

RAISE GRANT

City of Wagoner: Complete Street Project to Enhance Equity and Safety

U.S Congressional District OK-01



Safety
People
Vision
Equity

U.S. Department of Transportation

FFY 2022 RAISE GRANT APPLICATION

RAISE Funds Requested: **\$7 Million**

Submitted
by:

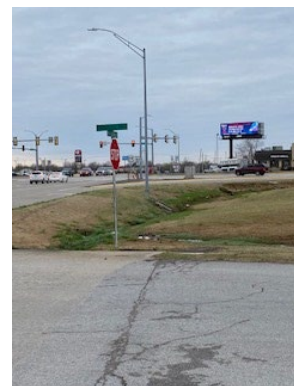
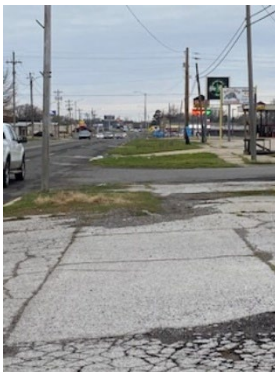
City of
Wagoner

WAGONER, OKLAHOMA Complete Street Project to Enhance Equity and Safety

Project Name	City of Wagoner: Complete Street Project to Enhance Equity & Safety
Applicant	City of Wagoner
Project Partners	City of Wagoner Oklahoma Department of Transportation (ODOT)
Contact Information	Mr. Albert R. Jones, Mayor City of Wagoner 231 Church Street, Wagoner, OK 74467 (918) 485-2554 mayor@wagonerok.org
Location	City of Wagoner, Wagoner County Oklahoma Congressional District 1 Census Tract 301.01 HDC Community (25% of the Project cost) Census Tract 301.02 APP Community (75% of the Project cost)
Project Type	Rural, Sidepath, Trail, Sidewalk, ADA Enhancements, Trail Underpass
Project Description	<p>The City of Wagoner and ODOT are partnering to enhance safety and to improve mobility, access and connectivity for a diverse population that is in an area historically disadvantaged community (HDC). The three-quarter mile corridor along Cherokee Street (Oklahoma State Highway 51) will:</p> <ul style="list-style-type: none"> — Construct a safe active transportation connection with a new sidewalk, Americans with Disabilities Act (ADA)-compliant ramps, a new sidepath — Construct a new US Highway 69 trail underpass to allow project area residents to more safely access fresh food and other services
Project Cost	\$8.75 Million
RAISE Funds Requested	\$7.0 Million (80%)
Local Match Source(s) & Amounts	\$1,000,000– City of Wagoner, Public Works Authority Utility Relocations (11.5%) \$ 750,000 – Oklahoma Department of Transportation Participation (ODOT) (8.5%)
Project Schedule / Status	National Environmental Policy Act Categorical Exclusion (NEPA process) for the corridor is scheduled for completion in August 2023. Construction is scheduled for FFY 2025 and will be complete by 2027.
Project Benefits	<p>Once completed, this Project will:</p> <ul style="list-style-type: none"> — Provide safe access to significantly underserved population in HDC census tract and a persistent poverty census tract — Improve environmental sustainability due to stormwater management measures and increased active transportation options — Improve access to the only grocery store in Wagoner by constructing a new trail connection and a new underpass
Benefit-Cost Analysis Results	Benefit-cost ratio: 1.31 (7% discount rate)
Project Website	http://www.incog.org/Transportation/RAISEWagoner.html

Table of Contents

1. Project Description	4
1.1. Project Elements	6
1.2. Addressing Transportation Challenges.....	7
1.3. Project Benefits	9
2. Project Location.....	10
2.1. Connection to Major Activity Centers.....	12
3. Grant Funds and Sources/Uses of all Project Funds	14
3.1. Capital Sources of Funds and Local Match Description	14
3.2. Capital Uses of Funds	15
3.3. Summary of Operating Sources and Uses	15
4. Selection Criteria	15
4.1. Primary Selection Criteria	15
4.1.1. Safety	15
4.1.2. Environmental Sustainability.....	18
4.1.3. Quality of Life.....	19
4.1.4. Mobility and Community Connectivity	21
4.1.5. Economic Competitiveness and Opportunity	22
4.1.6. State of Good Repair	23
4.1.7. Partnerships and Collaboration.....	24
4.1.8. Innovation	25
5. Project Readiness	26
5.1. Technical Feasibility	26
5.2. Project Schedule	27
5.3. Required Approvals	28
5.4. Assessment of Risks and Mitigation Strategies.....	28
6. BCA Results.....	29
Appendices	31



List of Tables

Table 1.	Project Elements.....	6
Table 2.	Project Benefits.....	9
Table 3.	Project Area Demographic Profile.....	11
Table 4.	Project Capital Budget Summary by Source (YOE \$ Millions)	14
Table 5.	Project Capital Budget Summary by Use (YOE \$)	15
Table 6.	Cherokee Street On-Street Collision Data Summary 2016-2020	16
Table 7.	Cherokee Street On-Street Collision Data by Year 2016-2020	16
Table 8.	Cherokee Street Wet Conditions Collision Data 2014-2018 (From INCOG Study)	17
Table 9.	Partnership Support.....	25
Table 10.	Project Schedule.....	27
Table 11.	Detailed Project Schedule.....	27
Table 12.	Risks and Mitigation Strategies.....	28
Table 13.	Benefit-Cost Analysis Results, Millions of 2020 Dollars	29

List of Figures

Figure 1.	Project Area Context – HDC and APP in City of Wagoner.....	4
Figure 2.	RAISE 2022 Project Detail & Other Funded Projects.....	5
Figure 3.	Wheelchair user utilizing the roadway with no sidewalk.....	7
Figure 4.	Pedestrian waiting to cross a small creek on Cherokee Street	8
Figure 5.	Project Location Map, Wagoner County	10
Figure 6.	Cherokee Street (SH-51) Corridor, Wagoner Challenges: Existing Conditions.....	13
Figure 7:	Deteriorated curb, Cherokee Street Project.....	17
Figure 8.	Low Life Expectancy showing significant disparity.....	20
Figure 9.	Trail Underpass to be used as example from Razorback Trail Underpass, Bentonville, Arkansas.....	21
Figure 10.	US-69 Critical Rural Freight Corridor & SH-51.....	22
Figure 11.	Flooding on Cherokee Street, Spring 2019.....	23





OFFICE of the MAYOR

April 8, 2022

The Honorable Pete Buttigieg
Office of the Secretary
U.S. Department of Transportation
1200 New Jersey Ave SE
Washington, DC 20590

RE: Request for 2022-RAISE Funding to improve Cherokee Street as a Complete Street for Safety & Equity

Honorable Secretary Buttigieg,

City of Wagoner is submitting the RAISE grant application for \$7 million dollars for Cherokee Street connection to create a complete street addressing both safety and equity. This main street project is necessary for improving the safety, quality of life, economic competitiveness and state of good repair for the City of Wagoner while ensuring equitable investment for both in terms of people and travel modes. This project is the essence of what the RAISE program is intended for – to build infrastructure to serve the low-income, blue-collar work force that has no alternative means or modes of travel to access healthcare and groceries or other necessities. This funding request represents a one-time need for a project that will connect the Census Tract 301.02 an area identified as residential neighborhood with “persistent poverty” and the Census Tract 301.01 that is identified as the Historically Disadvantaged Community (HDC) with the necessary services the resident need.

The City of Wagoner owns and operates the electric utility, therefore commits to provide the utility relocations and assure the constructability of the project in order to make the safer connection a reality. The high-quality active transportation infrastructure built along the State Highway 51 (Cherokee Street) will facilitate safe mobility options for residents to access places of employment and essential services.

Thank you for your consideration of the application. Should you have any questions regarding this letter of support, please do not hesitate to contact me at mayor@wagonerok.org or at 918-485-2554.

Sincerely,

A handwritten signature in red ink, appearing to read 'AJ', followed by a horizontal line.

