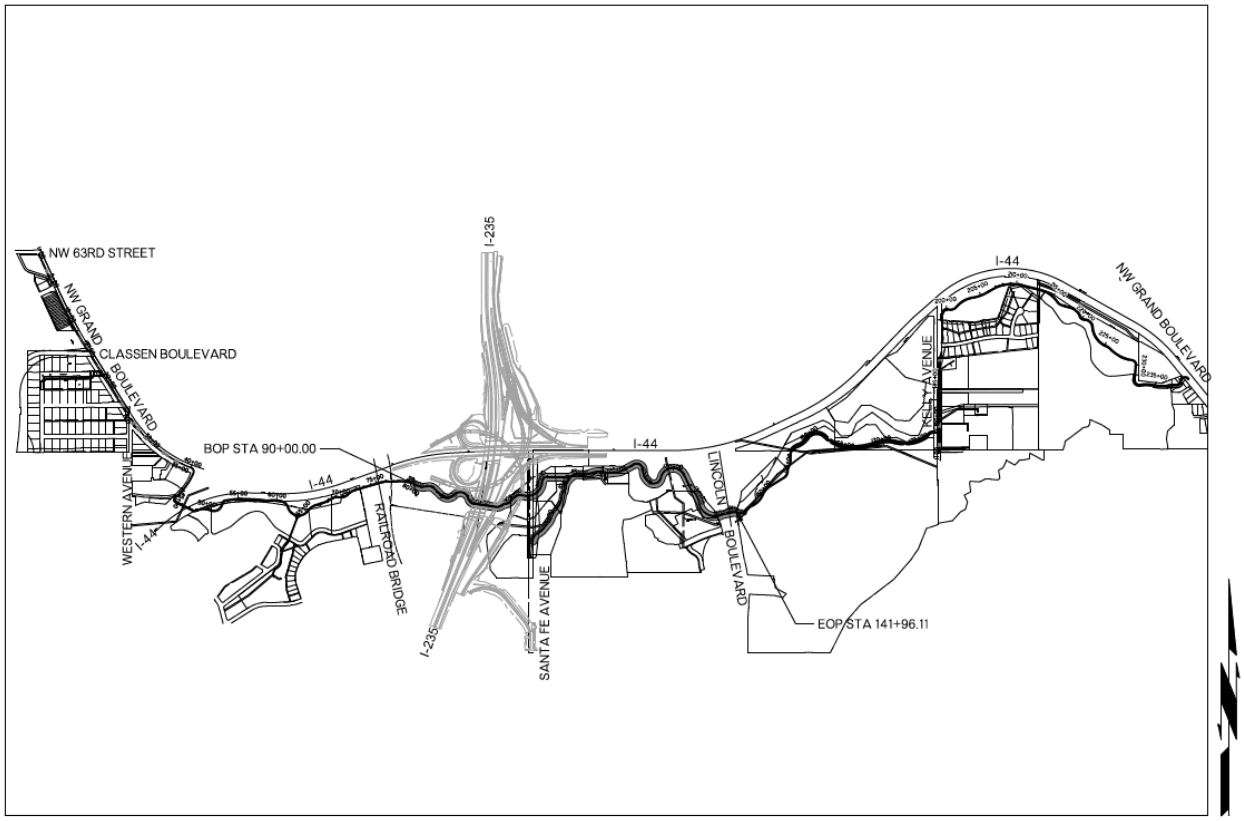
The City of
OKLAHOMA CITY

DEEP FORK GREENWAY TRAIL PHASE 3A
CAPITAL PROJECT APPLICATION



PROJECT AREA
SCALE: 1" = 1000'

PROJECT LENGTH: 15130.05 FEET. OR 2.87 MILES

RAISE

Rebuilding **A**merican **I**nfrastructure with **S**ustainability and **E**quity
DTOS59-23-RA-RAISE
CFDA 20.933
PKG00278732

Table of Contents

List of Figures

List of Tables

1.0 Project Description

The City of Oklahoma City (City) proposes to construct a portion of a new multimodal trail to expand new bicycle-pedestrian trail capacity. This new trail is the Deep Fork Greenway Trail, a 22,840-foot-long, 12-foot-wide multi-use concrete path spanning 4.33 miles in a natural environment alongside both the Deep Fork River and the newly constructed junction of Interstate 44 and Interstate 235 connecting the northwest and northeast quadrants of Oklahoma City through otherwise untraversable topography.

The City seeks $6,961,316 in Federal funds from the RAISE program to construct Phase 3A of the Deep Fork Greenway Trail, a 2.87-mile portion that includes the addition of prefabricated pedestrian bridges spanning a cumulative total of 565 feet of ravine and waterway and including approximately 6,733 square yards of concrete sidewalk and a total of 1,067 square yards of cast-in-place retaining walls.

Completion of Phase 3A will add trail capacity and provide facilities for biking and walking as low-cost, low-carbon modes of active transportation to enable modal shift, facilitate tourism opportunities, address an active transportation system gap, and implement adopted City plans completed with robust public engagement and input. The full Deep Fork Greenway Trail will provide a connection between two existing trails that will connect a 24-mile recreational trail system across Oklahoma City's vast 621 square miles. Existing uses and connections along or near the trail include two City parks, a major regional commercial district, two multi-family developments, a private co-educational college-preparatory secondary school, and a National Housing Trust Fund $1.3 million development of 20 tiny homes for youths ages 18 to 24 living independently.

Over the next 30 years, the Deep Fork Greenway Trail is projected to save 4 bicyclist or pedestrian lives, eliminate 45 serious injury crashes annually, induce greater than 4 million pedestrian trips and approximately 4.3 million cycling trips, save an estimated 4.5 million miles for light duty vehicles, and reduce transportation sector carbon emissions by 1,800 metric tons.

Figure 1-1, Deep Fork Greenway Trail Alignment Close-Up, Phase 3A in Blue

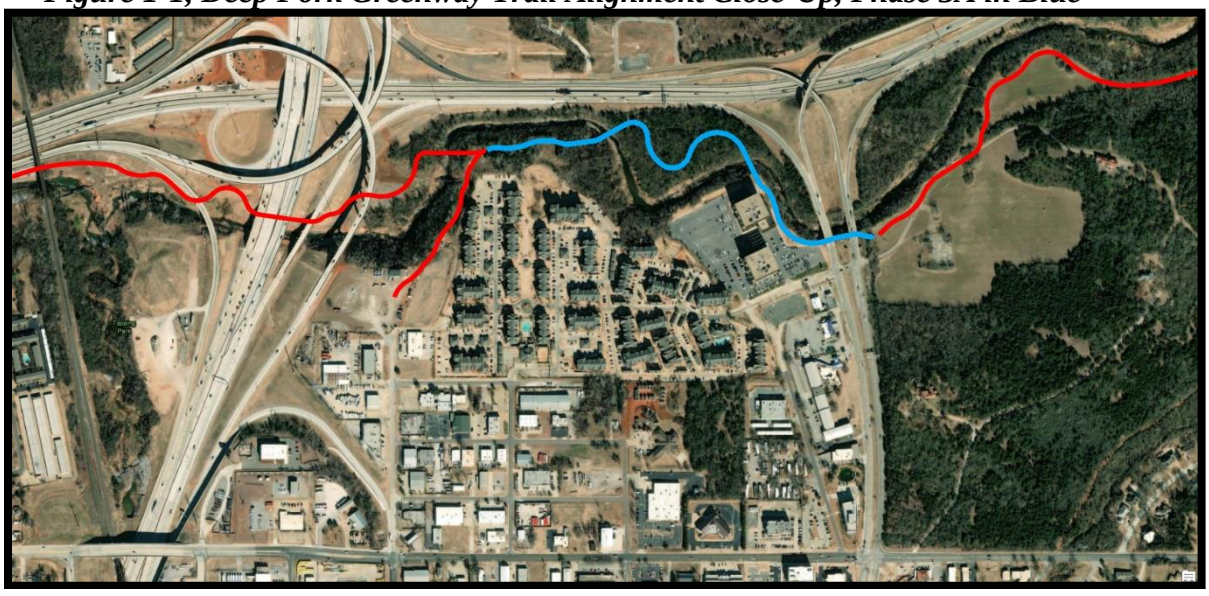
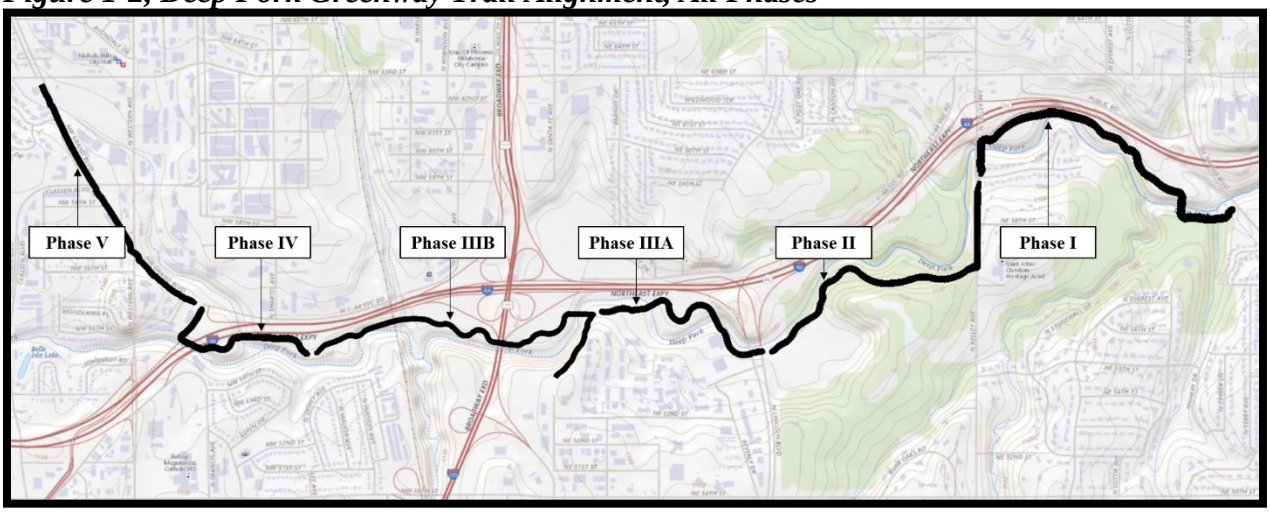


