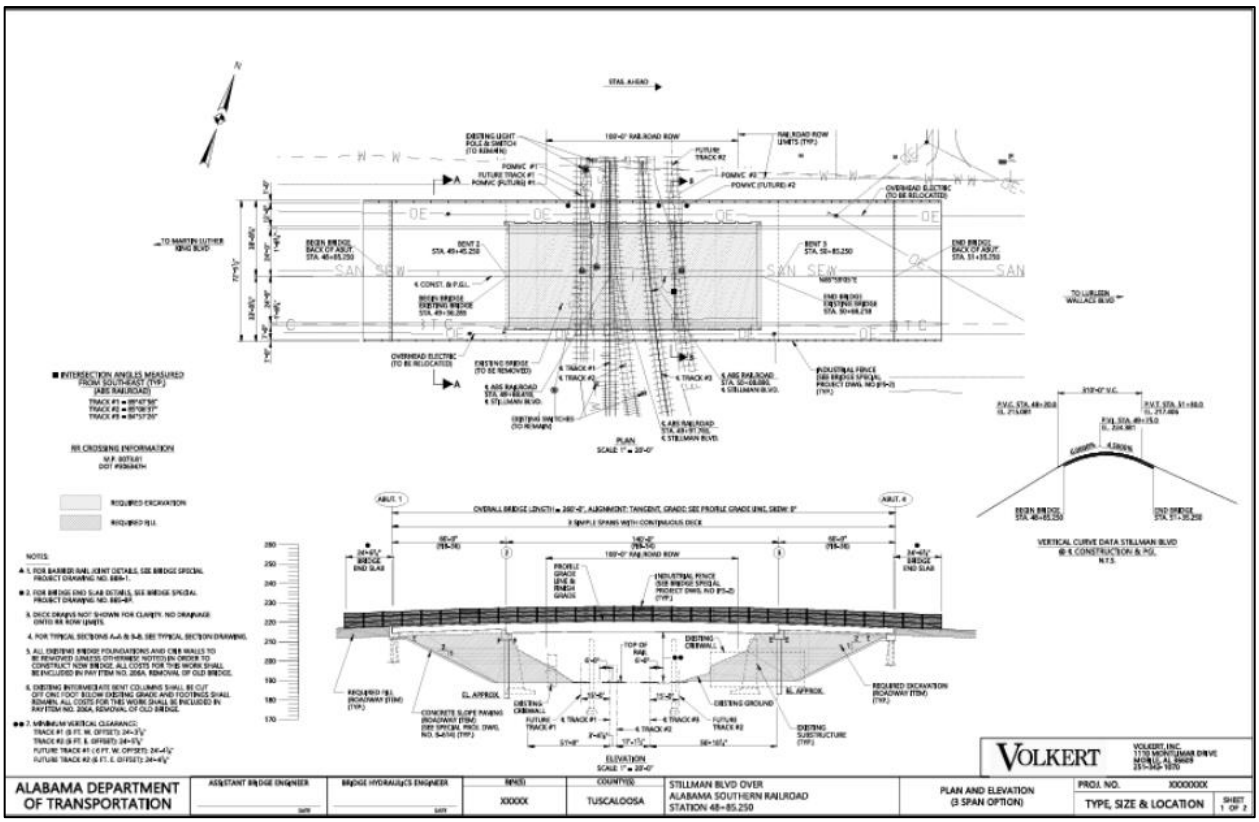
The Stillman Bridge Project



BCA Technical Memorandum

Safety · Mobility · Economic Opportunity

City of TUSCALOOSA

Grant Program: FY 2026 BUILD Grant
Applicant: City of Tuscaloosa, AL
Grant Request: $22,641,209
Matching Funds: $4,000,000
Total Project Cost: $26,641,209

City of TUSCALOOSA

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City of TUSCALOOSA

Stillman Boulevard Bridge Replacement and Shared Use Path Project Overview

The City of Tuscaloosa, Alabama is requesting US Department of Transportation (USDOT) BUILD Program grant funds to complete the redesign and reconstruction of Stillman Boulevard Bridge from Martin Luthur King Boulevard to Nick's Kids Avenue. Stillman Boulevard Bridge is a major artery into downtown Tuscaloosa. The bridge consists of two westbound, two eastbound lanes and has a 5'-6' pedestrian sidewalk on each side. See Figures 1, 2 and 3 which show the project vicinity and the project area for the *Stillman Bridge Project* application, and Figure 6 which shows the planned bike/pedestrian path.