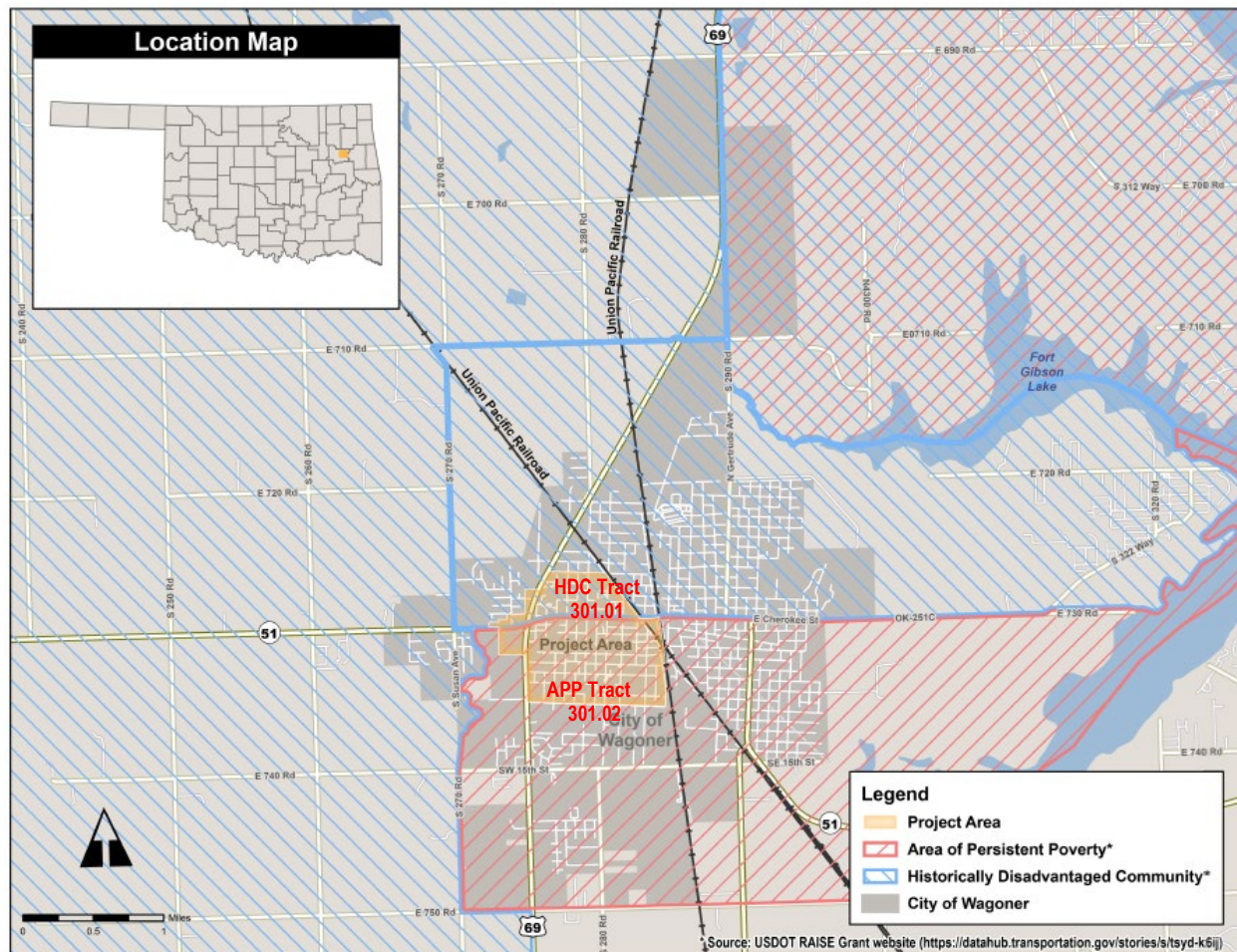
Albert R. Jones III
Mayor

P.O. Box 406 • Wagoner, Oklahoma • 918 485-2554

1. Project Description

The City of Wagoner, Oklahoma is requesting \$7.0 million in Rebuilding American Infrastructure with Sustainability and Equity (RAISE) funds for an active transportation improvement project for a safe and equitable access to residents living in an Area of Persistent Poverty (APP) area and a community that is defined as the Historically Disadvantaged Community (HDC) (see **Figure 1**). The project seeks to serve travelers with physical disabilities, elderly, and low-income individuals to access fresh food/grocery as well as provide access to jobs —along the Cherokee Street (Oklahoma State Highway 51) corridor in Wagoner, Oklahoma.

Figure 1. Project Area Context – HDC and APP in City of Wagoner



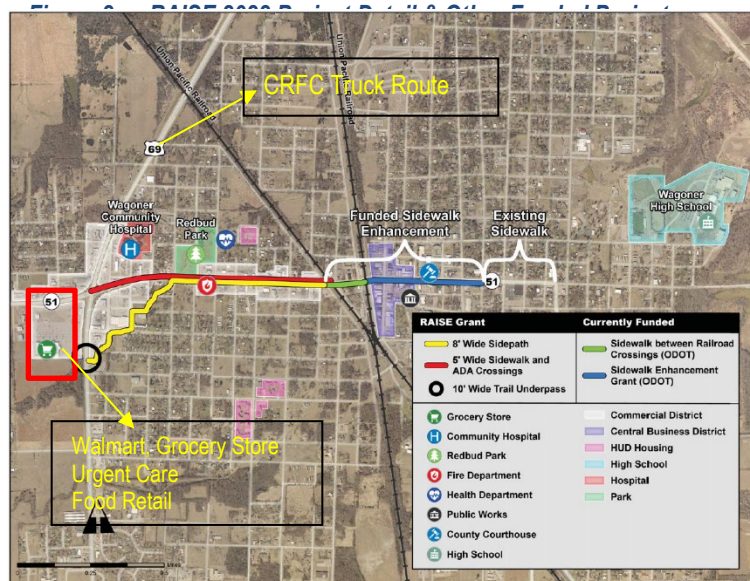
The Project will construct a multi-use path that connects the only grocery store in the City of Wagoner with a trail and constructing a new Reinforced Concrete Box (RCB) culvert allowing users to cross under the heavy volume roadway. There is an existing culvert that is deficient for any access that functions merely as a drainage way connecting to local stream. **The RAISE Project will build the sidepath** along State Highway 51 to City Hall, the County Courthouse and Businesses on Main Street, **a new RCB culvert will be built based on an innovative design** to accommodate the trail underpass to connect to the sidepath, both entirely within the Area of Persistent Poverty (APP) neighborhood (Census Tract 301.02); **and a sidewalk with ADA** access to enable mobility for the Historically Disadvantaged Community (HDC) neighborhood (Census Tract

301.01). The City of Wagoner serves as the county seat of Wagoner County, one of the fastest growing counties in Oklahoma. Despite Wagoner County growth, the City of Wagoner population has not kept pace with the growth, with population hovering near 9,000 people. The City however serves thousands of other rural residents from surrounding region, for all their needs within a services catchment area.

Wagoner also serves as the primary medical and mental health care center for residents in the county and within a 20-mile radius of this rural region. The RAISE project enhances mobility and safety along a major thoroughfare in the City of Wagoner, and will create a safe multi-modal travel environment with access to employment, healthcare services and emergency services. Other services and establishments along the corridor include: the City's library, cultural destinations, commercial stores, and the only grocery store in the City of Wagoner. Additionally, the sidepath and sidewalk improvements will support active forms of transportation for all the residents of the City of Wagoner, serving the neighborhood needs for all residents including disabled community. The project will greatly improve safety and quality of life for the residents of Wagoner and the surrounding area.

As shown in Figure 2, the project will improve approximately a 0.85-mile stretch of the highway corridor along the Cherokee Street to function as a complete street to include:

- Construct a 1.0-mile 5-ft sidewalk along the north side of Cherokee Street (SH-51) in a HDC community
- Construct a 1.0-mile sidepath along the south side of Cherokee Street (SH-51) in an APP community
- Construct Americans with Disabilities Act (ADA)-compliant ramps at the US-69 & SH-51 intersection (The intersection is entirely within APP and/or HDC community)
- Construct one RCB Culvert (In the APP community) that provides for both conveyance of storm water along the existing drainage way and provides for a trail underpass to connect project area with retail and medical services in the APP community connecting the sidepath and the trail



The project is scheduled to complete the National Environmental Policy Act (NEPA) phase and design in Federal Fiscal Year 2023. Project construction is scheduled to begin in FFY 2025 and complete in FFY 2027.

1.1. PROJECT ELEMENTS

There are four key elements to the Project scope, as summarized in Table 1.

Table 1. Project Elements

Project Element	Description	Implementing Agency	Benefit to Corridor
Project Element #1 5' Sidewalk, Safe Crosswalks, ADA-compliant ramps	Install sidewalk, ADA-compliant ramps along corridor, and provide safe access away from the roadway to connect the south trail with major intersection at US-69 & SH-51.	City of Wagoner	<ul style="list-style-type: none"> Enhances mobility and safety for pedestrians and bicyclists Reduces conflicts between automobile and non-motorized transportation needs Enables wheelchair access to services along the corridor
Project Element #2 8' sidepath Connection	Construct multiuse sidepath for pedestrians and bicyclists along the length of the highway & a half-mile trail along the adjoining drainage way	City of Wagoner	<ul style="list-style-type: none"> Reduces pedestrian and bicyclist conflicts thereby reducing accidents and provide safe active modes of transportation
Project Element #3 Trail Underpass at US-69	Connect the grocery store with the Underpass with the main sidepath that extends from the corridor to the only grocery store in the city	ODOT & City of Wagoner	<ul style="list-style-type: none"> Provide safe alternative for pedestrians and bicyclists, while improving safety to access the only grocery store & retail establishments Connects the HDC community to the major grocery store (Walmart) and other retail adjacent to US-69, a major high-speed truck corridor The entirety of the project serves neighborhoods that are HDC & APP
Project Element #4 Access Management along the Corridor for a complete street	Construct Curb-cuts to facilitate safe ingress and egress from businesses along the corridor with specific signage and directions for pedestrians, wheelchairs.	City of Wagoner	<ul style="list-style-type: none"> Reduces conflicts with active transportation users Improves predictability for driving public and mitigates turning movement and rear-end crashes

1.2. ADDRESSING TRANSPORTATION CHALLENGES

The project aims to address **five core challenges** facing residents in the project area:

- Lack of any sidewalk that separates users from the unsafe roadway forcing pedestrians, cyclists, and disabled transportation users into the vehicular lanes
- No existing ADA facilities along the corridor
- A major 4-lane highspeed, US highway 69, that is both a Critical Rural Highway Freight Corridor, a part of National Highway System creating a barrier to employment and essential services on the
- No defined Curb-cuts along the Cherokee Street (SH-51) creating numerous auto-pedestrian conflicts and contributing to rear-end vehicle collisions due to unpredictable ingress and egress from facilities along the street and
- Severe flooding during rain events due to ill-defined drainage into the adjacent small stream/creek along the street

Figure 3. *Wheelchair user utilizing the roadway with no sidewalk*



The following paragraphs briefly describe these challenges, and how the project will address them. Additional details are provided in **the Merit Criteria Section**.

Safety



The central challenge this project would accomplish is to provide a **safe active transportation** mode for people of all ages. **The ill-defined curbs along the main street and non-existent sidewalk and ADA compliance** coupled with a disconnected community due to a heavily traveled US Highway 69 (a part of the National Highway System and a Critical Rural Highway Freight Corridor). The project elements #1, #3 & #4 seeks to address each of these deficiencies.

Environmental Sustainability



The project area does not have any tree canopy, nor proper surface drainage from the roadway causing flooding issues. These two specific issues will be addressed with the RAISE grant. Project Elements #3 & #4 will address environmental sensitivity and sustainable practice.

Quality of Life



Existing conditions are barriers to all users from both the modal and economic standpoint. This project seeks to address **ADA non-compliance** throughout the corridor. Existing conditions create barriers to mobility for pedestrians and residents, particularly those who are physically challenged.

