D**. As stated in the Economic Competitiveness section, the project is estimated to create 2,552 short term jobs and 1,278 long term jobs over time once the project is completed.

<u>Support existing communities</u>: The project supports existing communities with higher concentration of lower income populations (39% are below poverty within the NTATTC) by making strategic investments to revitalize communities in economically distressed areas. An Environmental Justice Index (EJI) is used by NCTCOG to aggregate low-income and minority populations for analysis efforts. Low-income and minority status are aggregated and analyzed in an effort to examine the effects of recommendations in long range transportation planning for the DFW region, on the protected population as a whole. The EJI has been refined to reflect the demographic and development patterns of the DFW region. Three variables, including percent below poverty, percent minority, and persons per square mile, are used to identify the block groups with dense minority and low income populations. **Appendix D** shows an EJI for areas of concern and overall the projects fall within a wide range of categories.

<u>Coordinate policies and leverage investment</u>: The project leverages federal funding in transit investments by making active transportation connections to existing transit stations making them more accessible to a wider range of users. The project also leverages the state and city government investments in existing on-street and off-street bicycle and pedestrian infrastructure which has been in the hundreds of millions as discussed in **Appendix A**.

<u>Value communities and neighborhoods</u>: The project proposes to construct bicycle and pedestrian facilities that increase safety and walkability in existing urban, suburban, and rural neighborhoods. Several neighborhood organizations were involved in the project planning stages and there are several historic neighborhoods that are strongly invested in the outcomes and success of the projects.

4. Environmental Sustainability

The proposed bicycle and pedestrian projects promote non-motorized transportation options which can decrease fuel consumption and promote a healthy environment by reducing emissions and improving air quality in the region. Air quality has been an issue of significant concern in DFW for over two decades. Currently, the EPA classified ten counties in the region as moderate nonattainment under the National Ambient Air Quality Standard (NAAQS) for ozone including Collin, Dallas, Denton, and Tarrant Counties where the NTATTC projects are located. North Texas also received a grade of "F" from the American Lung Association in 2013 for ozone. There is a strong need to reduce emissions from mobile sources in the region to not only meet the ozone standard, but also to protect the health of residents, most importantly the sensitive populations.



The proposed bicycle and pedestrian projects will reduce greenhouse gas emissions and improve environmental quality of the DFW Region. Based on the air quality analysis included in the BCA, the overall project was estimated to reduce 40 tons of Nitrogen Oxides (NOx), 33 tons of Volatile Organic Compounds (VOC), and 27,157 tons of Carbon Dioxide (CO2) between 2018 and 2038. The monetized value of Non-CO2 Emission Benefits is \$245,154 (discounted at 3%) and \$151,738 (discounted at 7%). The monetized value of CO2 Emission Benefits is \$969,730 (discounted at 3%). Overall value of air quality benefits are \$1,219,698 (discounted at 3%).

The BCA of the project estimated a total fuel savings of five million gallons for 40 miles of bicycle and pedestrian improvements in the proposed NTATTC between 2018 (completion of construction) and 2038. These savings amount to \$15.9 million.

The proposed projects avoid adverse environmental impacts and utilize existing natural features to promote quality of life. Three of the projects (Dallas Trinity Skyline, Campion Trail and Fort Worth Trinity Lakes) are within the Trinity River floodway. These trails take advantage of open space that cannot be developed and encourage environmental education and conservation. All three projects have been designed to avoid and minimize impacts to jurisdictional waters. For example, the Campion Trail is utilizing a helical pier system to elevate a section of the trail over a wetlands area to substantially reduce impacts.

Green Infrastructure opportunities and components will be reviewed for possible inclusion where feasible within the projects. Permeable pavement materials that may assist in stormwater mitigation, along with xeriscaping plant materials which will require lower levels of irrigation will be investigated. The NCTCOG is a strong advocate for solar and LED lighting and has funding programs to support these elements. Opportunities to utilize these materials will be pursued.