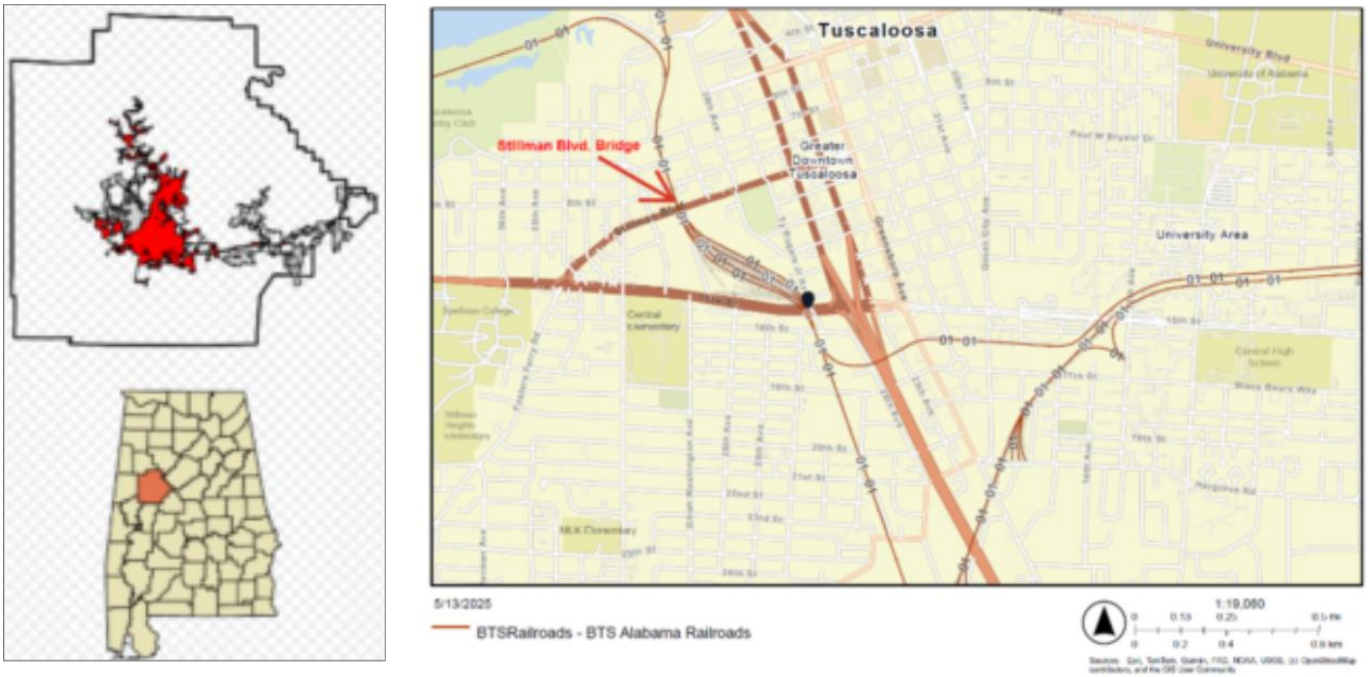


Figure 1. Stillman Bridge Project Area in Tuscaloosa, Alabama

Figure 2. Current - Stillman Boulevard Bridge

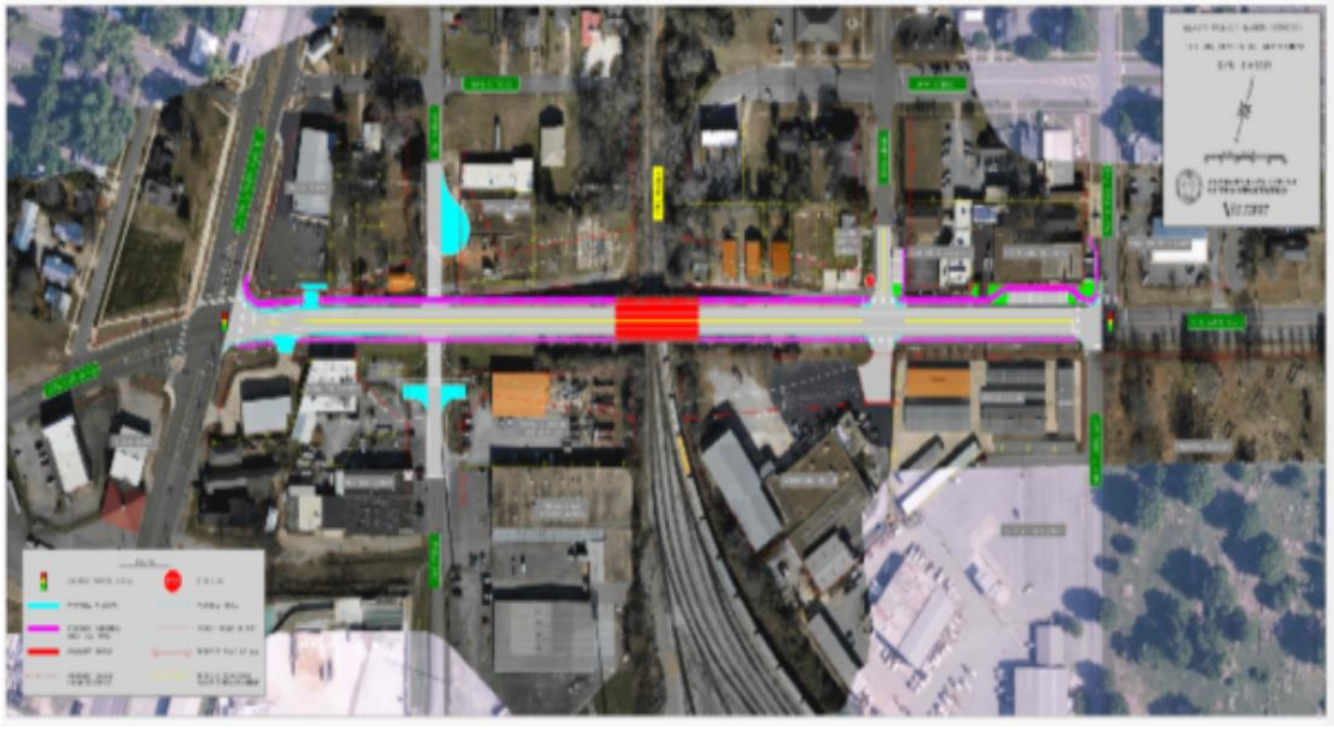


Figure 3. Proposed - Stillman Bridge rendering with bike/ped path on both sides

The Stillman Boulevard Bridge was built in 1938. It has a deck area of approximately 7,053 square feet. The current bridge is functionally obsolete and structurally deficient. The bridge was last inspected on November 2, 2024. The bridge load rating was reduced to 30 tons in 2012 due to the bridge's structural condition. This reduction limited the bridge's carrying capacity by 20-30 percent. Heavy trucks must detour around this location, resulting in increased travel times and inconvenience.

Bridge inspection noted cracking and abrasion damage in all spans of the deck, heavy spalling in multiple girders in spans 2 and 3, and heavy spalls on bent caps 2 and 3 with exposed rebar. The barrier rail on the north side of the bridge has been damaged by a vehicle collision, with missing concrete and exposed rebar. Please see Figures 4 and 5.

Figure 4. Deteriorated condition of deck on Stillman Boulevard Bridge

Figure 5. Deteriorated condition of the Stillman Boulevard Bridge

In addition to structural issues, the bridge is also functionally obsolete. This bridge provides grade separation for the CPKC Railroad operated by Watco Companies as the Alabama Southern Railroad. However, the bridge does not provide the current minimum horizontal and vertical clearances for safe and compliant use. Horizontally, the bridge provides just 43' clearance between the bents with no crash walls. Crash walls are required where there is less than 25' from the center of the track to the face of the bridge column. Current regulations require a minimum clearance between bents of 66". Vertically, the existing bridge provides 22'-6" clearance, where current regulation requires 23'-6" minimum. Additional functional deficiencies include deck width (4-10' lanes as opposed to 4-11' lanes), width of the sidewalks (4.5' as opposed to 5' minimum), and bridge barrier rail. The post-and-beam barrier rail does not meet current crash test requirements.

A replacement bridge will be widened to accommodate an 11' wide shared use path on the northern side and a 5'-6' wide shared use path on the southern side. The replacement bridge will be widened to the conceptually proposed bridge width of 75', with coordination and approvals already obtained from the Kansas City Southern railroad company in the design phase. The bridge replacement will involve utility relocations, and the new bridge shall have roadway and pedestrian lighting.

Side roads will be tied into the proposed new Stillman Boulevard. Since the vertical alignment of Stillman Boulevard will need to be raised, the connections to the existing side roads at 31st Street and 29th Street will be generally steeper than the existing conditions. The roadway type and width will be maintained, and any existing sidewalks will be tied into the proposed multi-use path/sidewalk. The project also incorporates a separated bicycle-pedestrian improvement along Stillman Boulevard from Martin Luther King Boulevard to Nick's Kids Avenue. Please see Figure 6 for a bridge rendering.

Figure 6. Rendering of the Stillman Boulevard Bridge showing multi-use sidewalk

Stillman Boulevard Bridge Project Benefits

The Stillman Boulevard Bridge project will provide residents and businesses with a safer major road corridor in and out of downtown Tuscaloosa and will accommodate improved and separated pedestrian and bicycle paths that will permit expanded use for both recreational and commuting activities.

Existing and proposed development, existing topography, bridge and road geometry, and impacts were all considerations evaluated prior to determining the best improvements and access management design. The city considers this project a key component of its economic development plan for this area.

Need

- **Safety**: Safety is a priority for residents and the workforce who use Stillman Boulevard Bridge and adjacent roadways. Between 2016 – 2024, the city of Tuscaloosa recorded 116 crashes along Stillman Boulevard Bridge in the project area. The city recorded from this total the following breakdown of accident types – See Table 1.

Crash Summary (Type)	Quantity
Fatality	1
Suspected Serious Injury	2
Suspected Minor Injury	13
Possible Injury	16
Property Damage Only	84
Total	**116**

Table 1. Crash Data for Phase Two Project Area

  Stillman Boulevard Bridge requires replacement and improvement of pedestrian and bicycle infrastructure. The *Stillman Bridge Project* will provide needed safety improvements for motorists, pedestrians and cyclists and significantly reduce crashes and accidents.

- **Connectivity**: Residents living near the *Stillman Bridge Project* will benefit from improved traffic operations and be provided enhanced multi-modal options and connections that will help to reduce conflict between different modes of transportation.

- **Economic Development**: The *Stillman Bridge Project* will increase the economic competitiveness of the area by connecting people to jobs, improving access to affordable transportation, leveraging current community investments, and attracting new public and private investment.

BCA Executive Summary

The City of Tuscaloosa, Alabama *Stillman Bridge Project* evaluated existing road conditions as the baseline condition or No-Build scenario to the Build Scenario which represents the proposed road improvements. The BCA spanned a 33-year project period. Years one through three have been modeled to reflect the project's construction period. Project costs have been accounted for during those years. Project benefits begin to accrue in 2029, which is the first year after construction completion. Project benefits have been modeled over a 30-year period. This period was selected based upon the City's plan to undertake significant operation and maintenance activities throughout the 30-year operational time period. Based on this operations and maintenance plan, the city believes that a 30-year project's useful life is appropriate for this BCA modeling exercise.