Figure 1-2, Deep Fork Greenway Trail Alignment, All Phases



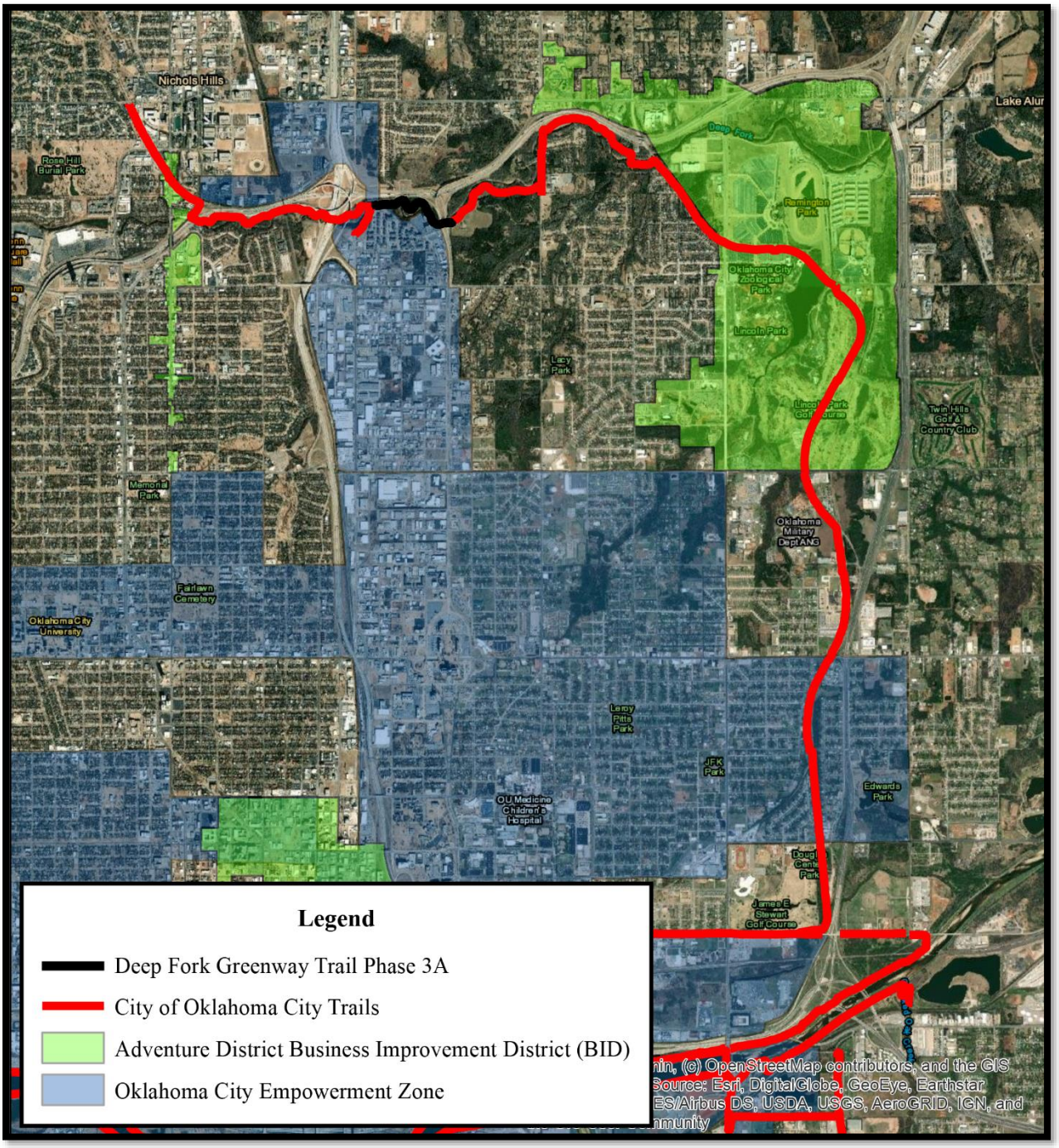
1.2 Project History

In 2005, the City contemplated the addition of a new trail through the Deep Fork terrain and initiated work to determine the feasibility and cost of a potential trail connection in or around the area. By 2007, Oklahoma City voters approved general obligation bond packages that included funds to "construct a trail that completes a 24-mile trail system connecting the Katy Trail at the Deep Fork River, near I-44 and NE Grand Boulevard and the NW Grand Boulevard and Bert Cooper Trails at Lake Hefner," via a new 2.5-mile trail. Planning commenced via collaboration with the Oklahoma Department of Transportation with the City providing plans, specifications, and estimates for the project as well as the acquisition of necessary right-of-way. In 2017, Oklahoma City voters again supported the Deep Fork Greenway Trail through a general obligation bond election.

The City contracted with a firm to complete preliminary and final design drawings for the trail alignment, structural design for retaining walls and pedestrian bridges, hydrology and hydraulics modeling, drainage improvements, intersection crossings, preservation of existing trees, adherence to City standards, Oklahoma Department of Transportation specifications and requirements, ADA compliance (including PROWAG), and compliance with AASHTO trail specifications for the full alignment which encompasses the 12-foot-wide concrete trail itself, nine pedestrian bridge crossings, three highway underpasses, a trailhead, nearby neighborhood access, and signage/wayfinding amenities. Those plans earned the contracted firm Merit Awards from both the Oklahoma and Texas chapters of the American Society of Landscape Architects in the categories of design unbuilt and design unrealized, respectively.

Construction on other phases of the Deep Fork Greenway Trail began in late 2022 and are scheduled to be completed in 2024. From a Technical Capacity standpoint, this indicates how quickly the City can commence with Phase 3A should a RAISE award be made.

Figure 1-3, Deep Fork Greenway Trail and Intersecting Districts, Zones



2.0 Project Location

The Deep Fork Greenway Trail is in North Central Oklahoma City along the southern alignment of Interstate-44 between a connection at Northwest 63rd Street and Northwest Grand Boulevard and a connection at Northeast Grand Boulevard. The project is within the Oklahoma City Urbanized Area (UA-65080) which, per American Community Survey 2021 5-year estimates, has an area-wide population of 1,412,874 and is therefore considered an "urban" project. Phase 3A of the Deep Fork Greenway Trail is in Census Tract 1051 of Oklahoma County, which is designated a Federal Opportunity Zone, Federal Empowerment Zone, and a Priority Enterprise Zone. The project area is also designated as eligible for New Market Tax Credits, which were established by Congress in 2000 "to result in the creation of jobs and material improvements in the lives of residents of low-income communities."

The Phase 3A site area, bound by Interstates 44 and 235 to the north and west, respectively, by North Lincoln Boulevard to the east, and Northwest 50th Street to the south, is approximately ¼ of a square mile with an estimated population of 1,126 in 724 housing units for a population density of 3,480. This includes the Lincoln at Central Park, a multi-family unit development on 50 acres. The area frontage along North Lincoln Boulevard includes mid-rise office buildings and commercial developments, but the area south of Northeast 53rd is a small industrial park of warehouses, offices, and truck yards. Restoration services, packaging system services, electronics and computer repair, construction firms, law firms, boat storage, and electrical contractors are just some of the uses scattered between the multi-family unit development and the Northeast 50th as the principal arterial to the south.

The Deep Fork Greenway Trail connects to Oklahoma City's eight-acre Adventure District, a regional district housing fun, family-friendly attractions and diverse businesses. Anchors in the Adventure District include the Oklahoma Zoo and Botanical Garden, with annual visitors estimated to be greater than one million; Science Museum Oklahoma, a 390-square-foot science museum and planetarium; the National Cowboy and Western Heritage Museum, a museum with greater than 200,000 square feet of display space for a collection of over 28,0000 Western and Native American art and artifacts; the USA Softball Hall of Fame Complex, where the NCAA Women's College World Series is held annually with four fields and seating for 13,000; Remington Park, a horse-racing track owned by the Chickasaw Nation; the Oklahoma State Firefighters Museum, home to firefighting artifacts dating back to the mid-1700s alongside the offices of the Oklahoma State Firefighters Association, Oklahoma Fire Chiefs Association, and the Oklahoma Retired Firefighters Association; and the American Pigeon Museum and Library, a museum dedicated to historically significant items from various pigeon fanciers and several major contributions from prominent members of the hobby.

3.0 Grant Funds, Sources, and Uses of Project Fund

The City of Oklahoma City is requesting $6,961,316 in FY 2023 RAISE funds to contribute to the construction of the Deep Fork Greenway Trail project. The City intends to utilize Federal aid and local match to fund Phase 3A of the project. The future eligible cost for the project components covered in this application is $6,961,316, based on 60% design. The budget reflects how non-Federal and RAISE funds will be allocated. A summary of the future costs of the project and the anticipated cost share is presented below:

Funding Source	Deep Fork Greenway Trail Phase 3A Construction Funding Amount	Total Funding
RAISE Funds	$ 6,961,316	$ 6,961,316
Other Federal Funds	$ 0	$ 0
Non-Federal Funds	$ 1,740,329	$ 1,740,329
TOTAL	$ 8,701,645	$ 8,701,645

The 20% non-Federal local match is committed by the City in the amount of $1,740,329 for a total project cost specific to Phase 3A of the Deep Fork Greenway of $8,701,645, representing contributions from both the Federal government and the City of Oklahoma City.