5. Safety

The DFW region ranks as the tenth most dangerous large metropolitan area for pedestrians, according to the Transportation for America's <u>Dangerous by Design 2011</u>. This can be attributed to people who are unable to drive or choose not to and are forced to contend with inadequate infrastructure and unsafe conditions. The lack of adequate bicycle and pedestrian infrastructure investment has the unfortunate side effect of increased fatalities as people travel by foot or bicycle. Various research and publications bring to light the unsafe walking and biking conditions in Texas and specifically the DFW region. According to the Texas Department of Transportation's annual report on safety for 2012, Texas had 481 pedestrian fatalities and 56 bicyclist fatalities, both of which were an increase from 2011 reports. There are 16 states and 30 cities that are on the FHWA High-Risk Pedestrian focus area map. These are communities that have the highest number of pedestrian fatalities and/or fatality rates. Texas is on the list and Fort Worth and Dallas, two of our partner cities are also on the list.

From 2008-2012, over 1,929 crashes occurred in the overall project area. The BCA estimates that the reduction in crashes will be 939 over the next 20 years. The BCA also estimates that building the projects submitted in the project application will provide a long term crash reduction benefit of about \$293.5 million (discounted at 7%) and \$468.1 million (discounted at 3%) to the DFW area. See Appendix C for additional data.

The proposed projects provide bicycle and pedestrian connections to transit stations and reduce congestion and vehicular traffic in project areas. The Dallas Trinity Skyline Trail proposes 13 miles of walking and cycling trails completely separated from vehicular traffic. The connectivity provided will eliminate roadway barriers and improve access between neighborhoods. The Irving - Campion Veloweb Trail project provides a safe crossing of Loop 12, SH 183, and SH 114 by building six miles of off-street paths. Other projects in the application also provide significant improvements to enhance safety of the existing transportation network in the project areas.

B. Secondary Selection Criteria

1. Innovation

The NTATTC project provides for innovation in that it promotes non-traditional forms of transportation as a focus. The network of non-motorized transportation choices can improve the

existing transportation system by improving energy efficiency, enhancing economic competitiveness, and by creating more livable communities overall. The network proposed provides for corridors parallel to heavily congested roadways and will improve the condition and accessibility of existing transportation infrastructure with a high return on investment. The time savings of avoiding congestion can make for an important case for alternatives to private automobile use. The network projects will also look at ways to pilot test the inclusion of clean



construction specifications and green cement purchasing requirements as part of their implementation. DCTA is being proactive to provide trail construction to their TOD stations which is very unique in our region where trail development is typically left up to the local municipalities or counties. Another innovative element is the commitment to data collection and the purchase of

equipment to establish baseline data and develop performance measures. For the regionally significant corridors we would like to acquire large "bike barometers" to develop friendly regional competition among communities.

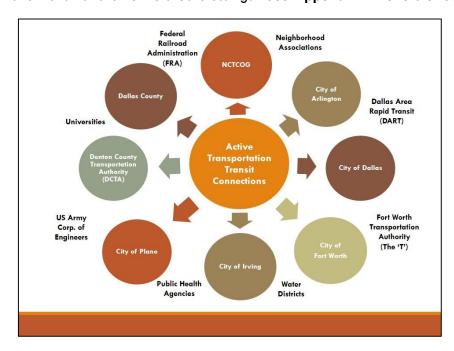
2. Partnership

(a) Jurisdictional and Stakeholder Collaboration

The NTATTC TIGER application is a multijurisdictional effort of several transportation agencies. NCTCOG, which serves as the region's MPO, will be the primary point of contact. The application is submitted in partnership with five municipalities; the Cities of Arlington, Dallas, Fort Worth, Irving, and Plano, and one County Government, Dallas County. All three transit authorities in the region are participating, with DCTA actually implementing a project, and DART and FWTA will be involved in planning access to their stations and providing access easements as they have done previously with similar projects. Bringing a regional focus to the importance of transit and the additional connections that can be made is a priority for all these agencies.