The City believes that the four-lane road network on Stillman Boulevard Bridge will be used for at least 60 years with the required operations and maintenance. Therefore, the city has included a Residual Value and Remaining Service Life in the computation of project benefits but limited the residual benefit to an additional 10 years or a total useful life of 40 years.

Project benefits were collected by various methods and consistent with US DOT BCA 2025 Guidance. The City collected transportation data for accidents over a nine-year period in the project area and applied a crash modification factor based on planned road improvements to determine project benefits.

Projected Traffic Volumes

Stillman Boulevard is one of the most travelled roads in Tuscaloosa. Traffic volume data for the Stillman Boulevard Bridge reveals that the annual average daily trip (AADT) is 10,588 as of 2023. The Alabama Department of Transportation (ADOT) has estimated that the AADT will increase by 15,733 by 2045.

Project Costs

Estimated for construction of the needed improvements are $26,641,209 (without Operation and Maintenance costs). These costs have been discounted at 7% per year starting in 2026 using 2025 pricing. The current cost estimate was completed using a 60% project design completion. The project team prepared estimates using detailed quantity estimates and unit costs based on bid prices of recently completed city projects of similar scope. Where possible, contractors have been consulted to support other unit costs. The project timeline assumes completion of the project design in 2026 with a shovel-ready start in 2027 and project completion in 2029.

Project Benefits

Benefits will begin to accrue in 2029 after project construction is complete. These benefits heavily derive from safety improvements and from travel time savings from *Stillman Bridge Project* improvements.

Benefits for the project have been estimated with the dollar values recommended by the U.S. DOT or - where specific guidance was not provided standard industry practice. A summary of the findings is listed below in Table 2 with detailed assumptions and sources provided in the following pages.

DISCOUNT RATE	TOTAL COST	TOTAL BENEFITS	BENEFIT COST RATIO
0%	$27,919,586	$89,112,472	3.19
7%	$22,343,367	$28,292,314	1.27

Table 2. Benefit Cost Ratio Findings

Summary of Benefits

Benefits from Improved Safety

Reductions in Frequency and Severity of Crashes

Stillman Boulevard Bridge experiences excessive speeding and high traffic volume for a four-lane divided highway with multiple intersections. This road configuration has resulted in severe crashes and a high number of accidents. Between 2016 – 2024, the city of Tuscaloosa recorded 116 crashes along Stillman Boulevard Bridge in the project area which included one death. Crash data reveals that there are many rear ends crashes every year along this route. These types of crashes can be caused by driver distraction, tailgating, panic stops, and reduced traction in wet weather. Please see Table 1 for a breakdown of crash types.

Improvements to bridge design and the addition of protected pedestrian/bicycle lanes will decrease the rate and severity of crashes that lead to injuries and fatalities.

The City of Tuscaloosa's *Stillman Bridge Project* will make several improvements to the existing road, and to bicycle/sidewalk conditions. These improvements include applying a high-friction surface treatment in combination with maintaining the maximum speed limit on the Stillman Boulevard Bridge to 35 mph. The project also constructs a separated bicycle lane and a separate sidewalk that are both protected from vehicular travel on the northbound side of Stillman Boulevard Bridge.

It is difficult to model the reduction in accidents anticipated from these various road improvements as individual project benefits. Instead, the City of Tuscaloosa has elected only to apply for the Crash Modification Factor (CMF) from USDOT Operational and Safety Trade-offs: Increase Lane width by 1 ft (9242) to calculate the reduction in accidents from road improvements. Applying only this selected USDOT Crash Reduction Factor for the project along the Stillman Boulevard Bridge results in a significant reduction in crash costs and injuries and a benefit of $36,594,720 (USDOT BCA 2025 $, net present value @ 0%).

Quality of Life Benefits

Cycling Active Transportation Benefit

The 2025 USDOT BCA Guidance permits the monetization of bicycling. Per the Guidance, the path improvements to the Stillman Boulevard Bridge and on the bridge will induce more users to take additional trips via active transportation modes such as walking and bicycling that will reduce mortality. The entire .33 project expanse satisfies this criterion for induced trips for which the mortality reduction values are applicable.

The Stillman Boulevard Bridge connects the University of Alabama's main campus to downtown Tuscaloosa to Stillman College and to four elementary-middle schools (i.e., Oakdale Elementary, Oak Hill Elementary, West Lawn Middle, and Martin L. King Jr. Elementary).

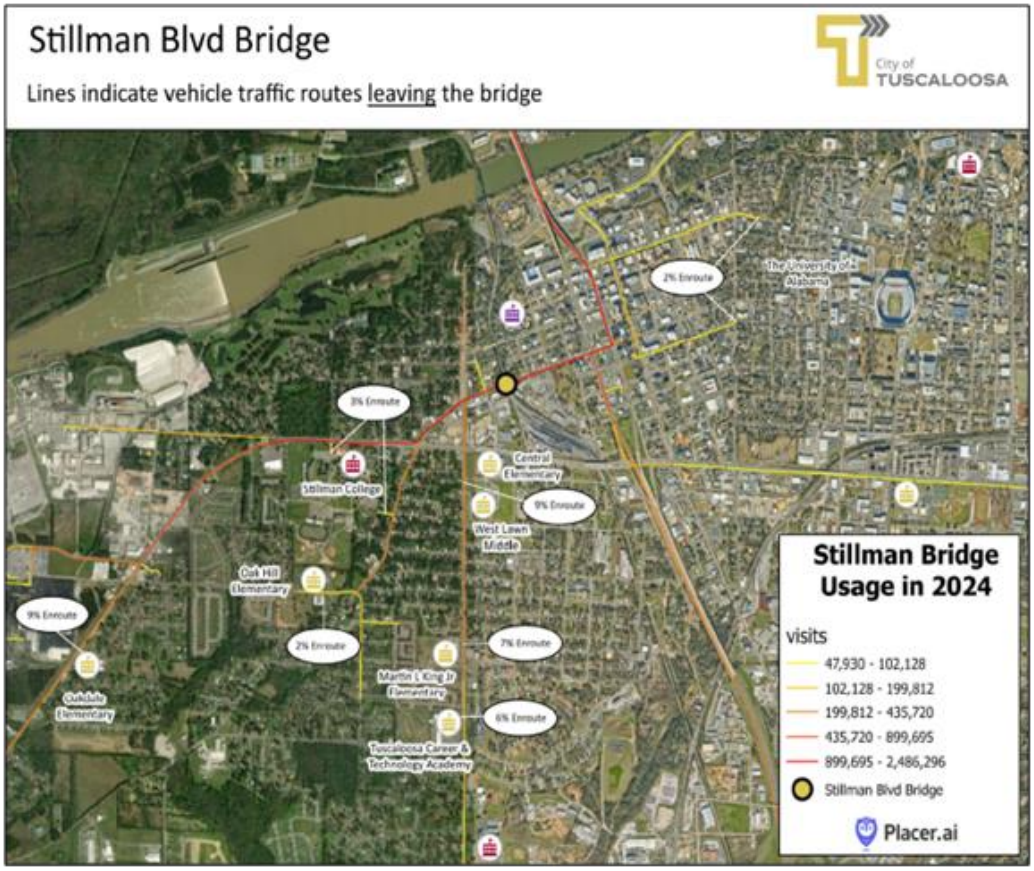


Figure 7. Placer.ai data on the use of the Stillman Boulevard Bridge

Placer AI data for the project area reveals that 36% of daily "visits" on the Stillman Bridge are to destinations south and west (i.e., the locations of the elementary and middle schools and Stillman College) and in 2024 there were at least 899,605 visits – See Figure 7.

Placer.ai is an AI-powered location data collection and analytics platform that provides users with accurate insights into consumer foot traffic and location visitation trends. It helps businesses and individuals analyze consumer behavior and make informed decisions based on location data.

The reconstruction of the Stillman Boulevard Bridge, which includes a protected bicycle/pedestrian lane, will enable students from elementary to college level to travel across the bridge safely.