Mobility and Community Connectivity (Project Element #1 & #3)



The corridor has numerous accessibility challenges, including the absence of sidewalks and extensive ill-defined ingress/egress vehicular access points. The poor condition and lack of infrastructure creates a challenging transportation and mobility environment for both motorized and non-motorized travelers.

Figure 4. Pedestrian waiting to cross a small creek on Cherokee Street



Economic Competitiveness and Opportunity (Project Element #3)



The sidewalk to the north entirely lies in HDC neighborhood (Census Tract 301.01) along Cherokee Street (SH-51). Sidepath on the southside abuts Cherokee Street to connect to the Walmart at the SW corner of SH-51 & US-69. Both these neighborhoods (Tracts 301.01 & 301.02) have been cut off from the opportunities for employment and services that are on the other side of US-69. The core part of the RAISE grant request is to replace the narrow RCB with an expanded RCB to accommodate a trail underpass to address a much-needed crossing under the long-distance truck-heavy US-69.

State of Good Repair (Project element #1)



A part of the grant would provide an opportunity to repair dilapidated sidewalks where existing and construct new sidewalks where they do not exist. The project would also address constant flooding of the roadway to maintain a **state of good repair**. The roadway section within the bounds of the curbs is being addressed by the Oklahoma Department of Transportation for repaving and maintains the existing condition. The project would mitigate the effects of flooding on sidewalk or sidepath users.



Partnerships and Collaboration

A unique part of this project is that the rural, small City of Wagoner will lead the design and provide an example to create a visible, significant complete street with cooperation from the Oklahoma Department of Transportation, as the main street itself is a State Highway. The collaboration extends with the city owned utility company.

Innovation (Project element #3)



The replacement of inadequate, deficient RCB with a proposed RCB to serve as a trail underpass will be a replicable example for other similar rural cities and towns striving to connect neighborhoods, that are currently divided by heavily traveled highways, with essential services.

1.3. PROJECT BENEFITS

The City of Wagoner has prioritized the Project, since it is a valuable regional investment, which will realize the benefits outlined in Table 2. These benefits are described in more detail in Section 4 of the application.

Table 2. Project Benefits

Merit Criteria	Project Benefits
Safety	<ul style="list-style-type: none"> ▪ The project will provide for separation of modes, automobile and active modes of transport. ▪ The project will deliver well defined curb cuts and curbs with ADA compliant ones to reduce auto-pedestrian conflicts. It is estimated to reduce 30 pedestrian-automobile conflicts to 10 that take place each day due to existing poor design. ▪ The overall automobile crashes also will see reductions due to the separated modes and the improved speed limit signage with clear striping. ▪ These crash reduction factors will improve safety and reduce vehicle collisions by 10% or 12 crashes per year.
Environmental Sustainability	<ul style="list-style-type: none"> ▪ The active transportation option once built, while it virtually does not exist at this time, between the HDC and poor neighborhoods, will reduce auto-dependence. ▪ Increasing safe provisions to walk and bike will reduce use of fossil fuels and resulting greenhouse gases. ▪ The immediate result of the project will be to mitigate flooding of the roadway for the walking public along the corridor and motorists. ▪ Additionally, the project elements will increase the amount of vegetation along the corridor.
Quality of Life	<ul style="list-style-type: none"> ▪ The project facilitates access to essential services and the only grocery store in the city and installs infrastructure for active modes of transportation. ▪ The project would benefit 3,527 residents in 1,303 households, living in APP and/or HDC, they will directly benefit from the project that provides opportunities to access jobs, health care, and other essential services such as groceries and fresh food.
Mobility and Community Connectivity	<ul style="list-style-type: none"> ▪ The non-motorist connections to the Historically Disadvantaged Community (HDC) will provide most direct and safe access to the city's only grocery store and other retail uses, including a Medwise Urgent Care, a bank, restaurants, other shops & a Dialysis Center, the most necessary needs that fulfill the needs of the people living in poverty.
Economic Competitiveness	<ul style="list-style-type: none"> ▪ The project will improve reliability of the corridor for vehicular, pedestrian, and bike travelers, increasing connectivity along a major regional thoroughfare. ▪ The separation of wheelchair users, cyclists and pedestrians alone will enhance the overall traffic experience along State Highway 51, benefiting the automobile users with predictability of travel. ▪ The ingress and egress out of the commercial establishments will be further enhanced.
State of Good Repair	<ul style="list-style-type: none"> ▪ The project will ensure proper maintenance of the roadway, state of good repair for the inadequate culverts while maintaining the mainstreet appeal for the project area, and ▪ Ensure stormwater mitigation measures that will enhance the life of all public infrastructure in project corridor.
Partnerships and Collaboration	<ul style="list-style-type: none"> ▪ The City of Wagoner and the Oklahoma Department of Transportation propose to collaboratively partner to make the city a safe, and an attractive city that also is the County Seat in the fast-growing county. ▪ The City owns its own electric utility improving significant coordination effort that will be required to relocate any electric utilities to design that meet the ADA needs. ▪ The City of Wagoner is pledging its own resources to assist with the utility relocations.

Merit Criteria	Project Benefits
Innovation	<ul style="list-style-type: none"> ▪ The innovative design will connect a neighborhood with services that are currently separated by the barrier of a heavily utilized Critical Rural Highway Freight Corridor (CRFC) with high volume, high-speed truck traffic. ▪ The funding and implementation will feature innovative use of City-owned electric utility for relocation of utilities.

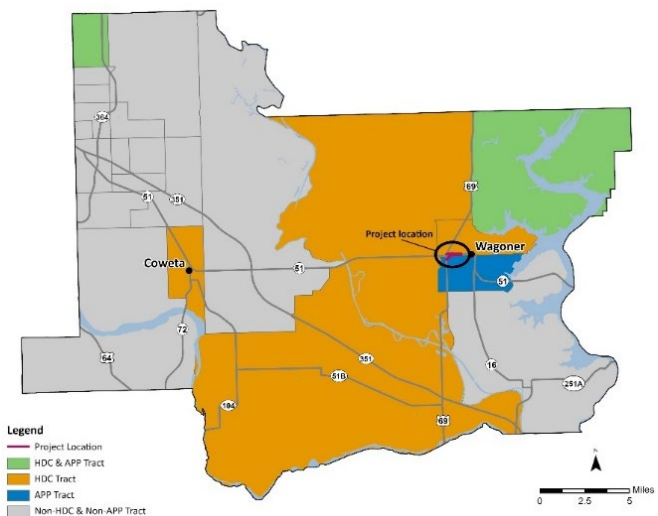
2. Project Location

Project Coordinates: Latitude 35.9595° N, 95.3694° W

Census Tract: 301.01 (HDC Community) and 301.02 (APP Community)

The RAISE Project is located within Oklahoma's First Congressional District in the City of Wagoner, the county seat of Wagoner County, Oklahoma (Figure 5). The primary focus for the RAISE project is within the city's main transportation corridors, Cherokee Street (SH-51), & US Highway 69 (US-69). The trail is proposed in the southwest area of the City of Wagoner as illustrated (Figure 2, Page 3). The project area begins at US-69 to the west, which is a National Highway System route (& the CRFC) that provides connectivity throughout Northeastern Oklahoma connecting the State of Missouri, the Great Lakes region and the State of Texas and ends at the Rail Road Tracks that bisect the City of Wagoner on Cherokee Street. The project is divided into four main elements. Each of these are described as below.

Figure 5. Project Location Map, Wagoner County



- The **Cherokee Street Sidewalk – Element #1** from the US-69 and SH-51 intersection to Main Street (3/4s mile in length), is along the most critical east-west arterial street in the rural town of Wagoner and connects neighborhoods, employment centers, commercial areas, cultural destinations, and health/safety services. This proposed sidewalk is entirely in the HDC Tract 301.01.
- The **South Trail - 8' Sidepath – Element #2**, a diagonal route, from South Dewey Avenue/US-69 to South Lincoln Avenue, is essential to connecting citizens to the neighborhood centers, the only grocery store in town, and allows for the only point of access across US-69. This section of the sidepath as proposed to be built is in a poor neighborhood abutting the HDC community to the North, the entire sidepath lies within Tract 301.02.
- The **Underpass at US-69 – Element #3** to provide a trail underpass connection to the only major grocery store, medical facilities including the urgent care, dialysis center and other retail fast food centers that are located across the high-speed Critical Rural Freight Corridor (CRFC), a heavily used truck corridor US-69, that acts as a barrier to the HDC and APP communities to access destinations that are of utmost importance to quality of life and safety.

- **Construct Well-defined Curb cuts along Cherokee Street – Element #4** will collaboratively build well defined curb cuts, the business entrances on Cherokee Street are currently lacking. These curbs, at present paved over, do not have a proper ingress and egress into the businesses, causing unpredictably travel along the corridor for all users, including vehicular and pedestrians. Several rear-end crashes and left-turn crashes along the street occur due to a lack of defined curbs.

The Cherokee Street Corridor is rich with services, community and cultural centers, and places of employment. By way of the arterial corridor, residents access the Wagoner City Public Library, a physical therapy center, various doctors' offices and physician clinics, a day care facility, pharmacies, and the Wagoner Community Hospital—all of which provide essential services to city residents. There are several places of worship and government offices, including the Wagoner County Health Department in the project area.