The projects will be coordinated with the Texas Department of Transportation (TxDOT) and the Region VI FHWA/Federal Transit Administration (FTA) offices. NCTCOG will also, as they have in the past, work closely with HUD's regional office located in Fort Worth, TX and with EPA's regional office located in Dallas, TX for input into the projects. NCTCOG has hosted regional workshops for the Partnership for Sustainable Communities area offices. These are good opportunities to coordinate and work together for feedback on these projects.

Finally the Federal Railroad Administration (FRA) was involved with one of our transit agencies on how to incorporate trail design in with the agency's trespassing mitigation strategy and improve pedestrian crossing safety at key trail crossings. FRA participated in creating safety barrier standards for the design of the Lewisville trail project. The standards that have been applied in the earlier built section will also be applied in the future sections we are requesting funds for and those same standards will be provided to the other projects for incorporation into the design for their access points to transit and other related crossings. See Appendix E: Letters of Support



(b) Disciplinary Integration

The projects of the NTATTC have included coordination with a variety of stakeholders. Through development of each trail and connection project, the various agencies have engaged groups such as Park Boards for the Cities of Arlington, Dallas, Fort Worth, Irving, Plano, Lewisville and Highland Village (where the DCTA Lewisville trail connection is located). There has also been coordination with education agencies such as the University of Dallas and area Independent School Districts. Communities have coordinated with neighboring jurisdictions on trail connections to ensure connectivity. Coordination with County Plans has occurred so that not only Dallas County but all four core urban counties, Collin, Dallas, Denton, and Tarrant have been involved. Various Chambers of Commerce, including the Greater Dallas Asian-American Chamber have been involved in the development of facilities. Several neighborhood and business associations have participated in planning, like the Southeast Plano Business Alliance and the Las Colinas Business Association.

From a technical perspective the USACE has been very instrumental in providing access points and easements for the project being implemented by DCTA and the one being implemented by the City of Dallas parallel to parts of the Trinity River. Groups focused on conservancy and who advocate for the connections of alternative transportation facilities to not only jobs and housing but to green space, which the NTATTC would provide, have been involved as well. These include the Trinity River Vision Authority in Fort Worth and the Trinity River Corridor Project group in Dallas. The river spans the metroplex and so will the project.

Non-profits have been involved in several key ways. Operation Lifesaver, a nationwide, non-profit public information program dedicated to reducing collisions, injuries and fatalities at highway-rail crossings and on railroad tracks has provided input into the development of the DCTA Lewisville trail. The Plano Transit Village Veloweb trail, among others, has involved BikeDFW in the development of their projects. BikeDFW is a 501(c)(3) non-profit advocacy organization whose mission is to educate and advocate for changes in attitude and public policy that will improve and promote the safety, convenience, and acceptance of bicycling in North Central Texas. BikeDFW brings a wide range of interest and knowledge and a strong voice for community engagement.





C. Results of Benefit Cost Analysis

The following description provides the results of the Benefit Cost Analysis. The detailed calculations of benefits and costs of each proposed facility (seven facilities), and the overall NTATTC project for the years between 2014 and 2038 for each cost and benefit indicator, are provided in **Appendix C**. Benefits are assumed to incur after project completion from 2018 to 20 years of life span of projects to 2038.

Table 1 provides a summary of benefits and costs by project and for the overall NTATTC project. The overall B/C ratio is 8.08 (discounted at 7%) and 11.56 (discounted at 3%). The B/C ratios for the seven proposed facilities are listed in the table. The total net benefit of the overall project is \$324.4 million (discounted at 7%) and \$541 million (discounted at 3%).