Costs of Phase 3A of the Deep Fork Greenway Trail are based on competitive bids received from three firms and included with this proposal. Local match funds are committed; on April 26, 2022, Oklahoma City Council passed a resolution adopting a Fiscal Year 2022 budget amendment that created a set aside of the City's Capital Improvement Projects Funds of "$10,000,000 for matching funds for federal projects funded through the Infrastructure Investment and Jobs Act."

4.0 MERIT CRITERIA

4.1 Safety

The addition of the Deep Fork Greenway Trail provides a safer alternative for non-motorized travelers, especially given the intensity of traffic around the I-44 and I-35 junction. The segment of I-44 just north of the Phase 3A portion has daily traffic counts of about 81,000 and Northeast 50th Street, which runs parallel to the Phase 3A alignment to the south, has about 9,200 daily.

The National Highway Traffic Safety Administration's Fatality and Injury Reporting System Tool (FIRST) was used to identify fatal crashes in and around the Phase 3A project area. Injury-only and property damage-only crashes were retrieved via the Oklahoma Highway Safety Office's interactive crash data maps. Between 2006 and 2020, there have been 6 fatalities, including a pedestrian fatality, and 5 injury- or property damage-only crashes as shown in Table 4-1:

Table 4-1, Crashes Near Project Area, 2006 - 2020

Year	Month	Location	Fatalities	Time of Day	Crash ID	Source
2007	March	I-44, E/NE Entrance Flyover	1	1pm – 2pm	400090	NHTSA
2010	October	I-44 Work Zone, Entrance/Exit Ramp	1	1am – 2am	400518	NHTSA
2013	September	I-44 Work Zone	1	12am – 1am	400396	NHTSA
2017	July	Central Park Drive and Lincoln Blvd.	0	6am – 7am	300318456	OHSO
2017	August	I-44 and Lincoln Blvd.	0	4pm – 5pm	300324379	OHSO
2018	January	Central Park Drive and Lincoln Blvd.	0	7am – 8am	300344113	OHSO
2018	March	I-235 / Broadway Extension	0	12am – 1am	300392293	OHSO
2018	September	I-44 and I-235 Junction	0	12am – 1am	300379197	OHSO
2018	December	I-44 Entrance/Exit Ramp	1	6am – 7am	400525	NHTSA
2020	April	I-235 / Broadway Extension	1	5pm – 6 pm	400142	NHTSA
2020	February	I-235 / Broadway Extension	1	N/A	400046	NHTSA
TOTAL FATALITIES			***6***			

Source: NHTSA FIRST, Oklahoma Highway Safety Office (OHSO)

Additionally, regional crash data for vehicles and non-motorized travelers as well as congested corridor data provided by the Oklahoma City region's metropolitan planning organization, the Association of Central Oklahoma Governments (ACOG), were consulted. One pedestrian death (identified as Crash ID 400525 in Table 4-1) and nine injuries of cyclists or pedestrians occurred

in the area. The Benefit-Cost Analysis calculations demonstrate the separated facilities offered by the Deep Fork Greenway Trail to non-motorized users offers a significant improvement for safety. Over the next 30 years it is estimated the trail will save four lives and stop 45 serious injury crashes from occurring on Oklahoma City's roads.

New trail capacity, especially upon full completion and connection to the wider trail network, will provide a carbon-free method of travel with minimal conflict points with traffic considering that portions of the Deep Fork Greenway Trail will carry users below three Interstate-44 ramps and beneath an elevated railroad bridge. The additional passage for cyclists, pedestrians, and other non-motorized travelers will provide a separate and much safer route than attempting to share nearby roads or interstates with vehicular traffic— a clear safety benefit.

4.2 Environmental Sustainability

The Deep Fork Greenway Trail project is intended to reduce single-occupancy vehicle trips while providing a means of transportation that provides physiological benefits to users through physical activity, exposure to nature, and reduced emissions. According to Table HM-71 of FHWA's 2020 Highway Statistics Series, the Oklahoma City Urbanized Area is ranked 51st for population but 46th for daily vehicle miles traveled. And the American Community Survey 2021 table of five-year estimates for commuting characteristics for Oklahoma City indicates 80% of workers commute by single-occupancy motorized vehicle trip, whereas a combined 2.3% make up commutes by transit, bicycle, and walking. (A total of 6.8% work from home.) In each of the U.S. Environmental Protection Agency National Emissions Inventories conducted and published – 2008, 2011, 2014, and 2017 – the largest mobile source of any greenhouse gas in Oklahoma in every inventory was "on-road gasoline light duty vehicles." The BCA confirms that the Deep Fork Greenway Trail project would reduce light duty vehicle trips by 4.5 million over 30 years and thus reduce transportation sector carbon emissions by 1,800 metric tons which, per the U.S. Environmental Protection Agency's Greenhouse Gas Equivalencies Calculator, is also equivalent to the emissions generated from the consumption of 202,543 gallons of gasoline.

In Encompass 2045, the most recent metropolitan transportation plan completed by the Oklahoma City Urbanized Area's metropolitan planning organization, the Association of Central Oklahoma Governments (ACOG), over the next thirty years the region can expect more than 434,000 new residents and 320,000 new jobs – increases of 36% and 49%, respectively. Regional daily vehicle miles traveled, too, will increase between 2015 and 2045 by an estimated 42% and annual freight tonnage by 43% on the region's streets and roads. ACOG currently estimates 60% of the Oklahoma City Urbanized Area's air pollution is from mobile source emissions and there is serious concern over the region's compliance with U.S. Environmental Protection Agency's National Ambient Air Quality Standard for ground-level ozone, as articulated in the City's sustainability plan, adapt**okc**.

In 2022 the City alongside regional and state partners collaborated on the Cost of Nonattainment Study for the Oklahoma City Area, which illustrated that a near-term failure to remain in attainment of the current 70 parts per billion eight-hour Federal standard for ground-level ozone "could cost the Oklahoma City–Shawnee Combined Statistical Area (CSA) as much as $9.6-$15.2 billion over a 20-30 year period," depending on the severity of the nonattainment designation (e.g. marginal or moderate). The Oklahoma City region's air quality has markedly

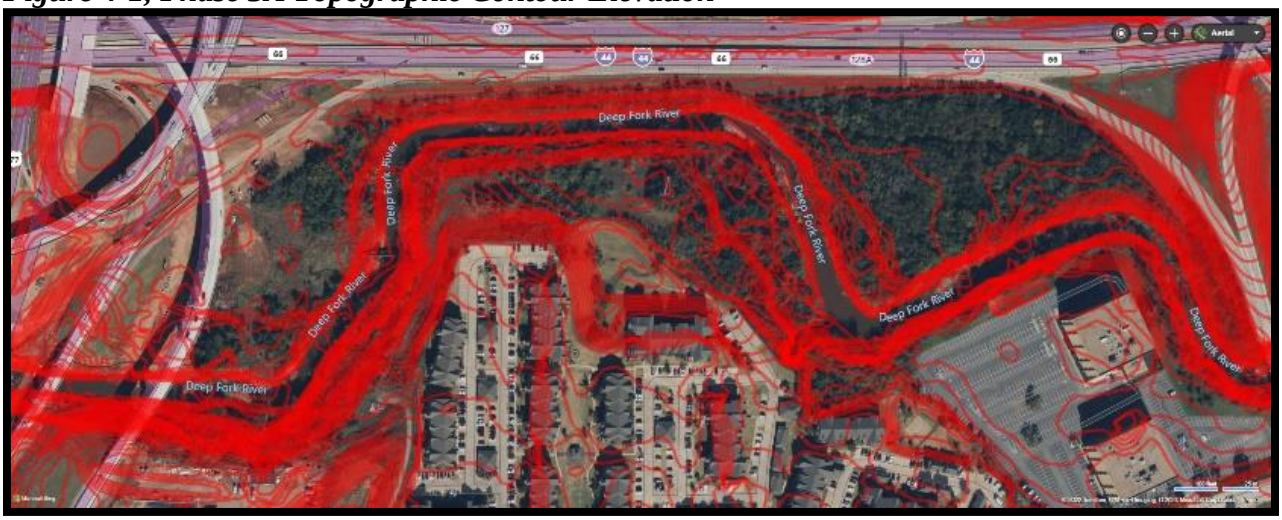
improved in the past twenty years – thanks in part to a significant 2002 Early Action Compact (EAC) in which the City was a signatory alongside ACOG, the Oklahoma Department of Transportation, the Greater Oklahoma City Chamber, the Oklahoma Department of Environmental Quality, and the U.S. Environmental Protection Agency Region 6. Submitted to the EPA, the EAC was a memorandum of agreement among parties to develop and implement a plan to reduce emissions so as to avoid violation of federal air quality standards. Additionally, Oklahoma City's Council includes each year on their State Legislative Agenda and Federal Legislative Agenda items to "[s]upport efforts to maintain Oklahoma's Clean Air Act attainment" (page 10) and "monitor enforcement and definitions of compliance with the Clean Air Act and EPA standards."

Oklahoma City is now the 20th most populous city in the country. It is already one of the largest cities by area in the country as within Oklahoma City's 621 square miles could be fit the cities of South Bend, Berkeley, Fort Lauderdale, Miami, Boston, Anaheim, San Francisco, Providence, St. Paul, Minneapolis, Pittsburgh, Tempe, Newark, Buffalo, and Oakland combined. Growth in Oklahoma City has increased population, increased gross regional product, and increased vehicle miles traveled, which means strategies to accommodate miles traveled via other modes – preferably low-or-no emissions so as to offset the mounting cost of a potential nonattainment designation – are critical for Oklahoma City's financial and physical health. Recreational trails are an established method to do that in Oklahoma City; major investments have seen voters support the expansion of trails citywide.