The BCA Guidance specifies that only trips diverted from non-active transportation modes are applicable, and only those within the age range (20-64 in the case of cycling) for which the mortality reduction values are applicable should be used in the calculation. Since the Stillman Boulevard Bridge is within 2 miles of the 40,846 students who attend the University of Alabama as of 2024, and there are four elementary/middle schools and Stillman College to the south and west, we are confident that at a minimum an estimated 682 induced bicyclists from ages 20-64 will be using the bicycle path on the Stillman Boulevard.[1] The basis for this assessment is University of Alabama bike registrations and University Recreation Center bike rentals. The University of Alabama Recreation Center currently averages around 150 (monthly) bike rentals per semester (300 per year). The annual number of students/faculty/personnel who have registered their bicycle with the University of Alabama averages 350 each academic year.

As described in the BCA Guidance Manual, the recommended monetized value for the Recommended Value Induced Active Transportation Trip is $7.45. Active transportation induced savings for the project over a 30-year period add up to $165,649 over the project's useful life under a NPV 0%.

Cycling Facility Improvement

The 2025 USDOT BCA Guidance permits the monetization of bicycling facility improvements. The improvements to Stillman Boulevard Bridge will result in the construction of a dedicated cycling lane. The calculation of project benefits for the bicycling facility improvements assumes bicyclists will travel the entire .33 miles of the project area.

As described in the BCA Guidance Manual, the recommended monetized value for Recommended Cycling Facility Improvement is $2.21/mile for a dedicated cycling lane. Active transportation induced savings for the project over a 30-year period add up to $16,216 over the project useful life under a NPV 0%.

Benefits from Improved Sustainability

The Stillman Boulevard Bridge project improvements will reduce travel times and fuel consumption. These reductions have been monetized as project benefits for travel time savings, vehicle operating costs, and fuel saving costs.

Travel Time Savings

Vehicle mileage will decrease with the proposed bridge improvements. Since the existing bridge is loaded to 30 tons currently, any heavy vehicles must seek alternative – and longer - routes. The most common detour would be MLK Blvd to 15 Street Lurleen Wallace Blvd, a distance of approximately 1.5 miles. The replacement bridge will have the same number of lanes as the existing bridge. There should be no change in vehicle mileage. The city calculates cumulative travel time savings over the 30-year project period of 862,213 hours.

As described in the BCA Guidance Manual, the recommended monetized values for savings per person per hour for business, local in- vehicle travel is $33.50. The City has documented that 4% of the AADT (trucks) for Stillman Bridge must detour 1.5 miles. Therefore, the total daily truck detour is 10,588 x .04 = 416. Annually, the truck diversion is 416 x 365 = 151,840 as of 2025. Travel time savings for the project over a 30-year period following construction completion in 2029 results in a project benefit of $29,952,382 over a 30-year useful life under a NPV 0%.

Decreases in Emissions

In this analysis, the modeled result is a decrease in fuel usage from the Stillman Boulevard Bridge project. These impacts translate to a net increase in greenhouse gas (GHG) emissions and other emissions of .512 tons of SO2, .0708 tons of PM 2.5 and 126.38 tons of NOx.

The Environmental Protection Agency (EPA) has assigned in 2029 a cost per pound to each of several passenger car emissions including SO2 ($63,400/ton), PM 2.5 ($1,122,600) and NOx ($23,300/ton). USDOT has also assigned cost values for several of these pollutants as described in the Detailed Assumptions and Sources section. Following USDOT and EPA guidance, a net benefit is realized from decreased emissions per year after reconstruction of Stillman Boulevard Bridge which also includes improvements to bicycle facilities. This benefit was calculated by multiplying the EPA emissions factors by the value per emission and then by the reduction of gasoline usage.

Per USDOT guidance, project benefit values were calculated separately for, PM 2.5. SO2 and Nox emissions with the latter discounted by 7% under all scenarios. Our analysis demonstrates the following project benefits: $80,704 for PM 2.5, $33,037 in SO2 savings and $3,005,822 in Nox decreased emissions over the useful life of this project (US DOT BCA 2025 $, net present value @ 0%).

Fuel Cost Savings

The Stillman Boulevard Bridge project area will reduce the consumption of fuel as current bridge weight restricted truck vehicle diversion trips will take slightly shorter time to complete. Improvements to project roads will also invite travelers to switch modes from vehicle to bicycle or walking. The Stillman Boulevard Bridge project will result in a decrease in diesel consumption by 1,146,544 gallons through 2058, resulting in a benefit of $3,878,757 (US DOT BCA 2025 $, net present value @ 0%).

City of TUSCALOOSA

Detailed Assumptions and Sources

Key Assumptions and Sources			
Parameter Name	**Value**	**Unit**	**Reference**
Project Life	30	Years	Expected Useful Life
Discount Rate	7%	Per annum	Per NOFA, https://www.transportation.gov/sites/dot.gov/files/2025-05/Benefit%20Cost%20Analysis%20Guidance%202025%20Update%20II%20%28Final%29.pdf
Time Savings - Business, Local	34.6	$/hour	
Time Savings - Personal, Local	20.1	$/hour	
Time Savings - All Purposes	21.8	$/hour	
Value of a Stat Life (VSL)	$13,700,000	$/life	
KABCO A	$1,302,300	$/injured	
KABCO B	$256,300	$/injured	
KABCO C	$122,400	$/injured	
KABCO O	$5,500	$/injured	
Expand Sidewalk (per foot of added Width)	0.13	Per Person-Mile Walked	
Property Damage Only (PDO)	9,700	$/vehicle	
Install Signal for Pedestrian Crossing on Roadway with Volumes ≥13,000 Vehicles per Day	$0.57	Per Person-Mile Walked	
Cycling Path with At-Grade Crossings	$1.76	Recommended Value per Cycling Mile (2025 $)	2025 US DOT BCA Resource Guide, https://www.transportation.gov/sites/dot.gov/files/2025-12/Benefit%20Cost%20Analysis%20Guidance%202026%20Update%20%28Final%29.pdf
Cycling Path with no At-Grade Crossings	$2.21	Recommended Value per Cycling Mile (2025 $)	
Dedicated Cycling Lane	$2.09	Recommended Value per Cycling Mile (2025 $)	
Cycling Boulevard/"Sharrow"	$0.33	Recommended Value per Cycling Mile (2025 $)	

City of TUSCALOOSA

Detailed Assumptions and Sources continued

Key Assumptions and Sources			
Parameter Name	**Value**	**Unit**	**Reference**
Walking Ages 20-74	$8.36	Recommended Value per Cycling Mile (2025 $)	
Cycling Ages 20-64	$7.45	Recommended Value per Cycling Mile (2025 $)	
Value of Emission - VOC's	2,100	2013$/ short ton	
Value of Emission - NOx	22,000	2026$/ short ton	
Value of Emission - PM 2.5	1,070,700	2026$/ short ton	
Value of Emission - SOx	60,100	2026$/ short ton	
Emission Factors - THC	28.47	lb/mi/yr	EPA consumer statistics, https://www3.epa.gov/otaq/consumer/420f08024.pdf
Emission Factors - VOC	27.33	lb/mi/yr	
Emmission Factors - NOx	18.32	lb/mi/yr	
Emmission Factors - CO2	9,737	lb/mi/yr	
Gasoline Consumption - Passenger cars	0.04149	gallons/mi	
Gas Diesel Price - All Grades	3.383	$/gallon	US Energy Information Agency Gas Prices as of 7/7/2025, National Average, Regular Gasoline (Gulf Coast) https://www.eia.gov/petroleum/gasdiesel/
Vehicle Occupancy	1.52	Persons	2022 National Household Survey
CPI Inflation Calculator from 2020-2022	4.23%	2020-2022	http://www.bls.gov/data/inflation_calculator.htm
Crash Data - 2025		2016-2024	Tuscaloosa, AL Stillman Bridge) area
Fatality Rate - 2025		2016-2024	Tuscaloosa, AL Stillman Bridge) area
Injury Rate - 2025		2016-2024	Tuscaloosa, AL Stillman Bridge) area
Vechicle Operating Costs Light Duty Vehicles	$0.56	2025	2025 US DOT BCA Resource Guide, https://www.transportation.gov/sites/dot.gov/files/2025-12/Benefit%20Cost%20Analysis%20Guidance%202026%20Update%20%28Final%29.pdf
Vechicle Operating Costs Commercial Trucks	$1.23	2025	2025 US DOT BCA Resource Guide, https://www.transportation.gov/sites/dot.gov/files/2025-12/Benefit%20Cost%20Analysis%20Guidance%20202
ADT Annual Growth Rate	2.00%	% p.a.	ADT = Average Daily Traffic
O&M Inflation Escalator	1.38%	% p.a.	
VMT = Vehicle Miles Travelled			