Table 3. Project Area Demographic Profile

	Project Area (0.5 mile buffer from the project)	City of Wagoner
Total Population	3,527	9,061
African American	401	565
% African American	11.3%	6.2%
Households	1,303	3,268
Median Household Income	\$37,964	\$42,863
Total Employed	1,390	3,791
Unemployment rate	14.0%	9.2%

Source: American Community Survey 2016-2020, US Census Bureau

Table 2 summarizes the population within the project area. The project is entirely (100%) located within the areas targeted for the [Justice-40 initiative](#), with the project benefits reaching the targeted population as identified in the Executive Order. All the benefits will be realized by the population residing within HDC communities (Census Tract 301.01) and within the APP community (Census Tract 301.02) where the RAISE project is proposed. In addition, the project is estimated that, **25% of the project costs will be spent in the HDC tract and 75% of the project costs will be spent in the APP census tract.**

According to the 2016-20 American Community Survey (ACS) estimates, Wagoner residents living within the project area have a median household income of \$37,964. This is 85% of the median household income for the State of Oklahoma (\$45,990) and 67% of the median household income for the Tulsa Metropolitan Statistical Area (\$57,859). The City of Wagoner is the county seat of Wagoner County, a part of the Tulsa Metropolitan Statistical Area. The project area also has a higher percentage of minority populations living within the boundaries (41.2%) than both the City of Wagoner (39.4%) and the Tulsa Metropolitan Statistical Area (30.6%). 11.3% of the residents in the area are African American and the remaining minorities account for Native American and other races. The area has an unemployment rate of 14% compared to 9.2% of the City of Wagoner.

The corridor is in desperate need of pedestrian access improvements, especially due to a high elderly population in the area where 25% of population are over 65 years old. A safe, inclusive, and accessible transportation environment along the Cherokee Street Corridor—which the project will facilitate—is essential to improving the quality of life for residents, and for the long-term economic vitality and competitiveness of the region. Below, **Figure 6** (Page 14) illustrates current challenges in the corridor.

- 52% of the working population in the Corridor and in the City of Wagoner are blue-collar workers
- Project area residents have 67% of the median household income of the Tulsa MSA residents
- 25% of the RAISE project area residents are over the age of 65
- 48% of the residents with zero or 1-car households, with heavy dependency on walk or bike options

Connecting the project area neighborhoods with a major grocery store, educational institutions, and healthcare facilities with those that have fewer resources, the RAISE Project provides mobility, access and opportunity for the corridor residents and particularly those with limited mobility options who must manage unsafe travel conditions to access basic services.

2.1. CONNECTION TO MAJOR ACTIVITY CENTERS

The Project corridor provides transportation connections to key activity centers and neighborhoods in the rural areas of Wagoner while strengthening the regional network and improving access to government services, education, health care and safety, and employment opportunities. Improving the infrastructure within the Project area will improve access to the immediate major services and activity centers, including the only grocery store in the community, the public library, elderly care centers, doctors' offices, a day care, a physical therapy center, and City of Wagoner facilities.

As a major thoroughfare, the corridor also facilitates access for residents to key employers in the city, recreational facilities, and schools. Other major employers accessible along the corridor, include Unarco Industries, situated south of the corridor, Wagoner County offices, and the Wagoner school facilities. Access to schools and their recreational facilities is also important for youth and families in the area, outside of the employment benefits.

Figure 6. Cherokee Street (SH-51) Corridor, Wagoner Challenges: Existing Conditions



3. Grant Funds and Sources/Uses of all Project Funds

The City of Wagoner is requesting \$7.0 million of the Project's total costs from USDOT's FY2022 RAISE program, to leverage funding sources from the City of Wagoner and ODOT. The total project cost is estimated to be \$8.75 million in Year-of-Expenditure (YOE \$). The Project's funding plan is presented below.

3.1. CAPITAL SOURCES OF FUNDS AND LOCAL MATCH DESCRIPTION

The following section summarizes the Project funding sources. All non-federal funds shown below are fully committed to the Project.

Federal Funds: if awarded, a total of \$7.0 million in federal funds will support this Project

- **RAISE Funds:** \$7.0 million in federal discretionary funds

Non-Federal Funds: a total of \$1.75 million in non-federal funds are committed to support this Project

- Wagoner Public Utilities Authority: \$1.00 million
 - The City of Wagoner owns and operates its own utility authority for electric, water, and sewer—**Wagoner Public Works Authority**. The City's contribution will be to move the utilities and build curbs and eliminate flood hazards with drainage improvements.
- Oklahoma Department of Transportation (ODOT): \$0.75 million
 - ODOT commits to providing environmental clearance and oversight, building the ADA-compliant intersection improvements, designing, and contributing to the new RCB box to enable the Trail Underpass.

Appendix B and the Project website contains letters of financial commitment from the City of Wagoner and ODOT.

Table 4 shows the project capital budget by funding sources and by percent of total.

Table 4. Project Capital Budget Summary by Source (YOE \$ Millions)

Funding Source		Total Funding Amount (\$ Millions)	Percent of Total
Federal Funds	RAISE FY 2022 Grant Funds	\$7.00 M	80%
	Total Federal Funds	\$7.00 M	
Wagoner Municipality Owned Utility	Wagoner Public Works (funding support letter)	\$1.00 M	20%
Non-Federal Funds	Oklahoma Department of Transportation (funding support letter)	\$0.75 M	
	Total Non-Federal Funds	\$1.75 M	
TOTAL PROJECT COST		\$8.75 M	

Other committed project in the vicinity of the Corridor: a total of \$1.25 million from state and federal sources are presently committed on an adjacent complementary project in the corridor. The RAISE grant request for funding will complement this investment below by ODOT:

- \$1.25 million toward improving sidewalks to the immediate east of the RAISE grant project terminus - near the courthouse and library utilizing the Transportation Alternatives Program (TAP) funding from ODOT.

3.2. CAPITAL USES OF FUNDS

As described above in Section 3.1, the federal funds will cover the total Project costs as listed in Table 5. The total cost of the Project is \$8.75 million in Year of Expenditure costs.

Table 5. Project Capital Budget Summary by Use (YOE \$)

Funding Use	FFY 2023	FFY 2024	FFY 2025	FFY 2026	Total Millions\$
Construction – Federal Funds (RAISE Grant)					
Corridor Sidewalk and ADA Improvements – Project Element #1 & # 4	—	\$1.00	—	—	\$1.00
South Trail – Project Element #2 & # 4	—	—	\$1.00	—	\$1.00
Trail Underpass – Project Element # 3	—	—	—	\$3.85	\$3.85
Contingency – 20%	—	\$0.20	\$0.20	\$0.75	\$1.15
CONSTRUCTION TOTAL (RAISE GRANT)	—	\$1.20	\$1.20	\$4.60	\$7.00
Construction – Non-Federal Funds					
Utility Relocation – Project element # 4	—	\$1.00	—	—	\$1.00
ADA Access Improvements (ODOT) Project Element # 1 & # 4	—	—	—	0.75	\$0.75
TOTAL PROJECT FUNDING (RAISE + LOCAL)	—	\$2.25	\$1.20	\$5.35	\$8.75

3.3. SUMMARY OF OPERATING SOURCES AND USES

After Project construction is complete, the annual operations and maintenance (O&M) costs of the Project are estimated to be \$10,000 annually to be maintained by the City of Wagoner. The O&M cost includes the costs for the City of Wagoner to maintain the asphalt, sidewalks, crosswalks, intersections, ADA-compliant ramps, the railroad crossings, and the trail. The City of Wagoner will absorb these costs within its annual maintenance budget.

4. Selection Criteria

4.1. PRIMARY SELECTION CRITERIA

In accordance with the USDOT's RAISE Notice of Funding Opportunity (NOFO), a description of the Project's quantitative and qualitative primary selection benefits is included below.

4.1.1. Safety

The Project corridor, Cherokee Street, has numerous safety concerns involving the motorized and non-motorized traffic, as evidenced by several safety conflicts among modes. The Project will address these

conflicts utilizing a new sidepath from the RAISE Grant on the south side of the roadway to connect to a new underpass under US-69, where the highway currently acts as an existing barrier between services and the HDC & APP Communities. The project envisions a sidewalk on the north side of Cherokee Street, built entirely within the HDC community to provide an alternative means to travel safely and outside of the roadway. These improvements will be supplemented by new well-defined curb-cuts (non-existent at this time) along the Cherokee Street and signage that is also absent. These provisions will reduce annual traffic collisions on average by 15%, including a reduction in annual wet-condition collisions, and help in reducing average annual pedestrian collisions. The wet-conditions will not continue to force pedestrians into the street to co-exist with automobile traffic – not conducive to the condition of wheelchair bound users.

From 2016-2020, there have been a total of 121 reported traffic collisions within the Project area, on Cherokee Street (Table 6 and Table 7). This includes multiple reported pedestrian collisions, all resulting in injuries. Further crash analysis conducted by the regional organization, Indian Nations Council of Governments (INCOG), the region's Metropolitan Planning Organization (MPO) determined that the contributing causes leading to a fatality collision were issues that this project seeks to address unsafe access management for predictably turning, a lack of safe and accessible roadway infrastructure, and crossings for all users.

Table 6. Cherokee Street On-Street Collision Data Summary 2016-2020

Collision Type	Number of Collisions	Average Annual Crashes
Property Damage	89	17.8
Traffic Injury	28	5.6
Traffic Fatality	1	0.2
Pedestrian Injury	3	0.6
Pedestrian Fatality	0	0.0
ALL COLLISIONS	121	24.2

Source: Oklahoma Department of Transportation, ODOT, 2016-2020

Table 7. Cherokee Street On-Street Collision Data by Year 2016-2020

Collisions by Year	2016	2017	2018	2019	2020*
Total Crashes	28	31	36	44	28*
Property Damage Only	23	22	24	33	24*
Injury Crashes	5	8	11	9	4*
Fatalities	0	0	0	1	0*
Pedestrian Crashes	0	1	1	1	0*

*Partial year data for 2020

Source: Oklahoma Department of Transportation, ODOT, 2016-2020

Further, pavement surface condition (Figure 7) leading into the driveways includes multiple traffic safety variables: friction (i.e., skid resistance), roughness (i.e., ride quality), and rutting. Each of these factors will be improved with curb-cut modification to create a safer roadway for the automobile user, helping to prevent a collision.