The Deep Fork Greenway Trail alignment runs through 100-year floodplain as a winding and meandering course through existing right-of-way. Deep Fork Creek itself is a tributary of the North Canadian River, dubbed the Oklahoma River where it winds through downtown Oklahoma City, and flows north where it is impounded in Lake Arcadia, a reservoir constructed to provide drinking water to the neighboring city of Edmond in collaboration with the U.S. Army Corps of Engineers. Adverse impacts to water quality are being avoided via pedestrian bridges overpassing the floodway itself and significant erosion control methods including hydroseeding, hydromulching, soil nails, rock filter dams, rip rap, and cast-in-place retaining walls used to stabilize and secure the excavated areas of the alignment. Figure 4-2 illustrates the challenging navigability of the area.

The National Oceanic and Atmospheric Administration's National Centers for Environmental Information's Storm Events Database indicates a combined 190 flooding and flash flooding events in the 26 years between 1996 and 2022 for Oklahoma County. Only five years during those 26 were without a flooding or flash flooding event. These 190 events cumulatively resulted in 16 deaths, 138 direct injuries, and an estimated $8.4 million in property damage; however, this reflects Oklahoma County, where the Deep Fork Greenway Trail is being constructed and the county containing the majority of Oklahoma City's land area. If expanded to include all four counties in which Oklahoma City stretches, the number of flooding and flash flooding events increases from 190 to 385, resulting in 19 deaths, 141 direct injuries, and an estimated $11.8 million in property damages.

Figure 4-1, Phase 3A Topographic Contour Elevation



The proposed work for Phase 3A of the Deep Fork Greenway Trail is sited in Census tract 40109105100, with a population of 2,313. While this tract is not considered disadvantaged per the Climate and Economic Justice Screening Tool, the full Deep Fork Greenway Trail project is comprised of five phases and includes a significant Justice40 Census tract, 40109106100, with an estimated population of 3,273; this tract is designated disadvantaged based on two of eight categories: Health and Housing. Though not the specific tract in which the Phase 3A work will occur, this tract demonstrates how benefits will flow to Justice40 community residents. The population of this disadvantaged tract will be served not just by the full Deep Fork Greenway Trail but specifically Phase 3A.

Disadvantaged status for the Health category requires a tract to be at or above the 90th percentile nationally for asthma, diabetes, heart disease, or low life expectancy as well as at or above the 65th percentile nationally for low income. For the Housing category, disadvantaged status requires the area to have "experienced historic underinvestment;" be at or above the 90th percentile for housing cost; lack green or open space, homes without indoor plumbing, or homes built before 1960 as a proxy indicator for the presence of lead paint; and be at or above the 65th percentile nationally for low income. Table 4-2 below is an excerpt of the Justice40 category findings for Census tract 40109106100 with categories and measures earning the disadvantaged status:

Table 4-3, Justice40 Indicators for Census Tract 4019106100

Justice40 Category	Justice40 Category Measures	Tract
Health	**Coronary Heart Disease Among Adults 18 and Older** **Low Life Expectancy** **Percent Individuals Below 200% Federal Poverty Line**	**0.92** **0.96** **70%**
Housing	**Homes Without Kitchen or Indoor Plumbing** **Percent Individuals Below 200% Federal Poverty Line**	**0.91** **70%**

Source: Justice40 Initiative Tracts, Data Release November 22, 2022

Additionally, the U.S. Environmental Protection Agency's EJSCREEN tool was used to better assess the project area and its surrounding demographics. A three-mile radius was added to the Phase 3A project area. Compared to the rest of Oklahoma, the project is in the 85th percentile for

ground-level ozone exposure, the 83rd percentile for diesel particulate matter, and the 75th percentile for traffic proximity. When the Phase 3A area is compared nationally, many of those percentiles increase – but when the full Deep Fork Greenway Trail alignment was mapped in EJSCREEN and compared to the country, it demonstrated a larger picture of the project and project benefits. Table 4-4 compares Phase 3A on the basis of percentiles compared to Oklahoma and compared to the United States as a whole. It also compares the alignment of the full Deep Fork Greenway Trail with the rest of Oklahoma and the United States.

Table 4-4, Deep Fork Greenway Trail EJSCREEN Comparisons

	Deep Fork 3A Only		Deep Fork Full Alignment	
Environmental Justice Indices	**Percentile (OK)**	**Percentile (USA)**	**Percentile (OK)**	**Percentile (USA)**
Particulate Matter 2.5	76th	81st	78th	83rd
Ozone	85th	85th	85th	87th
Diesel Particulate Matter, 2017	83rd	75th	87th	80th
Air Toxics Cancer Risk, 2017	69th	72nd	72nd	73rd
Air Toxics Respiratory HI, 2017	68th	73rd	71st	75th
Traffic Proximity	75th	66th	89th	85th
Socioeconomic Indicators	**Percentile (OK)**	**Percentile (USA)**	**Percentile (OK)**	**Percentile (USA)**
People of Color	75th	64th	66th	68th
Low Income	50th	64th	68th	76th
Unemployment Rate	52nd	53rd	24th	25th
Linguistically Isolated	81st	68th	0	0
Less than High School Education	44th	52nd	34th	43rd
Under Age 5	58th	64th	12th	18th
Over Age 54	46th	44th	5th	4th

Source: EJSCREEN

The Deep Fork Greenway Trail will also have proximity to a National Housing Trust Fund-supported $1.3 million development of 20 tiny homes for youths ages 18 to 24 living independently. The project is the work of the Oklahoma Housing Finance Authority and the 501(c)(3) Pivot, Inc., with 280-square feet, fully furnished tiny homes where at-risk teens are responsible for their own cooking, cleaning, maintenance, and have routine check-ins with 24/7 on-site support "towards a healthy school or work/life balance." In addition to the large multi-family development – the 50-acre Lincoln at Central Park apartment complex – a small mobile home park, the Lincoln Park North Mobile Home Rentals and RV Park, is located near the southeast corner of the Phase 3A project area.

Figure 4-2 overlays a blue polygon which includes Phase 3A project area residential developments. Proximity to the Deep Fork Greenway Trail will provide significant access to active, low-carbon travel through difficult terrain and around significant infrastructural barriers, especially adjacent interstate highway. The access provides the mixed use, mixed income area – a combination of industrial, office, commercial, and residential – greater connectivity, opportunity, and wellness, which the EJSCREEN data indicates are necessary to improve area air quality, provide more equitable active transportation infrastructure, and reduce area vehicular traffic.

Figure 4-2, Residential Development Within Deep Fork Phase 3A Project Area

4.3 Quality of Life

The Deep Fork Greenway Trail will improve residents' quality of life in several ways; first, it will increase affordable transportation choices by improving and expanding active transportation and reducing vehicle dependence. Doing so will improve access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, and parks, while simultaneously improving public health by adding new facilities that promote walking, biking, and other forms of active transportation.

Oklahoma City's extraordinarily large land area lends itself to vehicle dependence. As discussed in the following section on Mobility and Community Connectivity, Oklahoma City has more than 3,590 center-line miles of roadway and single-occupancy vehicle trips are the most predominant form of commute as shown in Table 4-6:

Table 4-6, Means of Transportation to Work, 2017-2021 5-Year Estimates

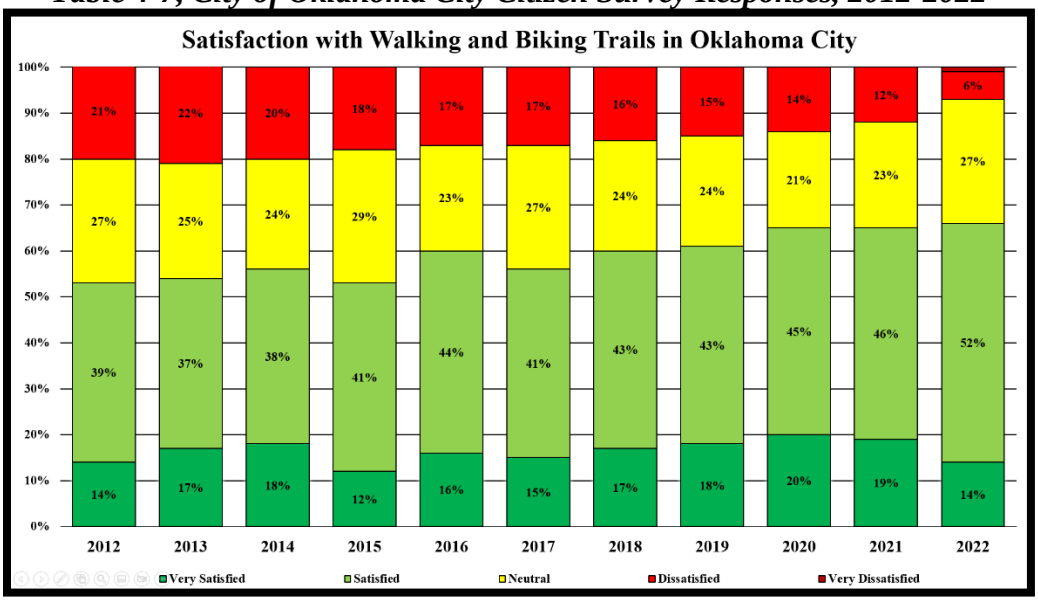
Commute Mode	Project Area Census Tract	Oklahoma City
Car, truck, or van – drove alone	81.4%	80%
Car, truck, or van – carpooled	1.6%	9.7%
Public transportation – Bus	0.0%	0.5%
Bicycle	0.9%	0.2%
Walked	0.0%	1.6%

Source: American Community Survey, 2017-2021 5-Year Estimates

The project area has a slightly larger share of single-occupancy vehicle commutes than Oklahoma City on average, far fewer carpooling commutes, and fewer commutes by walking, but a surprisingly 350% higher percentage of commutes by bicycle than Oklahoma City as a whole. This is a strong indicator of support for expanded active transportation infrastructure in the area. And such support has been consistently expressed by Oklahoma City residents.