Table 1: Summary of Benefits and Costs by Project

		Discounted to	2014 at 3%		Discounted to 2014 at 7%								
Project	Total Cost including O&M	Total Benefit	Benefit/ Cost Ratio	Net Benefit	Total Cost	Total Benefit	Benefit/ Cost Ratio	Net Benefit					
DCTA Lewisville Veloweb Rail Trail	\$6,456,589	\$36,901,952	5.72	\$30,445,363	\$6,050,355	\$23,033,504	3.81	\$16,983,149					
Plano Transit Village Veloweb Trail	\$2,344,246	\$45,938,222	19.60	\$43,593,976	\$2,142,632	\$28,680,125	13.39	\$26,537,493					
Dallas Trinity Skyline Veloweb Trail	\$8,361,726	\$274,694,735	32.85	\$266,333,009	\$7,499,108	\$171,780,918	22.91	\$164,281,810					
NW Dallas Multimodal	\$15,667,602	\$74,663,499	4.77	\$58,995,897	\$14,179,654	\$46,786,075	3.30	\$32,606,421					
Irving Campion Veloweb Trail	\$10,214,407	\$101,090,170	9.90	\$90,875,763	\$8,892,438	\$63,269,928	7.12	\$54,377,490					
TRE CentrePort Station Veloweb Trail	\$2,426,611	\$32,161,802	13.25	\$29,735,191	\$2,077,723	\$20,149,893	9.70	\$18,072,170					
Fort Worth Trinity Lakes Veloweb Trail	\$5,719,386	\$26,461,131	4.63	\$20,741,745	\$4,991,185	\$16,581,033	3.32	\$11,589,848					
Overall Project*	\$51,190,567	\$591,911,511	11.56	\$540,720,944	\$45,833,095	\$370,281,476	8.08	\$324,448,381					

Table 2 shows the costs and benefits for the overall project by each benefit and cost indicator between 2014 and 2038. The tables for each year and each project are available in **Appendix C**. The total cost of the overall project including construction and operation and maintenance was estimated to be \$45.8 million (discounted at 7%) and \$51.2 million (discounted at 3%). The total benefit of the overall project including Mobility, Air Quality, and Health benefits was estimated to be \$370.3 million (discounted at 7%) and \$591.9 million (discounted at 3%).

Table 2: Costs and Benefits by Type of Indicators

Costs and Benefits	Overall Project (\$)
Costs	
Construction Cost	\$50,776,848
Operation and Maintenance Cost	\$5,539,650
Total Cost	\$56,316,498
NPV of Project Costs (3% Discount Rate)	\$51,190,566
NPV of Project Costs (7% Discount Rate)	\$45,833,095
Benefits	
Non-CO2 Emissions Benefit	\$375,967
Total Crash Reduction Benefit	\$657,250,645
Mobility Benefit	\$193,932,188
Health Benefit	\$30,450,589
BENEFIT SUBTOTAL	\$882,009,390
NPV of Project Benefits (3% Discount Rate)	\$590,941,489
NPV of Project Benefits (7% Discount Rate)	\$369,311,452
CO2 Emission Reduction Benefit	\$1,488,079
NPV of CO2 Emission Reduction Benefit (3% Discount Rate)	\$970,023
Total Benefit (3% Discount Rate)	\$591,911,512
Total Benefit (7% Discount Rate)	\$370,281,475
NET BENEFIIT (3% Discount Rate)	\$540,720,946
NET BENEFIT (7% Discount Rate)	\$324,448,380

NPV - Net Present Value

Other Impacts or Indirect Benefits

Additional impacts of the proposed projects or indirect benefits were quantified and monetized values were calculated, but these variables were not included in the Benefit Cost Analysis because these benefits can be long term, and other external factors such as private investment can impact these benefits. Methodology for these estimates and detailed tables by project for each year between 2014 and 2038 are included in **Appendix C.**

- A total **Economic Development Benefit** of \$73.7 million was estimated for the overall project discounted at 7% and \$117.6 million discounted at 3%.
- A total **Quality of Life Benefit** of \$389.7 million was estimated for the overall project discounted at 7% and \$629.6 million discounted at 3%.
- A total 2,552 short term jobs and 1,278 long term jobs were estimated to be created.
- Rail transit ridership was estimated to increase by 1,171 and bus ridership was estimated to increase by 391.

V. ADDITIONAL APPROVALS

1. Project Readiness

Pre-construction activities are currently underway or have been completed for all projects. Each project included in the application can meet all local, State, and federal requirements by September 2016.