In 2020, INCOG, the regional council of governments, studied crashes for the years 2014-2018, all 167 project area crashes, 7.2% reported “wet” or “flooding” roadway conditions, while over 16% of all crashes occurred during non-clear weather conditions (rain, snow, etc.). Additionally, it was found that roadway flood conditions resulted in at least one single-car, injury collision in which the vehicle left the roadway and struck a utility pole. Given the role that weather, pavement condition, and curbing play in a motorist’s ability to safely maintain control of their vehicle, it is reasonable to assume that improving the roadway surface conditions (pavement, flood mitigation, curbing, etc.) will reduce the number of collisions occurring under abnormal weather conditions. Collisions under wet-road conditions are listed in **Table 8.**

Figure 7: Deteriorated curb, Cherokee Street Project

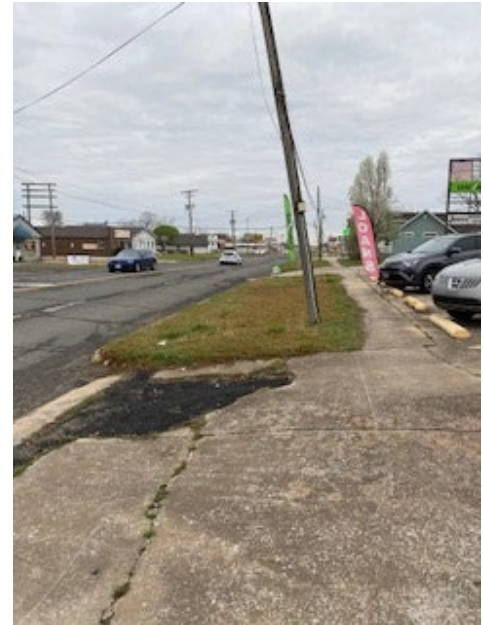


Table 8. Cherokee Street Wet Conditions Collision Data 2014-2018 (From INCOG Study)

Collisions Under Wet Road Conditions	Number of Collisions	Average Annual Crashes
Property Damage	10	2.0
Traffic Injury	4	0.8
ALL COLLISIONS	14	2.8

Source: Oklahoma Department of Transportation, ODOT, 2014-2018, INCOG Study

The Crash Reduction Factors as applicable to this Project will reduce total collisions by 15%. That will be a reduction of 12 crashes each year. These measures will advance the goal for the City to achieve zero fatalities along the corridor and to reduce the total number of all traffic collisions within the Project area, reducing the average annual number of collisions. These goals will be achieved by:

- Regularizing and providing a defined number and length of curbs at the street (Project Element #4)
- Construction of ADA-compliant sidewalks, ramps, and off-street bike paths (Project Element # 1)
- Installation of a defined crosswalk at the intersection of US-69 and SH-51 (Project Element #4)
- Installation of crosswalks at appropriate intersections along the Project area (Project Element #4)
- Installation of the South Trail and Sidepath (Project Element # 2)
- Replace the culvert structure to accommodate Trail Underpass (Project Element (#3)
- Storm water mitigation measures (Project Elements 1 - 4)

These improvements will create a safe corridor for all transportation users. [Federal Highway Administration Crash Reduction Factor Data](#) was used to estimate the the reduction in number of crashes. A site visit with number of crash conflicts was conducted to estimate the reduction in conflicts, with defined curbs, in place of a continuous paved over curb near the commercial area on Cherokee Street. Reducing ingress/egress points will minimize the uncertainty for vehicular traffic making turns while also providing pedestrians shorter

distances to cross the ingress/egress access points. Crosswalks at intersections will reduce the number of mid-block crossings by providing clearly defined locations to safely cross the street and improve visibility for motorists. Off-street bike paths create multi-modal options that separate cyclists from vehicular and pedestrian traffic, improving safety for all modes of traffic. Installation of the South Trail will remove pedestrians from the roadway entirely, reducing the risk of collision. ADA compliance ensures that the corridor will allow individuals with disabilities the ability to safely maneuver the thoroughfare. ADA compliance will also bring the corridor up to the standard required by ODOT to guarantee improved pavement conditions. Stormwater mitigation measures will reduce the risk of collision in wet and rainy conditions.

The Average Annual Daily Traffic (AADT) on US-69, a designated highway on the National Highway Freight Network, is 18,700 AADT, where 15% of the volume are heavy haul long distance trucks. Vehicular traffic on Cherokee Street (SH-51) is over 10,000 AADT. The Project will mitigate the impact of these heavily utilized state and nationally significant corridors.

US-69 is heavily used by heavy duty commodity trucks that travel at high speeds and has a long braking distance creating a barrier to crossing the highway from the traditionally underserved neighborhood residents from essential services. The RAISE grant would accommodate and resolve this separation and create safe access to the neighborhoods previously discussed.

4.1.2. Environmental Sustainability

Flood mitigation is a key element to the environmental protection aspect of this Project. The roadway storm drainage improvements that will include well-defined curbs and stormwater grates to drain properly into the adjacent creek, will reduce the peak rate of runoff, alleviate flooding, and reduce the exposure of storm water run-off to roadway contaminants, and improve water quality. In addition to controlling storm water flow and improving water quality, this Project will increase the presence of vegetation along the corridor by installing street trees and landscaping. This attribute will improve stormwater runoff management.

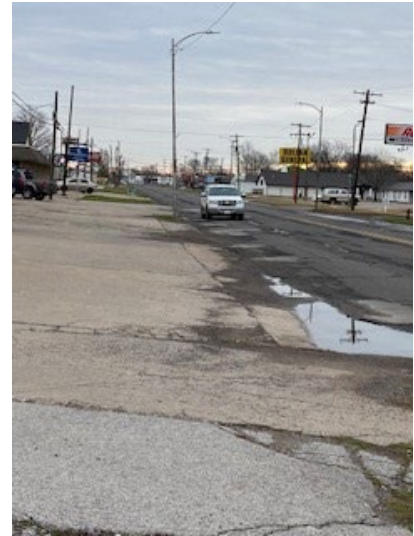
The mobility and connectivity improvements achieved by sidewalk construction and the proposed multi-use path will provide residents living in Census Tracts 301.01 & 301.02, an active transportation alternative to gain access to goods and services to meet daily needs, rather than use their vehicle. This would result in a reduction in energy consumption, pollution, and greenhouse gases. While quantifying these benefits depend on the country and case study, there is wide agreement from World Health Organization, US Environmental Protection Agency that active transportation use not only reduces dependence on fossil fuels that cause 70% of greenhouse gases (GHGs) but also contribute to mortality and cause health issues. This is even more predominant among people living in poor areas such as the target population in Wagoner, where access to fresh food is currently only possible utilizing the automobile as a means of transportation.

According to the 2020 Census, approximately 6.1% of Wagoner households in the City are African Americans and a total of 36% people belong to all combined minority races, including Native Americans. Over 11% of residents within a mile of the Project are African Americans. These disparate populations experience significant impacts from roadway flooding in the corridor with no other safe alternative modes of travel. Eight percent of people in the Project corridor do not have access to a vehicle and 4% of Wagoner residents over the age of 15 walk as their means of transportation. Walking as a mode has increased significantly over the past two years during the Pandemic, it is now even more prevalent, with cost of transportation increased with gasoline price fluctuations.

The Project provides for a new tree canopy that is non-existent currently along with environmentally sustainable erosion mitigation measures, while ensuring proper surface water drainage along the corridor. Trees in Oklahoma provide shade during harsh summers that produce temperatures over 90 degrees consistently over a three-month period. Adding this tree canopy to the sidewalk and the sidepath will produce an inviting atmosphere for all users. City of Wagoner is a gateway to one of the largest lakes and hosts a large nursery adjacent to the Lake and just outside the City limits, yet due to the non-existent walking surface, the city has not moved forward with installing an inviting tree canopy along the roadway. This project will enable the city to proactively create such a canopy for all users.

Flood Mitigation & Reliability

The mobility of freight, automobile travel, and pedestrians along the corridor are compromised as a result of flooding rain events that force the four-lane thoroughfare down to two lanes (one lane in either direction) thereby increasing congestion, hindering travel time, diminishing safety, and impairing mobility for all users. Reducing congestion and flood conditions on the SH-51 corridor, Wagoner's designated truck route, is key to the long-term economic competitiveness of the City of Wagoner. The Project improvements address the causes of flooding and reduce the likelihood of congestion, not only improving freight movement through the city and improving traffic flow for all commuters, but also improving travel time reliability, which is especially important to freight traffic. The Project improvements specifically address the types of collisions the City of Wagoner and transportation safety professionals at INCOG desire to improve, as well as the environments which facilitate this unsafe motorist behavior: unpredictable turning movements when exiting commercial driveways, flooded roadway collisions, and non-existent infrastructure to facilitate a safe, multi-modal transportation environment.



Environmental Justice Screening

INCOG conducted the EJ Screening for this segment of roadway in 2020 to estimate the beneficiaries of the population. The report was updated utilizing the 2019 ACS (as per the EJ Screen). These results reinforce the 2020 census results that show a greater proportion of minorities living in the vicinity of unsafe street, with no sidewalks, access to fresh food, without alternative mode of transportation, disproportionate unemployment and people exposed to elements when a need arises to walk or cycle to the nearest destination. The earlier planning efforts dating to 2020 reinforce the need for this project. The latest analysis performed with the [EJ Screen tool](#) from the Environmental Protection Agency shows that the population residing within a half-mile of the project are more exposed to Particulate Matter 2.5, Air Toxics Cancer Risk, Air Toxics Respiratory risk, and the residents being greater in proportion in People of Color (41%), Low Income (51%) with double the regional, state or national unemployment rate (13%). Appendix D of this project submittal contains the EJ Screening results.