Since 2005, the City of Oklahoma City has conducted 15 near-annual scientifically significant Citizen Surveys to poll residents on their opinions, perceptions of and needs for City services, City programs, and City infrastructure. In 11 of those 15 surveys, respondents were asked to express their degree of satisfaction with Oklahoma City's walking and biking trails based on a simple Likert scale with responses illustrated in Table 4-7.

Table 4-7, City of Oklahoma City Citizen Survey Responses, 2012-2022



Source: City of Oklahoma City

In the most recent survey, respondents ranked the City's multi-purpose trails as the sixth priority for our Parks & Recreation Department. This survey also warranted the highest share of "satisfied" responses based on results dating back to 2012; combined with "very satisfied" respondents, the 2022 Citizen Survey indicated 66% of residents are satisfied with the City's multi-purpose trails. Of the remaining, the majority respond as "neutral" (27%) while the combined "dissatisfied" and "very dissatisfied" totaled just 7%. Moreover, respondents were asked to identify three priorities for the Parks & Recreation Department over the next two years. When assessed by City Council Ward, the Ward that ranked the City's multi-purpose trails the highest was Ward 2 – the Ward where the Deep Fork Trail Phase 3A project area is sited.

This indicates the likelihood the Deep Fork Greenway Trail project will improve access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks. Full completion of the alignment will complete a citywide trail circuit: The east end of the Deep Fork Greenway Trail connects to the Katy Trail, former railroad right-of-way now owned by the City's transit agency, EMBARK, and runs about 7.3 miles through much of historically-redlined Northeast Oklahoma City.

The west end connection runs along Northwest Grand Boulevard, functionally classified as a Major Collector, where at Northwest 63rd Street it transitions into Nichols Hills, a neighboring municipality wholly surrounded by Oklahoma City that has an American Community Survey 2021 5-year population estimate of 3,866. From Nichols Hills, the paved North Grand Boulevard Trail continues on for about 2.5 miles until it returns to Oklahoma City at Greystone Avenue. It

then continues until it connects with the Bert Cooper Trail at Lake Hefner. From Lake Hefner, trail users can take the Hefner-Overholser Trail to the southwest to take the Overholser Trail further south to the West River Trail running along the Oklahoma River. From Lake Hefner, trail users can also take the Will Rogers Trail south to either the North River Trails or South River Trails, and from those trails connect to the South Grand Boulevard Trail which connects with the Katy Trail and, soon, the Tinker-Draper Trail to provide access to rural southeastern Oklahoma City where a 14-mile multi-use trail surrounds a 2,900-acre reservoir with 34 miles of shoreline.

This connectivity permits access to a multitude of destinations either directly accessed from the Deep Fork Greenway Trail or accessible using on-street bicycle facilities or sidewalks. This is likely to include use by Bishop McGuinness Catholic High School, who are near the west end of the trail alignment, with enrollment of approximately 700 students. Connection to Zachary D. Taylor Park, a City park with walking trails, playground, and shelter settled in the center of the Zachary Taylor neighborhood of around 350 homes. The only locations of Trader Joe's and Whole Foods Market in the Oklahoma City MSA are also on the west end of the trail alignment along with offices, banks, fast food and fast casual restaurants.

The central and eastern portions of the Deep Fork Greenway Trail provide access to Lincoln Boulevard, a principal arterial that serves as primary gateway to the Oklahoma State Capitol Complex. Along this corridor are important services and offices including the Oklahoma City office of the Central Oklahoma Workforce Innovation Board, providing workforce development services as a partner of the U.S. Department of Labor's American Job Center Network; the Oklahoma Health Care Authority, the State agency responsible for health insurance benefits as part of the Centers for Medicare and Medicaid Services; Infant Crisis Services, a nonprofit that provides life-sustaining formula, food, and diapers for babies and toddlers; a combined Homeland full-service grocery store and the $13.9-million MAPS Senior Health and Wellness Center No. 3, a 4,000-square foot facility exclusively for senior citizens and operated by Langston University, Oklahoma's only Historical Black College or University (HBCU); the offices of the Oklahoma Highway Safety Office; the Oklahoma County Election Board, where early voting for the State's most populous county occurs; and the offices of Association of Central Oklahoma Governments, the region's MPO.

These are all examples of important destinations residents will be able to reach safely via an active, low-carbon mode of transportation while improving their health. Whether groceries, voting, health benefits, workforce training, engagement with government agencies, or acute services, the Deep Fork Greenway Trail will ensure these connections can enhance quality of life for residents of the area as well as trail-users across Oklahoma City.

4.4 Mobility and Community Connectivity

Once completed, the Deep Fork Greenway Trail will improve system-wide connectivity, remove physical barriers for individuals by reconnecting communities, and include transportation features that increase accessibility for non-motorized travelers. The Deep Fork Greenway Trail is a major part of a citywide trails system-wide connectivity effort. This system-wide connectivity is important due to Oklahoma City's sheer size and the implications it has on mobility, connectivity, quality of life, and economic competitiveness. It also implements a plan, based on community participation and data, that identifies and addresses gaps in the existing network.

As discussed, Oklahoma City has a high number of vehicle miles traveled, due in large part to its relatively low population density of just over 1,000 persons per square mile. The city's population grew by 117,483; this is in part because Oklahoma City is one of the largest cities by land area in the U.S., a municipality that crosses into four counties – Oklahoma County, Canadian County, Cleveland County, and Pottawatomie County – and, per Census 2020 data, is now the twentieth most populous municipality in the country. However, these residents are spread across 621 square miles, a land area so large Oklahoma City is a little larger than half the state of Rhode Island, which is a total of 1,214 square miles.

With a crude population density of just over 1,000 per square mile, a growing population (between 2010 and 2020, Census data reflects added population of 117,483, a percent increase of about 21%), greenfield development gradually expanding the urbanized footprint across the City's rural areas, and roads with substantially higher average annual daily traffic counts degrading more quickly and thus requiring more frequent interventions compared to lower volume rural roads, one of our greatest challenges is the sheer size of Oklahoma City and its transportation network.

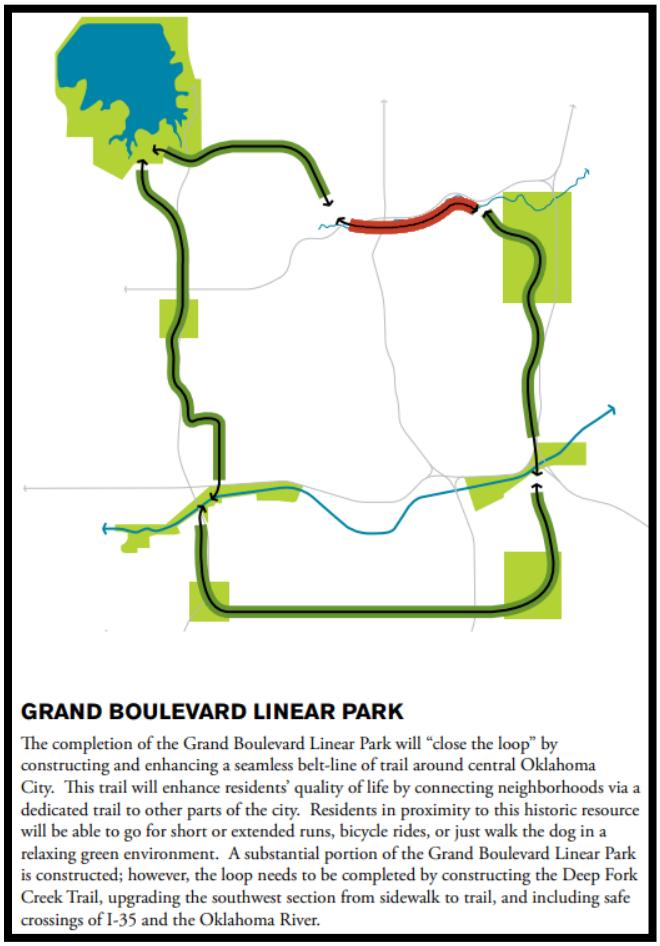
Growth through 2050 is anticipated to add as much as 300,000 people, and with them, the challenges of added lane miles of streets, greater transit service demand, increased congestion, increased vehicle miles traveled, increased emissions, increased freight traffic, and increased maintenance needs for our roads and streets.

Oklahoma City's transportation infrastructure is already complex, with more than 12,580 traffic signals; more than 790 signalized intersections; more than 70,000 traffic control signs; more than 3,590 center-line miles of roadway; a forthcoming 9.5-mile bus rapid transit route with 32 platform stops; 22 streetcar stops across 4.8-miles of streetcar track; 52 electric-assist bikeshare bicycles; and a 1,313 fixed-route bus system stops across 21 routes serving 283 square miles with annual ridership greater than two million. The Deep Fork Greenway Trail provides another low-complexity, low-cost, and low-emissions form of transportation to connect residents across Oklahoma City on non-motorized modes.

Oklahoma City's first combined bicycle and pedestrian plan, bikewalk**okc**, employed comprehensive approaches to public participation, which included a steering committee, a robust survey, and a multitude of public outreach events across Oklahoma City. The public outreach events occurred at varying times, days, and locations for as wide a reach as possible, including the Ralph Ellison Library in near the Deep Fork Trail, downtown's EMBARK Transit Center, or the Oklahoma State University-Oklahoma City farmer's market.