(a) Technical Feasibility

The project partners have completed, at minimum, feasibility and preliminary studies for all of the projects included in the application. Several of the projects did present engineering or environmental challenges that were addressed in the planning stages. For example the Irving - Campion Veloweb Trail would be within the Trinity River floodplain. The project has been designed to minimize impacts to jurisdictional waters and the project can be permitted under USACE Section 404 Nationwide Permit 14 or 42. The project is also utilizing a helical pier system to elevate a section of the trail over a wetlands area to substantially reduce impacts. The remaining projects utilize conventional design and construction techniques. Proposed grade separations including under crossings are designed in conformance with federal, State, and local standards and comply with the ADA. Additionally, all of the projects have been designed to conform to the requirements of utility providers and transit agencies associated with the initiative.

Additional project maps and detailed statements of work for each project to be constructed are provided in **Appendix A**.

(b) Financial Feasibility

Each project has local match fund commitments from project partners. As shown in the **Grant Funds** and **Sources/Uses of Project Funds** table on page 13, with the award of the requested TIGER grant funds, each project segment is fully funded. Estimated costs for the projects are provided in more detailed budgets in **Appendix B**. Listed below are the specific sources of funds sufficient to cover estimated costs. Each of these local funding sources has contingency reserves should planned capital revenues not materialize. Approximately \$4.4 million of federal funds are being leveraged on top of the local match commitments which makes the request for TIGER funds less and allows for funding to go further to develop more complete systems.

1. DCTA - Lewisville Trail

The DCTA Lewisville Trail is part of DCTA's Five Year Capital Plan. Funding for this project includes local sales tax revenues and \$3.2 million from Transportation Enhancement funds.

2. Plano Transit Village Veloweb Trail

Local match will be provided with City of Plano Capital Improvement Bond funds and \$1.2 million from CMAQ Program funds.

3. Dallas Trinity Skyline Veloweb Trail

Local match will be provided with City of Dallas Capital Improvement Bond funds.

4. Northwest Dallas Multimodal/DART Connection Improvements

Local match will be provided with Dallas County Capital Improvement Program funds.

5. Irving Campion Veloweb Trail

Local match will be provided with City of Irving Capital Improvement Bond funds.

6. TRE CentrePort Station Veloweb Trail

Local match will be provided with City of Arlington Park Impact Fees and City of Fort Worth Bond Funds.

7. Fort Worth Trinity Lakes Regional Veloweb Trail

Local match will be provided by the City of Fort Worth Bond Funds.

(c) Assessment of Project Risks and Mitigation Strategies

All of the projects are integral parts of larger, city-wide efforts and plans to expand and improve pedestrian and bicycle facilities in their communities. These plans have been vetted through community involvement. These projects will connect with other projects that have already been constructed in similar environs, will not require the acquisition of right-of-way, and will not require extensive environmental documentation or permitting. As the Applicant, NCTCOG will oversee the implementation of the projects and, as needed, provide technical support to our project partners to ensure timely delivery of the projects.





(d) Project Schedule

Pre-construction activities are currently underway or have been completed for all projects. As detailed in the Project Schedule, the projects can begin quickly upon the award of the TIGER grant. The funds can begin to be spent immediately upon receipt, and continue to be spent at a steady rate until the end of the third quarter 2018. All projects could begin construction of at least the initial phase by September 2016.