4.1.3. Quality of Life

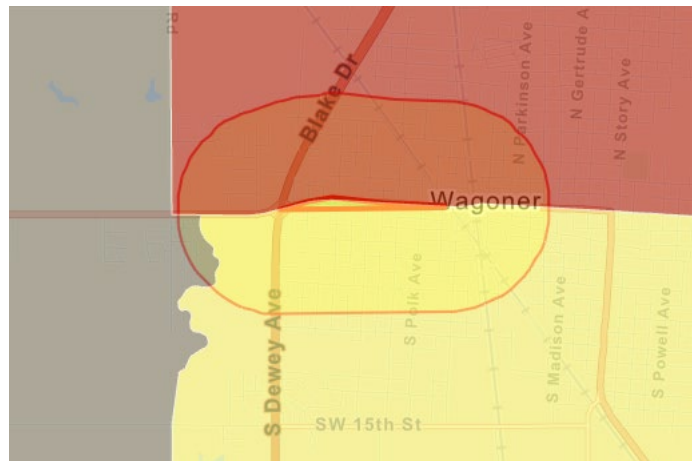
This Project elements serve to improve the quality of life for all citizens and individuals living in, coming to, and passing through Wagoner by increasing transportation choices and improving connectivity for residents to jobs, health care, and the only grocery store in the area.

Increased Transportation Choices

The Project increases transportation choices to meet the needs of the community and ensures the safe movement of people, including those with disabilities. The roadway resurfacing and stormwater improvements will improve the usability of the roadway, making it easier for travelers to utilize the Cherokee Street corridor. The sidewalk, sidepath and the trail will provide the physical infrastructure to facilitate active modes of transportation, providing residents various modal options for how to access jobs, essential services, and the grocery store. An added benefit of the active transportation infrastructure is that it will provide additional opportunities for outdoor fitness.

The EJ Screen (Figure 8) highlighted area shows ½ mile buffer from the project location with significant life expectancy disparities. It is important to emphasize that access to fresh foods and having safe and viable transportation options are central elements to one's quality of life. Health statistics from the Oklahoma State Department of Health show a high level of obesity among adults in Oklahoma. Diseases associated with inactivity and obesity such as diabetes and heart disease are a leading cause of death for the state and region. The RAISE Project will improve health outcomes in the area by providing the community with access to the only source of fresh food and produce in the city of Wagoner by installing crosswalks at the intersection of US-69 and SH-51.

Figure 8. Low Life Expectancy showing significant disparity



The surrounding neighborhoods that have and continue to face persistent poverty will have improved bike and pedestrian access to places of employment, healthcare, and groceries in a safe and inviting manner. The non-compliance of the street with ADA needs, compounded by other socio-economic and environmental barriers restricts Wagoner residents' safe access to jobs, medical care, healthy food, and other quality of life factors. The project scope, as described above, includes installing sidewalks and build ADA compliant ramps along the entire corridor to meet ADA requirements and to facilitate mobility of residents with disabilities. These quality-of-life improvements will contribute to lifting the Census Tracts 301.01 & 301.02 with opportunities for employment and access to services that is lacking at this time.

The project reduces auto dependence while providing a healthier active transportation option. It mitigates unhealthy outcomes due to the lack of those facilities. Attractive design with tree canopy, a wider sidepath linked to a trail underpass to access the other side of US-69 with a design that is already proven to be popular in Bentonville, Arkansas will create attractive option for all residents to utilize. The wheelchair bound population can safely use the underpass without the automobile or a need for a heavier vehicle such as demand response vehicle with a lift, that is costly to operate and maintain. Each demand response trip costs \$55/trip in Oklahoma when all costs are considered. Every trip that makes it easier for people with disabilities will improve quality of life tremendously. This project achieves these benefits for specific populations that are located in both the APP and HDC areas. Economic benefits are not as readily quantifiable but the predominance of zero-car households, people in wheel chairs, people with limited means will be the dominant beneficiaries from the RAISE investment in this rural community of Wagoner.

4.1.4. Mobility and Community Connectivity

The Project improves connectivity and eliminates service gaps along the corridor. The improved connectivity increases opportunities for employment as well as makes businesses along the corridor and west of US-69 more accessible. The quality of life for Wagoner will be benefited further by improving connectivity and access to the Wagoner Care Center, Parks, Wagoner Water Parks and Soccer Fields, Community Center, and the Wagoner City Public Library.

Figure 9. Trail Underpass to be used as example from Razorback Trail Underpass, Bentonville, Arkansas



The Project improves connectivity by improving safety for pedestrians. As noted above, the Project will reduce average annual pedestrian collisions as well as mitigate automobile and pedestrian conflicts in a significant manner. Congestion along the Cherokee Street Corridor is exacerbated by a lack of pedestrian and bike infrastructure, automobile collisions, and flooding. An example of this was recently highlighted by a local news agency where a wheelchair-bound pedestrian is regularly forced to operate his motorized wheelchair in the roadway when crossing the Lincoln Avenue bridge/culvert, thus forced to violate the law or prevented from traveling beyond this point. The Lincoln Avenue bridge is a pinch point in the roadway where wheelchair bound pedestrians are required to enter the roadway due to non-existing or inaccessible sidewalks and ramps. An 8-foot-wide creek crossing here at the Lincoln avenue, included within the cost estimate, for the sidepath connection will connect the Creekside trail and the trail underpass.

The Project will address curbs and ADA access with the sidewalk and sidepath within the project of the RAISE grant corridor, which will facilitate safer entry points for disabled and other active transportation users while providing well defined turning-movements for vehicular traffic that better protect pedestrians to reduce the number of traffic collisions. Transportation safety professionals with INCOG have identified that unsafe, undefined, and unprotected ingress/egress access points to major roadways causes unpredictable driving behavior, resulting in motorist confusion and subsequent collisions.

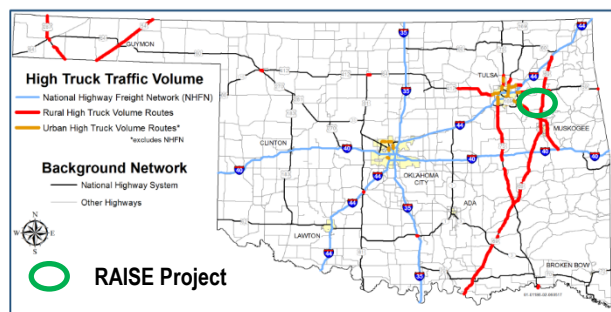
Other Timely Planning & Construction Efforts in the Project Area

The city of Wagoner and ODOT together are currently implementing a Transportation Alternatives Program (TAP) grant, as previously mentioned in Section 3.1 (Page 14), to improve sidewalks and streetscaping within in the Wagoner central business district (CBD), immediately adjacent to the RAISE project area to the east. This RAISE project will connect to this TAP funded sidewalk and extend it by building the pedestrian and bicycle connections from the CBD to the emerging commercial corridor at the intersection of SH-51 and US-69. Additionally, the pedestrian and ADA access between the two Union Pacific railroad lines crossing the Cherokee Street Corridor immediately to the east of the RAISE project area, the Van Buren Subdivision (railroad) and the Wagoner Subdivision, are currently funded and scheduled to be completed in FFY2022.

4.1.5. Economic Competitiveness and Opportunity

Cherokee Street is the main entry way into the City of Wagoner's central business district (CBD) and the US-69 corridor is a Critical Rural Freight Corridor (Figure 10) and a part of the National Highway System (NHS). The current conditions of the infrastructure along the corridor contribute to traffic collisions and congestion, create an unsafe environment for pedestrians and bicyclists, and reduces access to goods and services. The Project will reduce congestion, decrease collisions, and improve connectivity for travelers to propagate economic vitality and growth. The Project will improve access to jobs and services along the corridor, including several major employers such as Unarco Industries and the Wagoner Public School District.

Figure 10. US-69 Critical Rural Freight Corridor & SH-51



Travel Time Savings

In current conditions, pedestrians must walk within the roadway driving lanes to access the grocery store. The Project, which will implement the South Trail that provides access to the grocery store, will improve pedestrian travel times. The South Trail will reduce round trip travel times to and from the grocery store by six minutes for each walk trip. In addition, the delay due to any incident, as there are at least a crash every ten days, the resulting delay to motorists and other users is significant. The application for RAISE grant did not quantify that incident delay, in order to stay consistent with the conservative approach in estimating benefits. The trail underpass will not only enable walk and bike trips but also will mitigate conflicts with heavily used US-69, the RUFC and the NHS.

US-69 is an NHS corridor that connects North Texas including the Dallas Metroplex with the Midwest and Great Lakes regions that travels through Oklahoma and the project area in Wagoner. A major component of this project is the lack of access to the grocery store and how to address this challenge for the underserved population of the City of Wagoner. This deficiency will be mitigated if a safe trail underpass can replace the existing narrow RCB to meet the national freight needs above grade and the trail/bike/pedestrian needs below. This improvement will clearly define the area for pedestrians and bicyclists to cross the busy highway which is the main thoroughfare to the central business district and employment and health centers in Wagoner.

The current state of the infrastructure along the corridor is a **barrier to employment and essential services**. The lack of sidewalks coupled with the fact that 8% of households in the project area do not own a vehicle

and therefore rely on walking, cycling or wheelchairs, and are unable to safely access places of employment and healthcare services. The US-69, which runs north-south and intersects with SH-51, acts as a barrier to employment as there are no well-defined pedestrian crossings along the highway from one side to the other. Additionally, there is limited access to fresh foods and produce in Wagoner.

4.1.6. State of Good Repair

The City of Wagoner has experienced challenges maintaining the Cherokee Street corridor in a state of good repair. The current pavement and surfaces in the corridor need major improvements. Minor maintenance and temporary repairs have been routinely conducted to extend the service life of the roadway. This approach has been of limited value and it is no longer cost effective moving forward. In addition to this, the corridor has numerous sidewalk gaps with few ADA-compliant sidewalks, no sidewalk curb ramps, eroding curbs, and decaying and undefined driveway access points. Though the City has recently updated municipal codes to require sidewalks and more defined access in new development, much of the existing development along Cherokee Street stems from legacy issues, predating these code changes.