The steering committee and survey were both significant efforts for community participation to identify and address gaps in the existing bicycle and pedestrian network. In Figure 4-3, an excerpt from bikewalk**okc** identifies the "close the loop" nature of a citywide recreational trail network; the text specifically points to the connection of the Deep Fork Greenway Trail which has been colored red in the image below. Upon completion, a recreational trail outer loop will be complete.

Figure 4-3, Integral Project: Grand Boulevard Linear Park



Source: bikewalkokc

The bikewalk**okc** steering committee was responsible for reviewing and providing feedback on plan materials. The committee also helped advertise the plan process and distribute information to the larger community to enhance outreach efforts and expand opportunities for input throughout communities and neighborhoods in Oklahoma City. Members represented organizations including the Oklahoma City Black Chamber of Commerce, the YMCA, the Oklahoma City Public School System, the Oklahoma Department of Transportation, the Oklahoma Statewide Independent Living Council, and more. Steering committee members were asked to identify locations around the city for investigation, including urban and rural bicycle alignments, potential multi-use trail alignments, as well as intersection improvements and key crossings of major barriers. These barriers include natural elements like rivers and streams, as well as man-made infrastructure like I-44 and I-235.

The bikewalk**okc** survey was mailed to every customer of Oklahoma City's municipal water system as part of their monthly bill in October 2015. A total of 1,738 responded: "Of the survey respondents, between 90 and 95 percent stated the current conditions for walking and cycling is fair to poor, while 75 percent of respondents said that improving bicycling conditions is very important. Almost 80 percent believe improving walking conditions is very important" (page 9). Some of the key results included that the number one factor discouraging bicycling and walking

in Oklahoma City is a "lack of connected trails, sidewalks, and bike lanes" and the number one type of destinations respondents would want to reach by bicycling or walking was "parks and existing trails." The Deep Fork Greenway Trail helps to address both of these key results by using new trails and sidewalks to create new connections to parks and existing trails.

Implementation of bikewalk**okc** is based on community participation and data that identifies and addresses gaps in the existing network; this is especially true of the Deep Fork Greenway Trail project as it was the recreational trails project ranked as the highest priority based on the following criteria: residents served, or those within ½-mile of the proposed facility; whether funding was available; connections to existing trail facilities; estimated construction cost; right-of-way cost; and likelihood of surrounding greenfield development.

Figure 4-4, Recreational Trails Network Prioritization

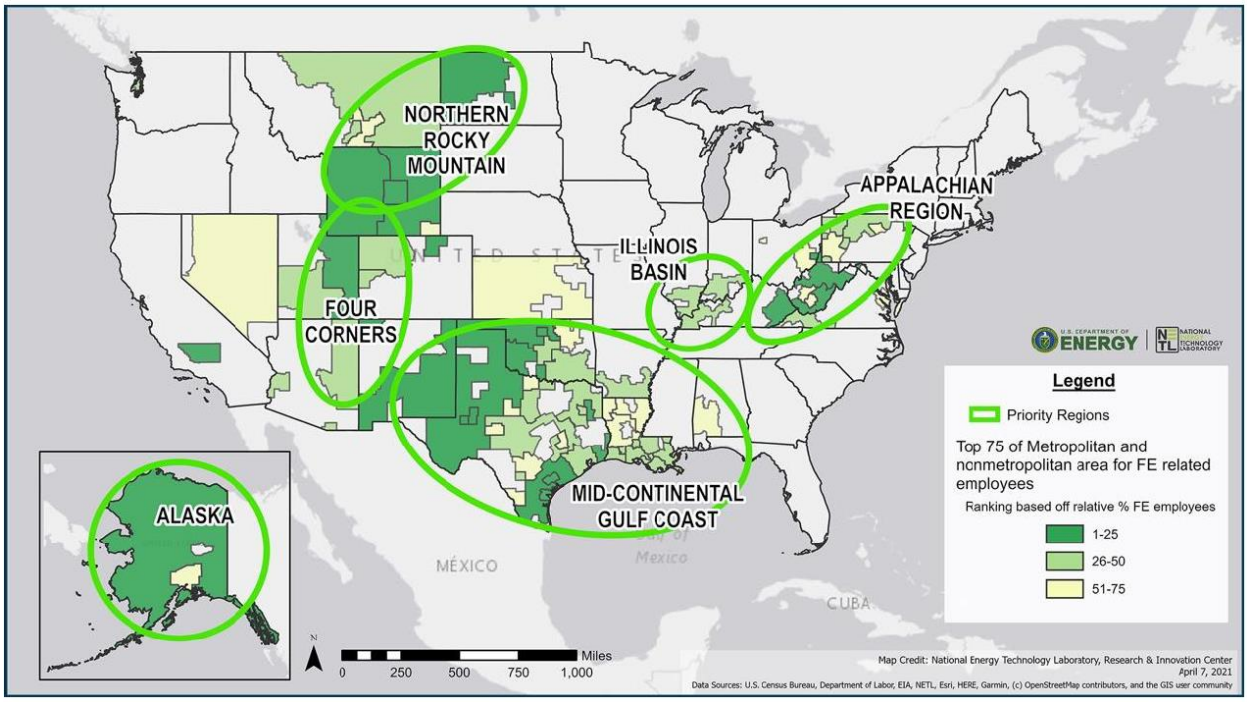
Rank / Map ID	Project Name
1	Deep Fork Trail
This project is an integral component of completing the Grand Blvd. Loop around Oklahoma City. This project connects the existing Katy Trail to the N. Grand Blvd. Trail through Nichols Hills. Additionally, this project will provide access across the I-44 corridor that is a substantial barrier to cyclists presently.	
2	S. Grand Blvd. Trail
This trail has existing for decades and is in need of repair and improved intersection crossings. Investing in existing facilities is essential to a long-lived and useful trail network.	
3	Rail Trail
An abandoned rail corridor that connects to the Oklahoma River provides a great opportunity to add a safe crossing of the river, as well as an opportunity to get more residents to and from the trail network.	
4	Edgemere Greenway
This project seeks to provide a connection between the many parks in the surrounding areas, including Crown Heights Park, Douglas Park, Edgemere Park, Sparrow Park, and Harlow Park.	
5	SW 119th St.
Earlywine Park in southern Oklahoma City is a great recreational asset. This trail connection will increase the number of residents in the area that can access the park safely without the use of an automobile.	
6	Eagle Lake Trail Extenstion
This project calls for an extension of the existing Eagle Lake Trail to facilitate a connection between the trail network south of the Oklahoma River to the trails north of the river.	
7	Eagle Lake to Katy Trail Connection
One of the more difficult portions of the Grand Blvd. Loop to connect is across the Oklahoma River, a rail corridor, and the interchange of Interstate 40 and Interstate 35. This project calls for a trail, on-street, and bridge enhancements to connect riders from the eastern terminus of the Eagle Lake Trail to the southern terminus of the Katy Trail.	
8	S. Grand Blvd. to River Trail Connection
Another needed improvement to close the Grand Blvd. Loop is to better connect the Oklahoma River Trails to the S. Grand Blvd. Trail. This project will enhance the existing sidewalk between these trails into a multi-use path in order to provide a safer and more obvious connection.	

*Source: bikewalk**okc***

Finally, the Oklahoma City MSA is recognized as an Energy Community in the April 2021 document, *Initial Report to the President on Empowering Workers Through Revitalizing Energy Communities: Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization,* spurred by Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad." Per Figure 4-5, the Oklahoma City MSA is shown as within the Mid-Continental Gulf Coast, a priority region, and the Oklahoma MSA ranked based on its percentage of fossil energy employment among 75 metropolitan and non-metropolitan areas. The report only ranks the top 25 areas, but the Oklahoma City MSA falls somewhere within the 26 to 50 range.

The Mid-Continental Gulf Coast is described as housing "two of the top 20 producing coal mines in the country; three of the top 20 coal power plants by power generation capacity; 62 refineries; more than 468,000 active oil and gas wells, representing 61% of active oil and gas wells in the United States; and five of the top 20 producing natural gas power plants. This region also hosts more than 114,000 miles of hydrocarbon pipeline infrastructure" (page 7). On page 16, the report explicitly points to the Department of Transportation's RAISE program and says its approach to "prioritizing projects that improve racial equity, reduce climate change impacts, and create good-paying jobs … will enable DOT to better serve the needs of applicants like Energy Communities that are focusing on job creation and climate change response."

Figure 4-5, Fossil Energy-Centric Corridors with a High Number of Fossil Energy Activities and Jobs