North Texas Active Transportation Transit Connections											Project Schedule										
	Year		20	14			20	15		2016				2017			2018			18	
	Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	Phase 1	E		Р	Р																
Lewisville Rail Trail	N. Mill St. to Hebron Village Station	D	D		С	С	С														
DCTA Commuter Rail Hebron Station	Phase 2		E	Е	Е																
to Highland Village Station	N. Mill St. to Highland Village Station			ES	ES																
	village orallon			D	D	Р	Р	С	С	С											
2. Plano Transit Ville DART Bush Turnpike S		E	E	E																	
Plano and future Cotte Station		ES	ES	ES	ES																
Sidiloli		D	D	D	D	D	D	Р	Р	С	С	С									
2 B.II 7 1 1 2	P. Wilson T. T.				ES	ES	ES	ES													
	van Ave) to Denton Dr.					E	E														
with access to DART B Light Rail Stations	achman and Burbank				D	D	D	D		Р	Р	С	С	С	С	С	С	С	С		
	I Diama de																				
	Phase 4A - Sidewalks					Е	E	E													
	Harry Hines Blvd, Manana Dr., Walnut	D	D	D	D								•	С		ŀ					
4. Northwest Dallas	Hill Ln					Ε	Е	Е	P E	P E	С	С	С	C							
Multimodal / DART Connection	Phase 4B Denton Drive					-	ES	ES	ES	ES	ES	ES									
Improvements	Complete Street				D	D	D	D	D	D	D	D	Р	Р	С	С	С	С			
					_	E	E	E	E	E		_		-	_						
	Phase 4C Timberline to				D	D	D	D	D	D	D	D									
	Denton Drive												Р	Р	С	С	С	С			
					_	_	_														
					E	E	E	ES													
5. Irving Campion V Colorado Dr. to north					E3	D	D	D	D	D											
Express Rail Line	, ,									Р	Р	Р									
												С	С	С	С	С	С	С	С	С	
						-	-	_													
6. Trinity Railway Ex Station Veloweb Trai	cpress (TRE) CentrePort					E	E	Е													
River Legacy Trail to	Trinity Blvd					D	D	D	D	Р	Р	С	С	С	С	С	С	С			
7. Fort Worth Trinity	Lakes Regional				Е	Е	Е	Е	Е												
	to the River Legacy Trail				ES	ES	ES	ES	ES												
near Trammel Davis Dr.					D	D	D	D	D	Р	Р	С	С	С	С	С					
Legend																					
	ES Easement		D	Doci	TD.		Р	Dro	curors	ont.		C	Car	nstruc	tion						
E Environmental		D	Desi	311		Р	Pro	curem	ient		С	Lor	istruc	เเดม							

2. NEPA and other environmental reviews/approvals

All of the projects included in this application are anticipated to have no significant environmental effects. The National Environmental Policy Act (NEPA) process has been completed for one project (TRE Multi-Use Trail) and part of another (Phase 1 of DCTA - Lewisville Veloweb Rail Trail) and is underway for two (Phase 2 of DCTA - Lewisville Veloweb Rail Trail and Plano Transit Village Veloweb Trail). For the other projects, NEPA specialists have reviewed the proposed designs, assessed the current environmental conditions and potential effects, and consulted with TxDOT regarding the level of NEPA documentation needed. Based on this information, the remaining projects would each meet the conditions to be classified as Categorical Exclusions (CE).

As of February 2014, TxDOT has assumed FHWA responsibility for approving CE documents in Texas (see http://ftp.dot.state.tx.us/pub/txdot-info/env/txdot-fhwa-ce-mou-121113.pdf) for the agreement between TxDOT and FHWA). This delegation allows for quicker review and approval of CE documents. All approvals are anticipated before March 2016. The following describes the environmental approval status, any needed coordination efforts and the expected NEPA approval dates for each of the projects.

1. DCTA- Lewisville Veloweb Rail Trail

Status of NEPA Process: Completed for Phase 1; in process for Phase 2

NEPA Completion Date: March 2014 for Phase 1; estimated October 2014 for Phase 2

This project is divided into two phases. The NEPA clearance of the CE for Phase 1 was approved in March 2014. A CE for Phase 2 is under development and will be submitted for review in August 2014 with NEPA approval expected in October 2014. Because the rail line is owned by DART, DCTA has an existing agreement that allows for the construction, operation, and maintenance of both the commuter rail line (the A-Train) and a bicycle/pedestrian trail within the right-of-way (See Appendix A). The trail crosses Lewisville Lake, which is owned by the USACE. The City of Lewisville has a lease agreement with the USACE that requires approval of the trail by USACE prior to construction. This approval is expected by the December 2014.