City of TUSCALOOSA

Build/No-Build Detailed Analysis – Fuel Savings

Fuel Cost Savings			
Fuel Savings Reduction (Gallons)	**Cost - Gallon of Diesel**	**Year**	**Build Benefit 0% NPV (C*E)**
38,218.1	$3.38	2029	$129,291.93
38,218.1	$3.38	2030	$129,291.93
38,218.1	$3.38	2031	$129,291.93
38,218.1	$3.38	2032	$129,291.93
38,218.1	$3.38	2033	$129,291.93
38,218.1	$3.38	2034	$129,291.93
38,218.1	$3.38	2035	$129,291.93
38,218.1	$3.38	2036	$129,291.93
38,218.1	$3.38	2037	$129,291.93
38,218.1	$3.38	2038	$129,291.93
38,218.1	$3.38	2039	$129,291.93
38,218.1	$3.38	2040	$129,291.93
38,218.1	$3.38	2041	$129,291.93
38,218.1	$3.38	2042	$129,291.93
38,218.1	$3.38	2043	$129,291.93
38,218.1	$3.38	2044	$129,291.93
38,218.1	$3.38	2045	$129,291.93
38,218.1	$3.38	2046	$129,291.93
38,218.1	$3.38	2047	$129,291.93
38,218.1	$3.38	2048	$129,291.93
38,218.1	$3.38	2049	$129,291.93
38,218.1	$3.38	2050	$129,291.93
38,218.1	$3.38	2051	$129,291.93
38,218.1	$3.38	2052	$129,291.93
38,218.1	$3.38	2053	$129,291.93
38,218.1	$3.38	2054	$129,291.93
38,218.1	$3.38	2055	$129,291.93
38,218.1	$3.38	2056	$129,291.93
38,218.1	$3.38	2057	$129,291.93
38,218.1	$3.38	2058	$129,291.93
1,146,544	**N/A**	**N/A**	**$3,878,757.81**

*Tredis 2024 (Fuel Per Mile Tractor Trailers) .1678 gallons of gasoline consumed per mile

416 trucks diverted/day x 365 days x 1.5 mile truck route diversion =38,218 .1 gallons/year saved

Fuel Gas Savings over 30 years	38218.13

Build/No-Build Detailed Analysis – NOx Costs

NOx Cost Savings				
NOx Savings Reduction (Grams)*	NOx Savings Reduction (Short Tons) (D)	NOx Savings Value/Ton (F)	Year	Build Benefit 0 % NPV (D*F)
3,821,812.80	4.21278	$23,300	2029	$98,158
3,821,812.80	4.21278	$23,800	2030	$100,264
3,821,812.80	4.21278	$23,800	2031	$100,264
3,821,812.80	4.21278	$23,800	2032	$100,264
3,821,812.80	4.21278	$23,800	2033	$100,264
3,821,812.80	4.21278	$23,800	2034	$100,264
3,821,812.80	4.21278	$23,800	2035	$100,264
3,821,812.80	4.21278	$23,800	2036	$100,264
3,821,812.80	4.21278	$23,800	2037	$100,264
3,821,812.80	4.21278	$23,800	2038	$100,264
3,821,812.80	4.21278	$23,800	2039	$100,264
3,821,812.80	4.21278	$23,800	2040	$100,264
3,821,812.80	4.21278	$23,800	2041	$100,264
3,821,812.80	4.21278	$23,800	2042	$100,264
3,821,812.80	4.21278	$23,800	2043	$100,264
3,821,812.80	4.21278	$23,800	2044	$100,264
3,821,812.80	4.21278	$23,800	2045	$100,264
3,821,812.80	4.21278	$23,800	2046	$100,264
3,821,812.80	4.21278	$23,800	2047	$100,264
3,821,812.80	4.21278	$23,800	2048	$100,264
3,821,812.80	4.21278	$23,800	2049	$100,264
3,821,812.80	4.21278	$23,800	2050	$100,264
3,821,812.80	4.21278	$23,800	2051	$100,264
3,821,812.80	4.21278	$23,800	2052	$100,264
3,821,812.80	4.21278	$23,800	2053	$100,264
3,821,812.80	4.21278	$23,800	2054	$100,264
3,821,812.80	4.21278	$23,800	2055	$100,264
3,821,812.80	4.21278	$23,800	2056	$100,264
3,821,812.80	4.21278	$23,800	2057	$100,264
3,821,812.80	4.21278	$23,800	2058	$100,264
114,654,384	126.38353	N/A	N/A	$3,005,822

*** (Gallons of Gasoline Fuel Saved from Road Improvements (38,218.1 gallons/year)(See Fuel Savings) x 100 grams NOx emission in a gallon of gasoline. Source:**

NOx = $19,000/short ton (2025 DOT BCA Guidance)

City of TUSCALOOSA

Build/No-Build Detailed Analysis – SO_2 Costs

SO_2 Cost Savings				
SO_2 Savings Reduction (Grams) *	SO_2 Savings Reduction (Short Tons) (D)	SO_2 Savings Value/Ton (F)	Year	Build Benefit (D*F)
17,083.4	0.02	$63,400.00	2029	$1,083.09
17,083.4	0.02	$64,500.00	2030	$1,101.88
17,083.4	0.02	$64,500.00	2031	$1,101.88
17,083.4	0.02	$64,500.00	2032	$1,101.88
17,083.4	0.02	$64,500.00	2033	$1,101.88
17,083.4	0.02	$64,500.00	2034	$1,101.88
17,083.4	0.02	$64,500.00	2035	$1,101.88
17,083.4	0.02	$64,500.00	2036	$1,101.88
17,083.4	0.02	$64,500.00	2037	$1,101.88
17,083.4	0.02	$64,500.00	2038	$1,101.88
17,083.4	0.02	$64,500.00	2039	$1,101.88
17,083.4	0.02	$64,500.00	2040	$1,101.88
17,083.4	0.02	$64,500.00	2041	$1,101.88
17,083.4	0.02	$64,500.00	2042	$1,101.88
17,083.4	0.02	$64,500.00	2043	$1,101.88
17,083.4	0.02	$64,500.00	2044	$1,101.88
17,083.4	0.02	$64,500.00	2045	$1,101.88
17,083.4	0.02	$64,500.00	2046	$1,101.88
17,083.4	0.02	$64,500.00	2047	$1,101.88
17,083.4	0.02	$64,500.00	2048	$1,101.88
17,083.4	0.02	$64,500.00	2049	$1,101.88
17,083.4	0.02	$64,500.00	2050	$1,101.88
17,083.4	0.02	$64,500.00	2051	$1,101.88
17,083.4	0.02	$64,500.00	2052	$1,101.88
17,083.4	0.02	$64,500.00	2053	$1,101.88
17,083.4	0.02	$64,500.00	2054	$1,101.88
17,083.4	0.02	$64,500.00	2055	$1,101.88
17,083.4	0.02	$64,500.00	2056	$1,101.88
17,083.4	0.02	$64,500.00	2057	$1,101.88
17,083.4	0.02	$64,500.00	2058	$1,101.88
512,503.38	**0.51250**	**N/A**	**N/A**	**$33,037.68**