The decayed state of the corridor's infrastructure is exacerbated by frequent, corridor-wide flooding. As shown in Figure 11, much of the Project area is inundated with street flooding as there is no proper defined curbs and drainage, even though a

Figure 11. Flooding on Cherokee Street, Spring 2019



creek exists immediately next to the roadway. Cherokee Street experiences significant level of flooding, even during mild rain storms. This results from decaying and undersized drainage infrastructure prevalent throughout the corridor. These conditions have culminated in the recurring degradation of not only the roadway surface and the few existing sidewalks, but also the roadway base, subgrade, and existing drainage ditch.

Stormwater improvements are essential to mitigate roadway flooding and in turn maintaining a long-term status of State of Good Repair. Stormwater improvements help to lengthen the roadway's anticipated lifecycle. This is vital to achieving and maintaining a long-term status of State of Good Repair. A long-term solution is needed, both in the improvement of the roadway and of drainage along the corridor to mitigate flood waters from deteriorating the existing and future infrastructure. Any corridor improvements that fail to address the persisting flood hazards will not result in a sustained State of Good Repair.

The Project addresses the need for stormwater mitigation measures and provides sustainable solutions by delivering needed improvements that reduce future costs associated with maintenance. The Project will result in the installation of adequate storm sewer systems that can tolerate moderate to heavy rain events. Improving this alone will help move water off the road surface, preventing deterioration of infrastructure. The Project also provides ADA-compliant sidewalks which allow for the City of Wagoner to partner with ODOT to install new curbs and resurface the roadway.

4.1.7 Partnerships and Collaboration

The Project demonstrates strong collaboration among multiple partners and stakeholders in implementing and funding the project. As it stands today, this corridor is of high importance to all project partners in terms of economic vitality, safety, quality of life, and state of good repair. Despite this, the corridor's conditions are rapidly deteriorating, resulting from limited local resources on part of the City of Wagoner and ADA compliancy.

As evidenced by the community partners' letters of support, which are included in Appendix B and on the Project website, the collaboration demonstrated here will transform the greater Wagoner region. The partnerships of this Project are key to ensuring timely development and the security of resources; the goals of this project will not be accomplished without the participation of each member. The partnerships among the Wagoner County Health Department, City of Wagoner, Oklahoma Department of Transportation, City of Wagoner-owned electric utility provide the basis for implementing this project.

The mission of the Oklahoma Department of Transportation is to provide a safe, economical and effective transportation network for the people, commerce and communities of Oklahoma.

—*Oklahoma Department of Transportation, Mission Statement*

Wagoner has so much to offer to its retail business owners and citizens. We want to make sure we are giving our city every opportunity that we can to thrive and to grow. I believe the corridor improvements accomplish this objective."

—*Albert Jones, City of Wagoner Mayor (speaking on Cherokee Street safety and access to fresh food)*

The City of Wagoner has partnered with ODOT, Wagoner County Health Department, Class I Railroads, Wagoner Public Works Authority, Grand River Dam Authority, Wagoner County in the past to deliver other infrastructure related projects, including moving of the utilities, building active transportation infrastructure elements, ADA ramps at public facilities, among others. Public agencies related to this project are listed below:

- **Oklahoma Department of Transportation (ODOT):** The Oklahoma Department of Transportation (ODOT) is the agency of the government of Oklahoma responsible for the construction and maintenance of the state's transportation infrastructure. ODOT partners with all jurisdictions that use federal money to fund projects, as the State's NEPA delegation authority.
- **INCOG:** City of Wagoner is a member of the Council of Governments. INCOG is a voluntary association of local and tribal governments in the Tulsa metropolitan area in northeast Oklahoma. Established in 1967, INCOG is one of eleven Councils of Governments in the State of Oklahoma, and one of several hundred regional planning organizations across the country. INCOG provides planning and coordination services to assist in creating solutions to local and regional challenges in such areas as land use, transportation, community and economic development, environmental quality, public safety, and services for older adults.
- **Wagoner County:** Wagoner County is a county in Oklahoma. City of Wagoner is the county seat of Wagoner County.

The commitments and roles of each of the partners are outlined in Table 9.

Table 9. Partnership Support

Entity	Form of Support
City of Wagoner	<ul style="list-style-type: none"> ▪ Selection of Design Consultant in coordination with ODOT ▪ Non-federal funding of \$1.0 million to move utilities, build defined curb-cuts ▪ Project planning and management and grant recipient at no-cost to the RAISE Grant
ODOT	<ul style="list-style-type: none"> ▪ Non-federal funding support of \$750,000 toward the project ▪ Selection of Design Consultant in coordination with City of Wagoner ▪ Environmental Clearance for the RAISE grant project at no-cost to the City or RAISE Grant
INCOG	<ul style="list-style-type: none"> ▪ Assistance with GIS, mapping, public meetings, analysis, data

4.1.8 Innovation

Innovative Project

The project uniquely attempts to work with the property owners adjacent to the roadway to enable safer ingress and egress, to rebuild the curb-cuts that are not helpful for users, and it is an everyday occurrence in a small-town America. It is not uncommon in small towns such as Wagoner to have parking lots paved along the roadways with no defined entrance and exit, what is uncommon with this application is to work with private property owners to improve these curbs in a manner that works for the betterment of the community, for safety and access. The unique approach to this project lies in that, the City of Wagoner, working with local property owners and business to work as a community, for the betterment of the street character to rebuild it as a complete street. The added sidewalk, sidepath & tree canopy would create an inviting atmosphere for businesses along Cherokee Street. These improvements will offer direct benefits to the disadvantaged populations in both APP and HDC census tracts.

A significant component of the Project is the relocation of sub-surface utilities for safe surface drainage into the creek, where the drainage can be improved. **The City of Wagoner is highly unusual in that it owns and operates the electric distribution system rather than a private publicly regulated utility. This allows the City to leverage local labor and resources to complete the relocation of public utilities for the Project, providing in-kind support for project execution.** The City will utilize its own equipment and manpower to relocate necessary utilities. This strategy will also improve the efficiencies of the Project bidding procedures and contractor identification will not be required for this portion of the Project.

The project is innovative for an APP and HDC communities that are essentially cut-off from necessary services such as fresh food & services with a trail underpass that would not only fulfill the need of the residents but also maintain the access and mobility of the state and the nation, with minimal changes to the current pattern of truck traffic connecting Texas and Great Lakes region with heavily traveled truck traffic along a major NHS route that is also on the NHFN. **The trail underpass to accommodate both a small creek, a drain channel, to co-exist with the need for active transportation under the highway, US-69, while the heavier trucks and other automobile users use the roadway unhindered by water, flooding or the pedestrians. It is this solution to address environmental, physical, and social challenges together in a sustainable manner would be ideal for communities of this size.** Communities such as Wagoner, can only create such a meaningful project with the partnership from USDOT. The project will create a replicable example for the USDOT to remove barriers, create sustainable practices without having to trade off one mode with another while addressing the weather events, such as flooding or extreme heat.

These innovative design strategies and local input that make this project so competitive, though dependent on a successful RAISE grant award, because of the community's affordability as a whole **to build this transformative project for the City of Wagoner**. Once complete, this project will create an inviting gateway in the form of Cherokee Street and with considerable upgrade to the street character. The RAISE grant is essential to the overall success of the Project. Though the ODOT project related to the resurfacing of the SH-51 will still occur, as resurfacing along with no ADA or sidewalk, sidepath and the connectivity improvements will not change the corridor-wide safety conflicts and issues related to pedestrians and access management, nor will they adequately alleviate the flooding and drainage that cause excess congestion and economic disadvantages to all residents and businesses and the city at-large. The transformative approach for the City of Wagoner is to address it as a complete street approach to change the character of this main thoroughfare, the Cherokee Street.

5. Project Readiness

The initial project planning process from 2016-17 has laid a strong foundation for project implementation. The Cherokee Street (SH-51), a gateway into the city of Wagoner, has been in planning phase with discussion among the city council, mayor and the ODOT. All parties agree regarding the substantial improvements that are called for in this application. Insufficient funding streams for small towns prohibited the city from carrying out the project on its own. ODOT has developed a plan of action for the segments that are to the east of 1-mile section, and funded a portion of the sidewalk through the downtown utilizing statewide Transportation Alternative Program (TAP) funds. That project has been designed and ready to proceed as approved and authorized by the Federal Highway Administration. The same design consultant has been consulted for this 1-mile section and the city has been assured of the project readiness for the RAISE grant segment of the project with respect to timely execution.

This RAISE Project design for the Sidewalks, Trail & the Trail underpass will begin with the grant. ODOT and the City of Wagoner already collaborated on survey, design, and an implementation timeline for the projects immediately to the east of the proposed RAISE project corridor. The difficult part of the entire corridor was to coordinate the process with Union Pacific Railroad and that has already been addressed as that project is already proceeding without having to wait on the RAISE Grant, to the east & outside the project area. The ODOT with its standards for constructing sidewalks along the State Highways is well positioned to guide the joint process with City of Wagoner as its funding partner. The NEPA process for this 1-mile section will be completed in one year from the award with ODOT as the lead agency. Due to the nature of the roadway ownership under the Oklahoma Department of Transportation and adjacent land, and structures, ODOT will be responsible for completing the NEPA work and securing all necessary permits and approvals. It is assumed that this project will be a categorical exclusion (CE), thus expediting the start of the project.

The City of Wagoner will be acting as lead agency to execute the project and will be providing labor from the public utility authority to relocate sub-surface utility infrastructure. The City of Wagoner will manage the bid process, design, and construction of sidewalks, ramps, storm drainage, including all utility relocation.

5.1. TECHNICAL FEASIBILITY

The following **planning and design activities** have been completed to date:

- **Engineering Design:** To date, the engineer's estimates for construction and design have been completed.

- **Right-of-way (ROW) acquisition:** No additional ROW acquisition is required for this project.
- **Cost Estimate Reliability:** Cost estimates were developed with coordination between Robert Shears (ASLA, CLARB) owner and president of the landscape architecture firm R.L. Shears Company PC, and Bill Smith (PE) owner of the engineering firm HISINC, LLC, and Steve Powell (PE) partner at the civil engineering firm Infrastructure Solutions Group, LLC.
- **Experience delivering federally funded projects:** The City of Wagoner has utilized national primary entitlement fund the Non-Primary Entitlement Fund through the Federal Aviation Administration (FAA) for improvements to Wagoner's municipal airport. Completed projects include access road and parking lot construction, runway lighting upgrades and installation, and runway maintenance. The City of Wagoner has also utilized CDBG grant funds for various projects including repaving of Southeast 15th street and the construction of wastewater lift stations.