2. Plano Transit Village Veloweb Trail

Status of NEPA Process: In process

NEPA Completion Date: Estimated July 2014

The CE for this project has been submitted to TxDOT for review and approval. NEPA approval is expected by July 2014. An access agreement with DART is needed. DART has permitted similar trails within its right-of-way and has committed to granting access (**See Appendix E**). No other permits or approvals will be required.

3. Dallas Trinity Skyline Veloweb Trail

Status of NEPA Process: Not started NEPA Completion Date: Estimated December 2014

This project meets the requirements to be classified a CE. The City of Dallas has included this trail in the <u>Balanced Vision Plan for the Trinity River Corridor</u>, which has been extensively coordinated with the USACE. While this trail will be within the Trinity River floodway, the impacts to jurisdictional waters will be minimized and the project can be permitted under USACE Section 404 Nationwide Permit 14 or 42. No other permits or approvals would be required. Upon confirmation of federal funds from the TIGER VI program, the necessary environmental reviews and approvals will be

completed by December 2014. There have been seven miles of adjacent trails this project connects to that were similarly constructed.

4. Northwest Dallas Multimodal/DART Connection Improvements

Status of NEPA Process: Not started

NEPA Completion Date: Estimated March 2016

This project includes three phases/projects. It is anticipated that three separate NEPA documents will be required but all will be classified CEs. Dallas County has been coordinating the planning effort for these projects with both DART and the City of Dallas. An easement from DART is needed for the Denton Drive project; DART has granted similar easements. The trail and pedestrian structure along Timberline Road will require a de minimis Section 4(f) because of construction of the trail in the park. No other permits or approvals will be required. Upon confirmation of federal funds from the TIGER VI program, the necessary environmental reviews and approvals will be completed by March 2016.

5. Irving Campion Veloweb Trail

Status of NEPA Process: Not started

NEPA Completion Date: Estimated July 2015

This project meets the requirements to be classified a CE. The City of Irving has developed a master plan for a trail system along the Trinity River and has already built portions of the trail. While this trail will be within the Trinity River floodplain, the project has been designed to minimize impacts to jurisdictional waters and the project can be permitted under USACE Section 404 Nationwide Permit 14 or 42. Upon confirmation of federal funds from the TIGER VI program, the necessary environmental reviews and approvals will be completed by July 2015.

6. TRE CentrePort Station Veloweb Trail

Status of NEPA Process: Not started

NEPA Completion Date: September 2015

This project meets the requirements to be classified a CE. This trail will cross several small streams that would be permitted under USACE Section 404 Nationwide Permit 14 or 42. Additionally, an agreement between the City of Fort Worth and DART is needed for the portion of the trail along the TRE commuter rail line. DART has permitted similar trails within its right-of-way; this agreement would be completed before June 2015.

7. Fort Worth Trinity Lakes Regional Veloweb Trail

Status of NEPA Process: Not started NEPA Completion Date: Estimated December 2015

This project meets the requirements to be classified a CE. This trail will primarily be within a floodplain and would impact more than 0.5 acres of jurisdictional waters. Therefore it will require an individual USACE Section 404 permit. For similar trails built in the Trinity River floodplains, the City of Fort Worth has coordination with the USACE on permitting and has had no issues receiving previous permits. Furthermore, NCTCOG has a Section 214 agreement with the USACE to expedite the Section 404 permitting of transportation projects. Upon confirmation of federal funds from the TIGER VI program, the necessary environmental review, approvals, and agreements will be completed by December 2015.

3. Legislative Approvals

Projects included in the NTATTC TIGER application <u>do not</u> require any legislative approvals; no action by a legislative authority is required to move forward with the project.