* Diesel Fuel SO_2 Emissions for Heavy Duty Trucks (grams/mile) .447 g/mile x truck diversion miles/year (38,218) Source: Greenhouse Gas Emissions from a Typical Passenger Vehicle Offce of Transportation and Air Quality EPA-420-F-18-008 March 2018

SO_2 = $55,800/short ton in 2029 (2025 DOT BCA Guidance)

City of TUSCALOOSA

Build/No-Build Detailed Analysis – PM2.5 Costs

PM 2.5 Savings

PM 2.5 Savings Reduction (Grams)*	PM 2.5 Savings Reduction (Short Tons)	PM 2.5 Savings Value/Ton (BCA Guidance 2025)	Year	Build Benefit 0 % NPV (D*F)
2,140.94	0.00236	$1,122,600	2029	$2,649
2,140.94	0.00236	$1,140,500	2030	$2,692
2,140.94	0.00236	$1,140,500	2031	$2,692
2,140.94	0.00236	$1,140,500	2032	$2,692
2,140.94	0.00236	$1,140,500	2033	$2,692
2,140.94	0.00236	$1,140,500	2034	$2,692
2,140.94	0.00236	$1,140,500	2035	$2,692
2,140.94	0.00236	$1,140,500	2036	$2,692
2,140.94	0.00236	$1,140,500	2037	$2,692
2,140.94	0.00236	$1,140,500	2038	$2,692
2,140.94	0.00236	$1,140,500	2039	$2,692
2,140.94	0.00236	$1,140,500	2040	$2,692
2,140.94	0.00236	$1,140,500	2041	$2,692
2,140.94	0.00236	$1,140,500	2042	$2,692
2,140.94	0.00236	$1,140,500	2043	$2,692
2,140.94	0.00236	$1,140,500	2044	$2,692
2,140.94	0.00236	$1,140,500	2045	$2,692
2,140.94	0.00236	$1,140,500	2046	$2,692
2,140.94	0.00236	$1,140,500	2047	$2,692
2,140.94	0.00236	$1,140,500	2048	$2,692
2,140.94	0.00236	$1,140,500	2049	$2,692
2,140.94	0.00236	$1,140,500	2050	$2,692
2,140.94	0.00236	$1,140,500	2051	$2,692
2,140.94	0.00236	$1,140,500	2052	$2,692
2,140.94	0.00236	$1,140,500	2053	$2,692
2,140.94	0.00236	$1,140,500	2054	$2,692
2,140.94	0.00236	$1,140,500	2055	$2,692
2,140.94	0.00236	$1,140,500	2056	$2,692
2,140.94	0.00236	$1,140,500	2057	$2,692
2,140.94	0.00236	$1,140,500	2058	$2,692
64,228	0.07080	N/A	N/A	$80,704

*** (Gallons of Fuel Saved from Bridge Improvement /.1678 gallons tractor truck fuel consumed/mile) * .0094 grams PM 2.5 emission/mile Source: Tredis 2021**

Build/No-Build Detailed Analysis – Accident Analysis

City of Tuscaloosa, Alabama
Traffic Engineering Accident Analysis
System Intersection Analysis Report
Stillman Boulevard Bridge Improvement Area

Summary Statistics
2016 to 2024

Injury Summary

Injury Type	Number of Injuries	% of Total
Fatal Injuries	1	0.031
Class A Injuries	2	0.06
Class B Injuries	13	0.41
Class C Injuries	16	0.50
Total Non-Fatal Injuries	31	0.969
Total Injuries	32	1.00

CRASH MODIFICATION FACTOR

Crash Type	Number of Crashes	% of Total	Avg. Crashes/Year	KABCO Monetized Value	CMF *
Fatal Injuries	1	0.032	0.125	$13,700,000	0.52
Class A Injuries	2	0.06	0.222222	$1,302,300	0.52
Class B Injuries	13	0.42	1.444444	$256,300	0.52
Class C Injuries	16	0.52	1.777778	$122,400	0.52
Class O Injuries	31	0.074	3.444444	$5,500	0.52
Total Non-Fatal Injuries	31	0.318	3.444444		
Total Injuries	32	0.318	3.555556		

ESTIMATED ANNUAL INJURIES PREVENTED	Number of Crashes	% of Total	Avg. Crashes/Year	KABCO Monetized Value	CMF *	
Fatal Injuries	1	0.009	0.111111	$13,200,000	0.52	0.053333
Class A Injuries	2	0.017	0.222222	$1,254,700	0.52	0.106667
Class B Injuries	13	0.112	1.444444	$246,900	0.52	0.693333
Class C Injuries	16	0.138	1.777778	$118,000	0.52	0.853333
Class O Injuries	84	0.724	9.333333	$5,300	0.52	4.48
Property Damage	84	0.724	9.333333	$9,700	0.52	4.48

*Crash Modification Factor (CMF) from USDOT Operational and Safety Trade-offs: CMF ID: 9242 Increase lane width by 1 ft
Description: Increase lane width by 1 ft

Prior Condition: No Prior Condition(s)
Category: Roadway
Study: Statewide Analysis of Bicycle Crashes, Alluri et al., 2017

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TOTAL
Fatal Injury	0	0	1	0	0	0	0	0	0	0	1
Suspected Seri	0	2	0	0	0	0	0	0	0	0	2
Non-Incapacita	2	2	2	0	1	1	0	1	3	1	13
Possible Injur	4	2	1	2	2	3	2	0	0	0	16
Property Damag	12	12	19	10	6	6	6	5	7	1	84
Unknown	0	0	0	0	0	0	0	0	0	0	0
TOTAL	18	18	23	12	9	10	8	6	10	2	116

*Crash Modification Factor (CMF) from USDOT Operational and Safety Trade-offs: CMF ID: 9242 Increase lane width by 1 ft Description: Increase lane width by 1 ft Prior Condition: No Prior Condition(s) Category: Roadway Study: Statewide Analysis of Bicycle Crashes, Alluri et al., 2017

City of TUSCALOOSA

Build/No-Build Detailed Analysis – Injuries and Property Damage

Stillman Bridge Injuries and Property Damage

Year	Annual Average Fatalities Prevented Full Project	Annual Average Class A Injuries Prevented	Annual Average Class B Injuries Prevented	Annual Average Class C Injuries Prevented	Annual Average Class 0 Injuries Prevented	Annual Property Damages Prevented	Final Build Benefit 0% NPV
2029	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2030	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2031	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2032	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2033	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2034	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2035	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2036	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2037	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2038	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2039	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2040	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2041	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2042	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2043	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2044	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2045	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2046	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2047	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2048	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2049	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2050	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2051	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2052	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2053	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2054	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2055	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2056	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2057	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
2058	$730,667	$138,912	$177,701	$104,448	$24,640	$43,456	$1,219,824
Year	**$21,920,000**	**$4,167,360**	**$5,331,040**	**$3,133,440**	**$739,200**	**$1,303,680**	**$36,594,720**