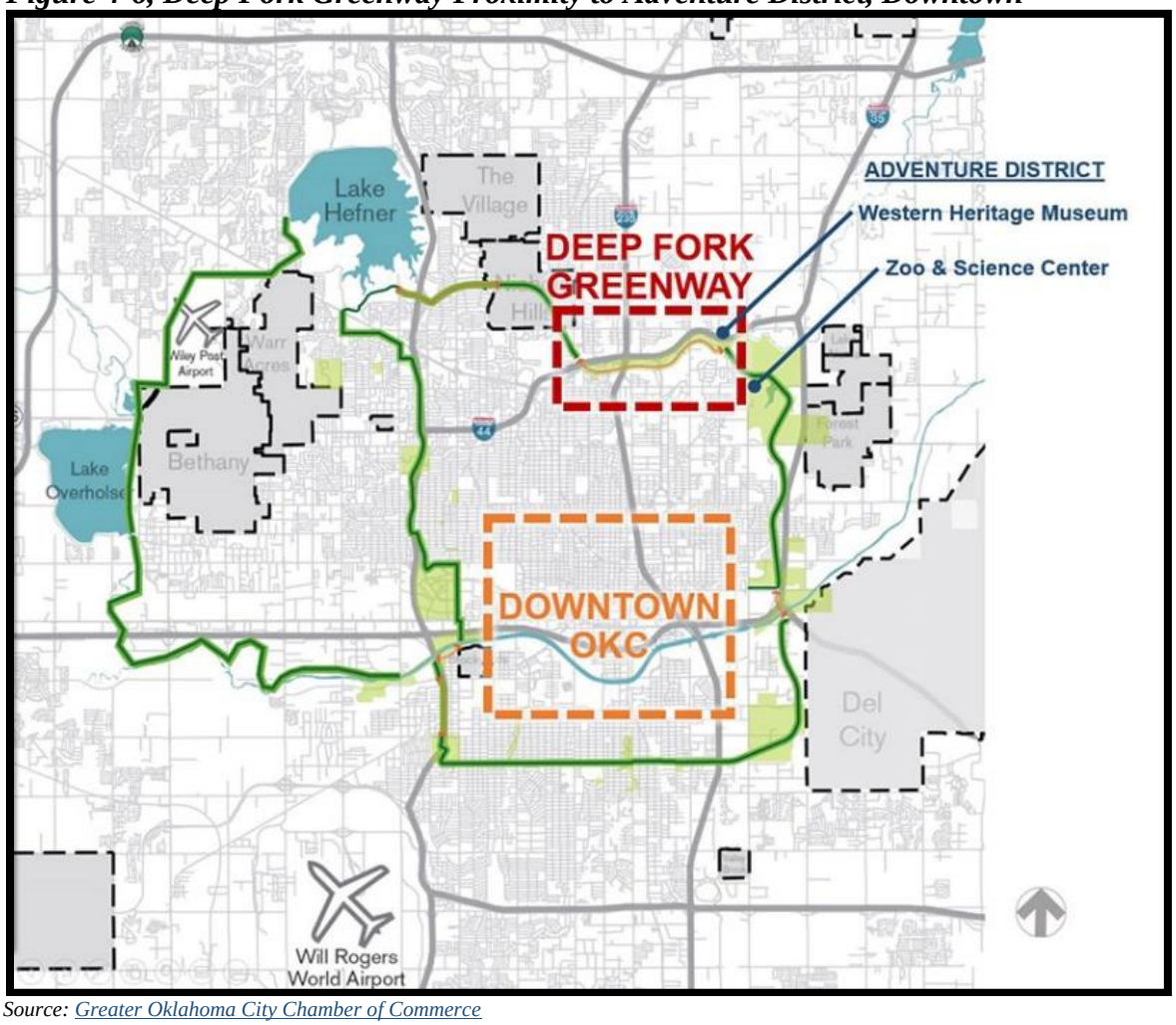
Source: [Initial Report to the President on Empowering Workers Through Revitalizing Energy Communities: Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization]

4.5 Economic Competitiveness and Opportunity

Phase 3A of the Deep Fork Greenway Trail will facilitate tourism opportunities most prominently to Oklahoma City's Adventure District, an eight-acre regional commercial district at the crossroads of I-35 and I-44, as well as promote long-term economic growth and other broader economic and fiscal benefits.

As discussed in the Project Location section, the Adventure District is anchored by five major tourism institutions: the National Cowboy & Western Heritage Museum; the Oklahoma City Zoo and Botanical Gardens; Science Museum Oklahoma; Remington Park; and the USA Softball Hall of Fame Complex. These are described as the five major tourism drivers that have "primarily funded" the Adventure District.

Figure 4-6, Deep Fork Greenway Proximity to Adventure District, Downtown



Source: Greater Oklahoma City Chamber of Commerce

In Figure 4-11, the distance between the Deep Fork Greenway Trail and Downtown Oklahoma City is shown – approximately four miles – as well as the Adventure District on the trail alignment's east end with three of the aforementioned anchors – National Cowboy & Western Heritage Museum, the Oklahoma City Zoo and Botanical Gardens, and Science Museum Oklahoma – all denoted. Additionally, other Adventure District tourism-oriented uses and destinations include the Cinemark Tinseltown USA, one of Oklahoma City's largest first-run theaters; the Lincoln Park golf courses and clubhouse, the former offering 36 holes and the latter 32,000-square feet including a 3,100-square foot event center, restaurant area and snack bar, executive conference room, a designer pro shop, and an exclusive terrace bar; the Oklahoma City-County Health Department's Northeast Regional Health and Wellness Center, which features outdoor walking trails, sports fields, a basketball court, a community garden, a KaBOOM! children's playground, free nutrition/weight loss classes, and presence by the Regional Food Bank on-site; the Twin Fountains RV Park, an approximately 20-acre recreational vehicle resort with everything from mini-golf and a fishing pond to on-site dog grooming and a limousine shuttle; and finally, the Springlake campus of MetroTech, one of four campuses citywide providing career and technology education including short-term adult and career development courses, full-time career majors for high school and adult students, career and

business counseling, assessment, financial aid, employment services, computerized academic centers including ESL (English as a Second Language), child care, disability services, and bus transportation.

In January of 2022, the now-former president of the Alliance for Economic Development for Oklahoma City stated in the state business journal the Adventure District "has tremendous opportunities to attract visitors" and tourists from outside Oklahoma City:

> A recent report commissioned by the Alliance for Economic Development of Oklahoma City and prepared by Economic & Planning Systems Inc. indicates the demand for 40,000 to 50,000 square feet of retail space to attract an anchor retailer. The best opportunity would come from entertainment-oriented retailers that would complement visitation to the area attractions and stay open past 5 p.m.
>
> Finally, to keep the out-of-town visitors in the area, the Adventure District needs a hotel. Hotels have a multiplier effect: If families stay overnight in the area, they're more likely to eat, spend money at retailers and take in a second attraction.

The Deep Fork Greenway Trail will augment the area's ability to attract tourism. The State of Oklahoma is unique in that it is the only state in the country that does not permit municipalities to use ad valorem/property tax for operations and maintenance; instead, Oklahoma municipalities are heavily reliant on sales tax—a more volatile source of revenue. In Oklahoma City, sales tax accounts for over 53% of our General Fund revenue. While the picture for Oklahoma municipalities has brightened due to *South Dakota v. Wayfair, Inc.* and voter-approval of medical marijuana in Oklahoma, municipalities are nonetheless limited to property tax for (1) paying judgments against the municipality and (2) to pay down voter-approved debt, most frequently general obligation bonds.

The City of Oklahoma City itself is rated AAA by the credit agencies, which is actually a higher bond rating than Oklahoma's state government. However, the MSAs status as a "Fossil Energy-Centric Corridor" means the community is subject to the boom-and-bust cycle. Strong financial management is a tenet of the City of Oklahoma City and an adopted priority for City Council. Another key Council priority is developing "a transportation system that works for all residents." The Council describes this priority as follows, per the City of Oklahoma City FY23 Budget Book (page A-15):

> A transportation system that gets people where they need to go in a timely manner and accommodates various means of mobility is necessary to connect residences and businesses. Improving the condition of streets is the top priority of our residents and will continue to receive significant investment in the coming years. We are making strides to become more pedestrian and cyclist friendly through better planning, design and construction of complete streets, sidewalks, and trails. There is also a growing interest in improving public transportation within Oklahoma City and the central Oklahoma region. Regional solutions and funding for public transportation are a prerequisite to effectively serve the region and maximize the effectiveness of the system. Attention to new

developments in transportation, such as autonomous vehicles, is needed to ensure Oklahoma City is ready to benefit from coming changes.

The Deep Fork Greenway Trail will promote long-term economic growth and other broader economic and fiscal benefits via the connection to the Adventure District because the Adventure District is one of six active Business Improvement Districts (BIDs), a status conferred by Oklahoma City Council in 2017. BIDs are a type of public-private partnership wherein property owners and community members work with City staff on BID policies and procedures to begin the process of establishing a district. In these districts, special tax assessments on commercial property owners are collected to cover district costs in areas of marketing and public relations, enhanced maintenance, capital improvement projects, and administration. Within a defined boundary, a district manager and a business-merchant association establish a mission and goals to strengthen and uplift the area in conjunction with the businesses and organizations in the area. The Adventure District established their independent 501(c)(6), Oklahoma City's Adventure District, in 2014, to advocate for and improve conditions in the district. The BID mechanism can support area improvements and accommodations for new developments as the Deep Fork Greenway Trail helps supply the tourists.

4.6 State of Good Repair

The new construction of the Deep Fork Greenway Trail will both create new infrastructure that will be maintained in a state of good repair and addresses current or projected system vulnerabilities for underserved communities. The new infrastructure – all of the Deep Fork Greenway Trail, including Phase 3A – will be owned by the City's Parks and Recreation Department, who are responsible for the maintenance and upkeep of the City's recreational trails system.

4.7 Partnership and Collaboration

The City of Oklahoma City and ODOT have collaborated on the Deep Fork Greenway Trail; however the City of Oklahoma City is the Project Sponsor. Via an agreement, the City is responsible for much of the project including Plans, Specifications, and Estimates, while ODOT conducted the environmental studies and prepared the National Environmental Protection Act documents as required for federally-funded projects. Additionally, ODOT was responsible for ensuring the Federal Highway Administration was in receipt of those documents. The City will fund construction and be responsible for maintenance in perpetuity.

Additionally, the City of Oklahoma City's Public Works Department operates a Small, Local, and Minority Business Utilization Program. This includes business that qualify as minority-owned, women-owned, a small business, or locally-owned – meaning the business is located within 40 miles of Oklahoma City. Currently, there are 128 businesses registered, including firms specializing in paving, demolition, stormwater, wastewater, bridge, HVAC, and more. When a firm is awarded a City contract, the firm is required to submit a Subcontracting Plan to establish their efforts to recruit and utilize small, local or minority businesses. During a project, the Program's Pay Application Breakdown Form is submitted with each pay application on a monthly basis; this data is used for program monitoring and performance measures. Finally, after final project inspection, the firm submits a Subcontracting Close Out Form which ensures final acceptance and payment of final claim may be processed.