4. State and Local Planning

The projects are supported by the <u>Mobility 2035</u>: The Metropolitan Transportation Plan for North Central Texas. If the NTATTC is successful in receiving funds, the RTC will support its inclusion in the 2013-2016 Transportation Improvement Program for North Central Texas. These projects are part of the Regional Veloweb trail system or part of other implementation projects such as bike share and gap construction for sidewalks and other multimodal facilities. For more information you can view specific information at: http://www.nctcog.org/trans/mtp/2035/documents/6/M35/MobilityOptions.pdf starting at page 13. There is no statewide plan for bicycle or pedestrian facilities but these projects are all part of county and local agency's plans in which the projects are located. These plans include:

1. DCTA - Lewisville Veloweb Rail Trail

Highland Village Trail Comprehensive Master Plan:

http://www.highlandvillage.org/DocumentCenter/Home/View/64

City of Lewisville Trails Master Plan:

https://www.dcta.net/images/uploads/content_files/lewisville_trails_mp-map_42x48red.pdf

City of Denton Bike/Ped Plan: http://www.cityofdenton.com/departments-services/utility-and-cip-

engineering/current-projects/pedestrian-bicycle-accommodation

2. Plano Transit Village Veloweb Trail

Downtown Vision Plan: http://tx-plano.civicplus.com/DocumentCenter/View/2977
Bicycle transportation plan: http://www.plano.gov/DocumentCenter/View/2977

3. Dallas Trinity Skyline Veloweb Trail

Dallas Trail Network Plan: http://www.dallasparks.org/Downloads/Trails/DallasTrailNetworkPlan.pdf

Dallas Trail Network Map: http://www.dallasparks.org/Parks/trails.html

2011 Dallas Bike Plan: http://www.dallascityhall.com/public_works/bikePlan/bikePlan2011.html

Dallas Floodway Project: http://www.swf.usace.army.mil/Missions/WaterSustainment/DallasFloodway.aspx

4. Northwest Dallas Multimodal/DART Connection Improvements

Capital Improvement Program: http://www.dallascounty.org/department/pubworks/mcip.php#

5. Irving Campion Veloweb Trail

Campion Trails Master Plan: http://www.cityofirving.org/cip/images/campion-trails-master-plan.jpg

6. TRE CentrePort Station Veloweb Trail

Fort Worth Bike Plan: www.fortworthtexas.gov/bikefw

TRE CentrePort/DFW Airport Station: http://www.trinityrailwayexpress.org/stationsdetail.html?item.id=5

NCTCOG Regional Trail: http://www.nctcog.org/trans/sustdev/bikeped/veloweb.asp

7. Fort Worth Trinity Lakes Regional Veloweb Trail

Fort Worth Bike Plan: www.fortworthtexas.gov/bikefw

Fort Worth Trinity Lakes Form Based Code:

http://fortworthtexas.gov/uploadedFiles/Planning and Development/Planning and Design (template)/Urban Design/Trinity Lakes Form Based Code- Ammended-17SEPT13 FinalAdopted.pdf

Trinity Lakes Development Plan:

http://www.gatewayplanning.com/radiate/radiateUploadFiles/Trinity Lakes overview Dec 2012.pdf

VII. Federal Wage Rate Certification

Federal Wage Rate Requirement

The North Central Texas Council of Governments (NCTCOG), as an applicant for Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant funds, certifies that for TIGER funds awarded to NCTCOG it will comply with the requirements of Subchapter IV of Chapter 31 of Title 40 (40 U.S.C. 3141, et. seq.) (federal wage rate requirements) as required by the Fiscal Year 2014 Continuing Appropriations Act.

Furthermore, NCTCOG annually certifies compliance with the Davis-Bacon Act as amended, 40 U.S.C. 3141 *et. seq.*, the Copeland "Anti-Kickback" Act, as amended, 18 U.S.C. 874, and the Contract Work Hours and Safety Standards Act, as amended, 40 U.S.C. 3701 *et seq.*, regarding labor standards for federally assisted projects. NCTCOG certifies to this provision within its annual Certifications and Assurances to the Federal Transit Administration.

4/16/14 Date

Monte Mercer, CPA
Deputy Executive Director

North Central Texas Council of Governments