5.2. PROJECT SCHEDULE

The City of Wagoner and ODOT are partnered to complete the construction and improvements for this Project. ODOT, working with the City of Wagoner, will be responsible for the roadway resurfacing with non-raise funding, while the City of Wagoner will be responsible for the majority of the remaining project elements. All elements of the Project will be complete in August 2027. The Project Schedule is illustrated below in **Table 10**.

Table 10. Project Schedule

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Pre-Construction					
NEPA Documentation					
Design Completion					
Permits					
Public Involvement					
Public Meetings					
Construction Work					
Utility Relocation					
Construct Sidewalk, Sidepath & ADA ramp Project Elements #1, #2, & # 4					
Construct Underpass Project Element # 3					
Construction Complete					

Table 11. Detailed Project Schedule

Project Milestone	Anticipated Completion
Anticipated RAISE Grant Awarded	August 2022
Categorical Exclusion NEPA Process (PA&ED Milestone)	August 2023
Final Design (PS&E Milestone)	August 2025
Construction Begins (Contract Award Milestone)	October 2025
Construction Ends (Construction Contract Acceptance Milestone)	August 2027

Any cost overruns above the allocated amounts for the Project will be covered by the City of Wagoner, from other local sources of funding to improve the Cherokee Street corridor.

5.3. REQUIRED APPROVALS

Environmental Approvals: ODOT is responsible for completing the NEPA process for this Project. It is expected that this project will be a categorical exclusion (CE) and ODOT will secure any necessary permits and approvals.

Legislative Approvals: The Project has received significant support from both state and local officials. Appendix B and the Project website include letters of support from INCOG, ODOT, and other partners.

State and Local Planning: All the elements of the Project are included in the City of Wagoner's Comprehensive Plan's goals and objectives, including walkability, limiting access points to major streets, improved bike infrastructure, signage, and more.

5.4. ASSESSMENT OF RISKS AND MITIGATION STRATEGIES

There are relatively minor risks associated with implementation of the Project. The risks are mitigated in large part because of the multiple sponsors committed to the Project. The roadway section is owned and operated by ODOT, which is an agency with a history of responsiveness to the needs of local communities, including rural communities such as the City of Wagoner. The City of Wagoner is a member of the Regional Council of Governments, INCOG, with committed leadership which is drawing resources to coordinate and help with know-how of the project implementation.

The Table 12 represents the top three risks associated with the project and the mitigation plan for each.

Table 12. Risks and Mitigation Strategies

Project Risk Item	Risk	Mitigation Plan
1	Utility Relocation	The City of Wagoner has committed funds and labor to this project to ensure utility relocation is successful for this project. The City of Wagoner as well as the Wagoner Public Works Authority has experience with utility relocation and installation projects, as utility relocation is the type of work that each entity does on a regular basis. Additionally, there will be no right-of-way acquisition needed for utility relocation, helping ensure the construction process with go smoothly.
2	Cost Overruns	All funding project partners are equipped to adapt to essential cost overruns, to complete their respective grant commitments. All funding partners are also experienced within their areas of commitment, diminishing much risk for significant cost overruns. ODOT is committing to fund intersection improvements. If these costs exceed ODOT estimates, they are still committed to the project and would cover cost differences. The City is capable of accommodating cost overruns as their local labor and resources necessary to cover these costs already exist and are presently available to be allocated to changes, if needed.
3	Schedule	The Project schedule includes flexibility and assumes conservative timeframes to RAISE in extra time as needed. Additionally, the City of Wagoner has established monthly coordination meetings to ensure all project elements are on track to minimize any delays.

Both the experience of working with federal agencies and the experts who helped develop the Project elements make the City of Wagoner and its project partners confident that the project will be completed on time and within budget.

6. BCA Results

An economic benefit-cost analysis (BCA) was conducted for the Complete Street Connection to Improve Equity and Safety Project, which is a multi-modal revitalization of a three-quarter mile stretch of roadway in Wagoner, Oklahoma. The BCA was conducted using a model developed by WSP that follows USDOT's March 2022 Benefit-Cost Analysis Guidance for Discretionary Grant Programs. The period of analysis corresponds to 23 years and includes 3 years of design and construction and 20 years of benefits after operations begin in August 2027.

The BCA Technical Memorandum is included in Appendix A and can be found at: <http://www.incog.org/Transportation/RAISE2022Wagoner.html>.

Table 13. Benefit-Cost Analysis Results, Millions of 2020 Dollars

BCA Metric	Project Lifecycle	
	Undiscounted	Discounted (7%)
Total Benefits	\$19.57	\$6.63
Total Costs	\$7.28	\$5.08
Net Present Value (NPV)	\$12.29	\$1.55
Benefit Cost Ratio (BCR)	2.69	1.31
Internal Rate of Return (IRR)	12%	12%
Payback Period (Years)	12	12

Costs

The costs reflected in the Project's BCA are the capital costs of construction and the operating and maintenance costs to support state of good repair after project completion. The total capital costs of the Project amount to \$8.75 million (YOE dollars), which equate to \$7.28 million (2020 dollars undiscounted) or \$5.08 million (2020 dollars discounted at 7%). Design is scheduled to begin in 2023 and scheduled to be completed in 2025. Construction is scheduled to begin in FY 2025 and scheduled to be completed in FY 2026. The capital costs of construction are described by spending category in **Table 13**. Operations and maintenance costs (O&M), which were considered in the numerator of the benefit-cost ratio as determined by the benefit-cost analysis, are projected to average \$10,000 (2022 dollars) or \$9,188 (2020 dollars) per year. Over the entire 20-year benefits analysis period, these costs accumulate to \$183,751 (2020 dollars), or \$64,857 when discounted at 7 percent.

Benefits

In 2020 dollars, the Project is expected to generate \$19.57 million (undiscounted) or \$6.63 million (discounted) benefits using a seven percent discount rate. The key benefit of the Project is safety benefits—through a reduction in traffic and pedestrian accidents. Table 13 summarizes the quantified project benefits and describes the way in which the Project addresses key challenges in the current conditions. There are additional benefits the Project realizes that are not quantified in the benefit-cost analysis, including economic

competitiveness through travel time savings, environmental sustainability, quality of life, mobility and community connectivity, and State of Good Repair. These benefits will be discussed in section 4 of the report.

The Project generates quantitative benefits in three primary ways:

- Improving safety through rebuilding of the roadway curb ingress and egress
- Improving safety through installation of pedestrian crosswalks at intersections along the corridor
- Separating mode of travel for walk, bike and wheelchair bound trips from the vehicular lanes into a sidepath and a new underpass
- Avoiding planned R&R costs associated with rehabilitation of existing intermittent sidewalks on Cherokee St.; and
- Realizing residual value associated with project elements at the end of the analysis period
- Stormwater mitigation measures where the curbs are rebuilt to channelize excess water

Each of these benefits are monetized in the sub-sections that follow, and the assumptions used to calculate the monetary values of the benefits are also described.

Additionally, the Project generates benefits that have not been quantified within the BCA, however, these benefits still provide value to the residents of Wagoner. These benefits include:

- Improving economic competitiveness of the region by reducing travel times for pedestrians by installing the trail connecting to the southside sidepath
- Improved quality of life for residents due to increased transportation choices and improved connectivity;
- Environmental sustainability due to stormwater mitigation measures implemented along the corridor; and
- Improved State of Good Repair due to stormwater mitigation measures implemented along the corridor.

The safety benefits are realized because of two expected improvements:

- Eliminating pedestrian collisions due to construction of trail underpass on US-69, the location of pedestrian collisions in the last 5 years. Pedestrian-related improvements, such as sidewalk and sidepath installation also reduce potential for collisions, however these have not been monetized as there have not been pedestrian-related incidents on Cherokee Street in the last 5 years.
- Reduction in mean vehicular travel speed of approximately 10% on Cherokee St. due to construction of access/egress improvements, sidewalk installation, curb-cuts and other markings on the roadway, leading to an expected 15% reduction in vehicular incidents.

These safety benefits include a reduction in fatalities, injuries and property damage (PDO) crash costs.

The reduction in fatalities were calculated using the observed number of collisions in the Project corridor, provided by the Indian Nation Council of Governments (INCOG), which is the local metropolitan planning organization (MPO). Reductions in vehicular accidents were calculated by applying a crash reduction factor (CRF) titled "10% REDUCTION IN MEAN SPEED," which was selected from the Crash Modification Factor Clearinghouse. A CRF of 0.15 that yields a 15% reduction in traffic crashes was selected since the factor

applied to all crash types. Reductions in pedestrian crashes were assumed to be 100%, as the trail underpass installed on US-69 would eliminate pedestrian-vehicle conflicts at the location.

The Project improvements specifically address the types of collisions the City of Wagoner and transportation safety professionals at INCOG desire to improve, as well as the environments which facilitate this unsafe motorist behavior: unpredictable turning movements when exiting commercial driveways, flooded roadway collisions, and non-existent infrastructure to facilitate a safe, multimodal transportation environment.

Detailed BCA report and analysis is presented in Appendix A, Technical Memorandum as well as the spreadsheet model that is used to estimate the Benefit-Cost Ratio.

Appendices

All appendices are hosted on the Project website:

http://www.incog.org/Transportation/RAISEFY19_Wagoner.html

— **Appendix A:**

- A1 - Benefit-Cost Analysis Technical Memo
- A2 - Benefit-Cost Analysis spreadsheet model

— **Appendix B:**

- Letters of Support & Financial Commitment letters

— **Appendix C:**

- Letters of Support & Financial Commitment letters

— **Appendix D:**

- EJ Screen results