City of TUSCALOOSA

Build/No-Build Detailed Analysis – Vehicle Operating Cost Savings

Vehicle Operating Cost Savings				
Length of Road Segment Savings (miles)	**Year**	**Truck Benefit**	**Annual Truck Vehicle Usage Full Bridge Replacement (416 trucks/day) - 2029**	**Final Build Benefit 0% NPV (D*F*G)**
1.50	2029	$1.23	151,840	$280,144.80
1.50	2030	$1.23	152,705	$281,741.63
1.50	2031	$1.23	153,576	$283,347.55
1.50	2032	$1.23	154,451	$284,962.63
1.50	2033	$1.23	155,332	$286,586.92
1.50	2034	$1.23	156,217	$288,220.47
1.50	2035	$1.23	157,107	$289,863.32
1.50	2036	$1.23	158,003	$291,515.54
1.50	2037	$1.23	158,904	$293,177.18
1.50	2038	$1.23	159,809	$294,848.29
1.50	2039	$1.23	160,720	$296,528.93
1.50	2040	$1.23	161,636	$298,219.14
1.50	2041	$1.23	162,558	$299,918.99
1.50	2042	$1.23	163,484	$301,628.53
1.50	2043	$1.23	164,416	$303,347.81
1.50	2044	$1.23	165,353	$305,076.89
1.50	2045	$1.23	166,296	$306,815.83
1.50	2046	$1.23	167,244	$308,564.68
1.50	2047	$1.23	168,197	$310,323.50
1.50	2048	$1.23	169,156	$312,092.35
1.50	2049	$1.23	170,120	$313,871.27
1.50	2050	$1.23	171,090	$315,660.34
1.50	2051	$1.23	172,065	$317,459.60
1.50	2052	$1.23	173,046	$319,269.12
1.50	2053	$1.23	174,032	$321,088.96
1.50	2054	$1.23	175,024	$322,919.16
1.50	2055	$1.23	176,022	$324,759.80
1.50	2056	$1.23	177,025	$326,610.93
1.50	2057	$1.23	178,034	$328,472.62
1.50	2058	$1.23	179,049	$330,344.91
N/A	**N/A**	**N/A**	**N/A**	**$9,137,381.72**

*Commercial Vehicle Operating Cost/Mile 2025 US DOT BCA Guidance

Build/No-Build Detailed Analysis – Travel Time

Travel Time Savings				
Travel Time Reduction (10 minutes for 1.5 mile truck detour) (D)	* Travel Time All Purposes Value $34.6/hour	Year	Average Annual Daily Trips* 1.6% annual increase (416 trucks detours/day x 365 days) (H)	Final Build Benefit 0% NPV D*F*H
0.1667	$34.60	2029	159,246	$918,316
0.1667	$34.60	2030	160,153	$923,550
0.1667	$34.60	2031	161,066	$928,815
0.1667	$34.60	2032	161,984	$934,109
0.1667	$34.60	2033	162,908	$939,433
0.1667	$34.60	2034	163,836	$944,788
0.1667	$34.60	2035	164,770	$950,173
0.1667	$34.60	2036	165,709	$955,589
0.1667	$34.60	2037	166,654	$961,036
0.1667	$34.60	2038	167,604	$966,514
0.1667	$34.60	2039	168,559	$972,023
0.1667	$34.60	2040	169,520	$977,564
0.1667	$34.60	2041	170,486	$983,136
0.1667	$34.60	2042	171,458	$988,740
0.1667	$34.60	2043	172,435	$994,376
0.1667	$34.60	2044	173,418	$1,000,044
0.1667	$34.60	2045	174,406	$1,005,744
0.1667	$34.60	2046	175,401	$1,011,477
0.1667	$34.60	2047	176,400	$1,017,242
0.1667	$34.60	2048	177,406	$1,023,040
0.1667	$34.60	2049	178,417	$1,028,872
0.1667	$34.60	2050	179,434	$1,034,736
0.1667	$34.60	2051	180,457	$1,040,634
0.1667	$34.60	2052	181,485	$1,046,566
0.1667	$34.60	2053	182,520	$1,052,531
0.1667	$34.60	2054	183,560	$1,058,531
0.1667	$34.60	2055	184,607	$1,064,564
0.1667	$34.60	2056	185,659	$1,070,632
0.1667	$34.60	2057	186,717	$1,076,735
0.1667	$34.60	2058	187,781	$1,082,872
	N/A	N/A	N/A	$29,952,382

City of TUSCALOOSA

Build/No-Build Detailed Analysis – Cycling Benefit

Cycling Benefits				
* Cycling Journey Value $2.21/mile	Year	Distance (.33 miles) (D)	Average Existing Cyclists Per Day * 1.6% annual increase (650 current number) (E)	Final Build Benefit 0% NPV (B*D*E)
$2.21	2029	0.33	682	$497
$2.21	2030	0.33	686	$500
$2.21	2031	0.33	689	$503
$2.21	2032	0.33	693	$506
$2.21	2033	0.33	697	$509
$2.21	2034	0.33	701	$511
$2.21	2035	0.33	705	$514
$2.21	2036	0.33	709	$517
$2.21	2037	0.33	713	$520
$2.21	2038	0.33	717	$523
$2.21	2039	0.33	722	$526
$2.21	2040	0.33	726	$529
$2.21	2041	0.33	730	$532
$2.21	2042	0.33	734	$535
$2.21	2043	0.33	738	$538
$2.21	2044	0.33	742	$541
$2.21	2045	0.33	747	$544
$2.21	2046	0.33	751	$548
$2.21	2047	0.33	755	$551
$2.21	2048	0.33	759	$554
$2.21	2049	0.33	764	$557
$2.21	2050	0.33	768	$560
$2.21	2051	0.33	773	$563
$2.21	2052	0.33	777	$567
$2.21	2053	0.33	781	$570
$2.21	2054	0.33	786	$573
$2.21	2055	0.33	790	$576
$2.21	2056	0.33	795	$580
$2.21	2057	0.33	799	$583
$2.21	2058	0.33	804	$586
N/A	N/A		N/A	$16,216

City of TUSCALOOSA

Build/No-Build Detailed Analysis – Health Benefit

Health Benefits			
* Health Benefits Cycling Value $7.45/trip	Year	Average Annual Daily Trips* 1.6% annual increase (G)	Final Build Benefit 0% NPV (E*G)
$7.45	2029	682	$5,079
$7.45	2030	686	$5,108
$7.45	2031	689	$5,137
$7.45	2032	693	$5,166
$7.45	2033	697	$5,195
$7.45	2034	701	$5,225
$7.45	2035	705	$5,255
$7.45	2036	709	$5,285
$7.45	2037	713	$5,315
$7.45	2038	717	$5,345
$7.45	2039	722	$5,376
$7.45	2040	726	$5,406
$7.45	2041	730	$5,437
$7.45	2042	734	$5,468
$7.45	2043	738	$5,499
$7.45	2044	742	$5,531
$7.45	2045	747	$5,562
$7.45	2046	751	$5,594
$7.45	2047	755	$5,626
$7.45	2048	759	$5,658
$7.45	2049	764	$5,690
$7.45	2050	768	$5,723
$7.45	2051	773	$5,755
$7.45	2052	777	$5,788
$7.45	2053	781	$5,821
$7.45	2054	786	$5,854
$7.45	2055	790	$5,887
$7.45	2056	795	$5,921
$7.45	2057	799	$5,955
$7.45	2058	804	$5,989
N/A	**N/A**	**N/A**	**$165,649**

City of TUSCALOOSA

Project Benefit Summary

Base Benefit (0% NPV)	
Category	**Build Benefit**
NOx	$3,005,822
SO2	$33,037
PM2.5	$80,704
Fuel Savings	$3,878,757
Cycling Journey	$16,216
Health Benefits	$165,649
Residual Project Value	$6,247,802
Property Damage	$1,303,680
Fatalities	$21,920,000
Class A Injury	$4,167,360
Class B Injury	$5,331,040
Class C Injury	$3,133,440
Class O Injury	$739,200
Vehicle Operating Benefits	$9,137,381
Travel Time Savings	$29,952,382
TOTAL	**$89,112,470**

DISCOUNT RATE	TOTAL COST	TOTAL BENEFITS	BENEFIT COST RATIO
0%	$27,919,586	$89,112,472	3.19
7%	$22,343,367	$28,292,314	1.27