4.8 Innovation

4.8.1 Innovative Technology

Phase 3A of the Deep Fork Greenway Trail does not incorporate innovative technology.

4.8.2 Innovative Project Delivery

Phase 3A of the Deep Fork Greenway Trail does not incorporate innovative project delivery.

4.8.3 Innovative Financing

Phase 3A of the Deep Fork Greenway Trail does not incorporate innovative financing.

5.0 Project Readiness

5.1 Environmental Risk

The City has completed 60% construction plans and NEPA approval has been accomplished by the Oklahoma Department of Transportation. Other portions of the Deep Fork Greenway Trail have been awarded and construction is currently underway. Obligation of RAISE funds for Phase 3A can occur upon award with an anticipated timeline of two years, well within the required funding and obligation deadlines for RAISE.

5.2 Project Schedule

Phase 3A of the Deep Fork Greenway is projected to require 18 months of work. One additional month has been included to accommodate any potential delays. The below schedule is predicated on a RAISE grant contract agreement finalized and fully executed by all parties in the final quarter of 2023.

Table 5-1, Deep Fork Greenway Trail Phase 3A Construction Schedule Estimate

Task	2023				2024				2025				2026			
Pre-Construction																
Construction																

5.3 Required Approvals

The Deep Fork Greenway Trail, including Phase 3A, are on the FFY 2020-2023 Transportation Improvement Plan (TIP) for the Oklahoma City Area Regional Transportation Study Area (OCARTS) with TIP ID 10564. The full Deep Fork Greenway Trail alignment has received NEPA approval per the Oklahoma Department of Transportation.

Potential risks and mitigation strategies to minimize the potential impact of those risks are summarized below. References to other sections of this application are included.
Environmental and right-of-way related risks are minimal given that NEPA approval has been obtained. Meaningful public involvement has occurred that engaged the environmental justice and disadvantaged community affected by the project.

The City has sufficient capacity to implement the proposed activities according to the schedule presented. Non-Federal matching funds are committed and will ensure the City is able to begin

construction in a timely manner until grant funds are reimbursed.

With regard to project risks and mitigation, many of the risks are inapplicable to Phase 3A. For example: given the completed NEPA documentation, environmental uncertainties are highly unlikely; increases in real estate acquisition costs does not apply given the City has already acquired the necessary right-of-way for the Deep Fork Greenway Trail. Lack of legislative approval, negative public perception, or lack of permitting are also all highly inapplicable given the collaboration between the City and ODOT, the twice-demonstrated support of a majority of Oklahoma City voters via the 2007 and 2017 general obligation bond elections, and Phase 3A's place on the Oklahoma City MSA's Transportation Improvement Plan (TIP). However, cost increases are affecting projects as reported by the Associated Press last year. As a result, an additional 15% has been added to the Phase 3A project budget to cover contingency.

Table 5-2, Project Risks and Mitigation Strategies

Project Risk (Probability of Occurrence)	Mitigation Strategies Discussion
Cost Increases (Moderate)	Because the project has already been bid once, the City has cost estimates that already reflect increased costs; because of cost overruns, a margin of 15% has been added to the budget to provide for contingency should costs increase further.

6.0 Technical Capacity

6.1 Benefit Cost Analysis

A Benefit-Cost Analysis (BCA) was conducted for the Deep Fork Greenway Trail Phase 3A project based on the most current DOT guidance dated January 2023. All monetary values in the BCA, including costs, are expressed in 2021 dollars with general parameters and assumptions documented in the BCA Technical Memo. A 7% real discount rate was applied to all costs and benefits less air emissions reductions, which were discounted at 3%, and given the design of the BCA's build/no-build scenario, the new construction of Deep Fork Greenway Trail provided for a project life cycle of 30 years. Project construction was estimated to commence in early 2024, end in late 2025, and the full alignment to come on-line in 2026. The BCA resulted in a benefit-cost ratio of 1.86 and a net present value of $10,632,477.

6.2 Costs

The costs for all phases of the project are shown below and include scoping and preliminary engineering, right-of-way (ROW) acquisition, utility relocation, and construction.

Table 5-3, Deep Fork Greenway Trail Capital Costs by Phase

Year	Trail Phase	Capital Cost
2024	Phase 1	$4,991,560
2024	Phase 2	$2,750,000
2025	Phase 3A	$6,670,320
2025	Phase 3B	$5,709,325
2025	Phase 4	$3,301,135
	Total	$23,422,340

6.3 Benefits

The monetized benefits included crash reduction savings, mortality reduction savings, discounted vehicle operating cost savings, and emissions reduction savings. From a safety perspective, construction of the Deep Fork Greenway Trail is estimated to reduce four on-street cyclist or pedestrian deaths and avoid as many as 45 serious injury crashes over 30 years.

Mortality reduction demonstrates the safety benefit gained from off-street facilities. Indicative of the data-supported notion that safe active transportation infrastructure and facilities will induce the most users, the Deep Fork Greenway Trail is projected to induce about 4 million walking trips and another 4.3 million cycling trips over the 30-year period used for the Benefit-Cost Analysis. These induced trips will save an estimated 4.5 million miles of light duty vehicle VMT and reduce transportation sector carbon emissions by 1,800 metric tons.

Table 5-4, Deep Fork Greenway Trail Quantified Benefits

Calender Year	Project Year	Discounted Crash Reduction Savings at 7%	Discounted Mortality Reduction Savings at 7%	Discounted Vehicle Operating Cost Savings at 7%	Discounted Air Emissions Reduction Savings at 3%	Discounted Capital Costs at 7%	NPV ($2021)
2024	1	$0	$0	$0	$0	$6,319,419	-$6,319,419
2025	2	$0	$0	$0	$0	$11,962,792	-$11,962,792
2026	3	$1,640,894	$1,160,460	$42,411	$2,704	$0	$2,846,469
2027	4	$1,451,122	$1,095,387	$40,033	$2,696	$0	$2,589,238
2028	5	$1,358,724	$1,033,964	$37,788	$2,687	$0	$2,433,163
2029	6	$1,272,229	$975,984	$35,669	$2,677	$0	$2,286,560
2030	7	$1,191,258	$921,256	$33,669	$2,709	$0	$2,148,892
2031	8	$1,115,457	$869,597	$31,781	$2,697	$0	$2,019,532
2032	9	$1,044,496	$820,835	$29,999	$2,685	$0	$1,898,014
2033	10	$978,064	$774,807	$28,316	$2,672	$0	$1,783,859
2034	11	$915,872	$731,359	$26,729	$2,659	$0	$1,676,619
2035	12	$857,648	$690,349	$25,230	$2,645	$0	$1,575,871
2036	13	$803,138	$651,638	$23,815	$2,667	$0	$1,481,258
2037	14	$752,104	$615,097	$22,480	$2,652	$0	$1,392,333
2038	15	$704,325	$580,606	$21,219	$2,636	$0	$1,308,786
2039	16	$659,591	$548,048	$20,029	$2,620	$0	$1,230,289
2040	17	$617,709	$517,317	$18,906	$2,603	$0	$1,156,535
2041	18	$578,496	$488,308	$17,846	$2,620	$0	$1,087,270
2042	19	$541,780	$460,926	$16,845	$2,602	$0	$1,022,154
2043	20	$507,403	$435,080	$15,901	$2,584	$0	$960,968
2044	21	$475,216	$410,683	$15,009	$2,565	$0	$903,473
2045	22	$445,077	$387,654	$14,167	$2,546	$0	$849,445
2046	23	$416,857	$365,917	$13,373	$2,558	$0	$798,705
2047	24	$390,433	$345,398	$12,623	$2,538	$0	$750,992
2048	25	$365,690	$326,030	$11,915	$2,518	$0	$706,153
2049	26	$342,521	$307,748	$11,247	$2,498	$0	$664,014
2050	27	$320,826	$290,491	$10,616	$2,478	$0	$624,410
2051	28	$300,509	$274,202	$10,021	$2,457	$0	$587,189
2052	29	$281,485	$258,826	$9,459	$2,436	$0	$552,206
2053	30	$263,669	$244,312	$8,929	$2,416	$0	$519,325
2054	31	$246,985	$230,612	$8,428	$2,395	$0	$488,420
2055	32	$231,361	$217,681	$7,955	$2,374	$0	$459,371
Total		**$21,070,942**	**$12,475,012**	**$455,918**	**$42,630**	**$18,282,211**	**$10,632,477**

Unquantified benefits include increased connectivity to and with other multi-modal projects across Oklahoma City's 621 square miles; agglomeration economies and land use, especially because greater circulation on a large recreational trail network can encourage "trail-oriented development"; modal diversion, which means reduced emissions due to fewer motorized vehicle trips distributes benefits across a larger area; and geographic extent, because those benefits distributed across a larger area are significantly amplified given the Deep Fork Greenway Trail's role as a vital link among the City's trails network.

6.4 Results

Phase 3A of the Deep Fork Greenway Trail was determined to yield a Benefit-Cost Ratio of 1.86 and a Net Present Value of $10.6 million, summarized in Table 6-4 below. Approximately 60% of total monetized benefits for Phase 3A are generated by the significant crash reduction savings, followed by 36% of benefits from mortality reduction savings, 13% reduction in vehicle operating savings, and 1% from emissions reduction benefits.

Table 5-5, Deep Fork Greenway Trail Benefit-Cost Analysis Results

Benefit-Cost	Amount
Discounted Initial Capital Costs	$18,282,211
Facilities Residual Value	$0
Total Discounted Costs	**$18,282,211**

Crash Reductions Savings	$21,070,942
Mortality Reduction Savings	$12,475,012
Vehicle Operating Cost Savings	$455,918
Emissions Reduction Benefits	$42,630
Total Discounted Benefits	**$34,044,502**

Benefit Cost Ratio	**1.86**
Net Present Value	**$10,632,477**