City of TUSCALOOSA

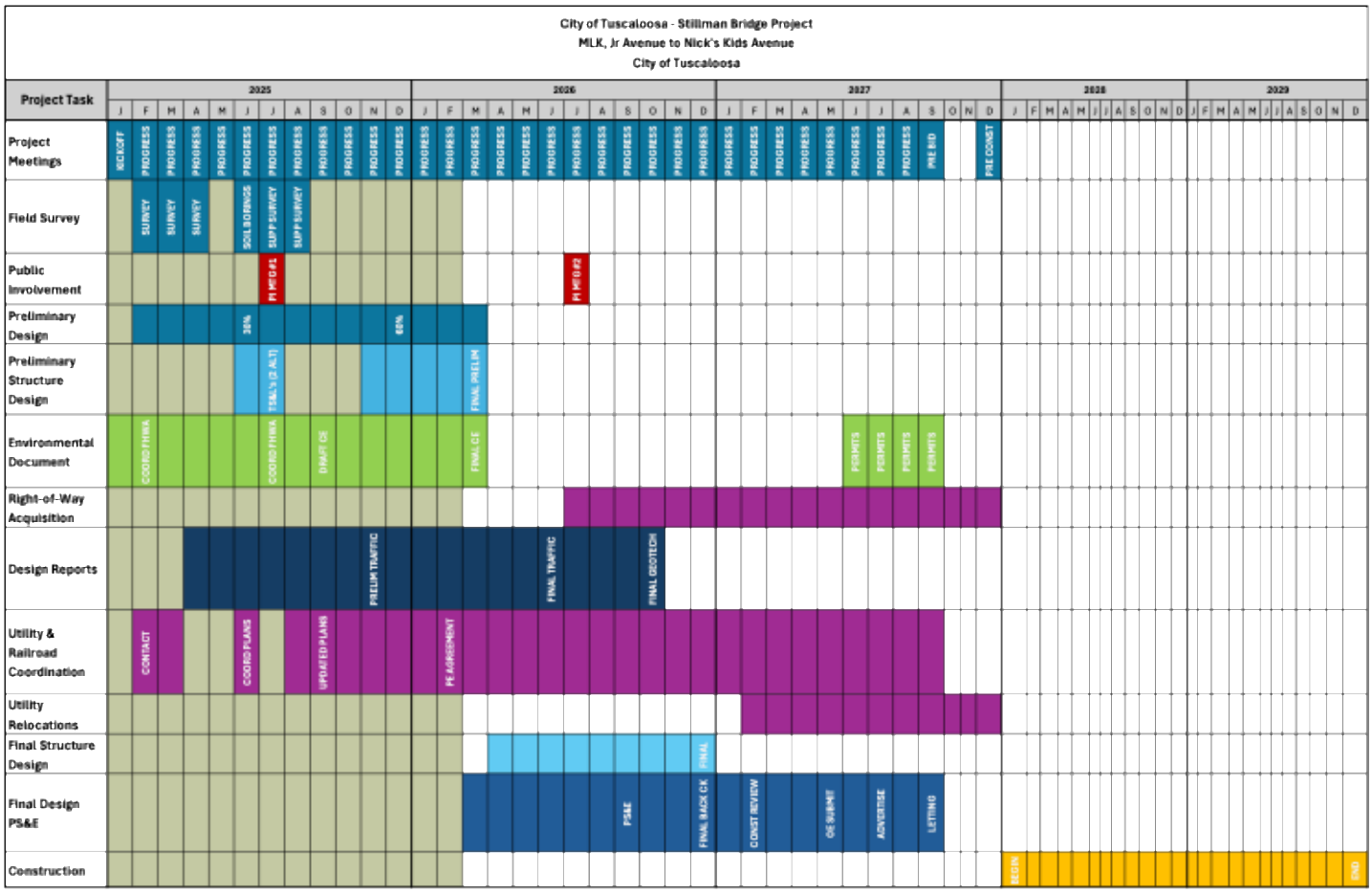
Build/No-Build Detailed Analysis – BCA Summary at 7% NPV and 0% NPV in $2026

Tuscaloosa, AL Benefit-Cost Analysis Summary: 2026 Build Baseline and 7% NPV

Year	Build Costs								Operating Benefits										
										Economic Competitiveness		Environmental Sustainability				Biking		Safety	Vehicle Operating Benefits
	Total Costs 7% NPV	O&M Costs + 1.38% Escalator 7% NPV	O&M Costs	Right of Way Acquisition 7% NPV	Right of Way Acquisition	Construction Cost (Includes 10% Contingency)	Costs 7% NPV	7% NPV Total Benefit	0% NPV Total Benefit	Travel Time Delay Savings ($/year)[1]	Fuel Savings ($/Year)	Pollutant Cost NOx ($/year)	Pollutant Cost PM 2.5 ($/year)	Pollutant Cost SO_2 ($/year)	Residual Value	Cycling Journey	Health Benefits Cycling	Crash Benefits ($/yr)[2]	Value ($/yr)
2026				$650,000.00	$650,000														
2027				$873,438.73	$1,000,000	$4,000,000	$3,493,755												
2028						$14,104,198	$11,513,227												
2029						$6,887,011	$5,254,068	$2,025,519	$2,655,043	$918,316	$129,291.93	$98,157.87	$2,649.29	$1,083.09		$497	$5,079	$1,219,824	$280,144.80
2030								$1,899,447	$2,664,073	$923,550	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$500	$5,108	$1,219,824	$281,741.63
2031		$16,366	$11,050					$1,779,784	$2,670,975	$928,815	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$503	$5,137	$1,219,824	$283,347.55
2032								$1,667,672	$2,677,917	$934,109	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$506	$5,166	$1,219,824	$284,962.63
2033		$15,269	$11,500					$1,562,635	$2,684,898	$939,433	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$509	$5,195	$1,219,824	$286,586.92
2034		$29,497	$23,466					$1,464,225	$2,691,919	$944,788	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$511	$5,225	$1,219,824	$288,220.47
2035		$14,246	$11,970					$1,372,024	$2,698,980	$950,173	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$514	$5,255	$1,219,824	$289,863.32
2036								$1,285,639	$2,706,081	$955,589	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$517	$5,285	$1,219,824	$291,515.54
2037		$13,291	$12,458					$1,204,703	$2,713,222	$961,036	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$520	$5,315	$1,219,824	$293,177.18
2038								$1,128,871	$2,720,405	$966,514	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$523	$5,345	$1,219,824	$294,848.29
2039		$37,202	$38,900					$1,057,821	$2,727,628	$972,023	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$526	$5,376	$1,219,824	$296,528.93
2040								$991,251	$2,734,892	$977,564	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$529	$5,406	$1,219,824	$298,219.14
2041		$11,570	$13,496					$928,877	$2,742,198	$983,136	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$532	$5,437	$1,219,824	$299,918.99
2042								$870,436	$2,749,545	$988,740	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$535	$5,468	$1,219,824	$301,628.53
2043		$10,795	$14,047					$815,678	$2,756,935	$994,376	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$538	$5,499	$1,219,824	$303,347.81
2044								$764,370	$2,764,366	$1,000,044	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$541	$5,531	$1,219,824	$305,076.89
2045		$30,214	$43,860					$716,296	$2,771,840	$1,005,744	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$544	$5,562	$1,219,824	$306,815.83
2046								$671,251	$2,779,356	$1,011,477	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$548	$5,594	$1,219,824	$308,564.68
2047		$9,397	$15,217					$629,044	$2,786,916	$1,017,242	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$551	$5,626	$1,219,824	$310,323.50
2048								$589,495	$2,794,518	$1,023,040	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$554	$5,658	$1,219,824	$312,092.35
2049		$12,791	$47,513					$552,437	$2,802,164	$1,028,872	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$557	$5,690	$1,219,824	$313,871.27
2050								$517,713	$2,809,853	$1,034,736	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$560	$5,723	$1,219,824	$315,660.34
2051								$485,176	$2,817,586	$1,040,634	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$563	$5,755	$1,219,824	$317,459.60
2052		$7,901	$16,817					$454,687	$2,825,363	$1,046,566	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$567	$5,788	$1,219,824	$319,269.12
2053		$15,263	$34,313					$426,117	$2,833,185	$1,052,531	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$570	$5,821	$1,219,824	$321,088.96
2054		$7,371	$17,503					$399,346	$2,841,051	$1,058,531	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$573	$5,854	$1,219,824	$322,919.16
2055								$374,260	$2,848,961	$1,064,564	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$576	$5,887	$1,219,824	$324,759.80
2056		$6,877	$18,218					$350,752	$2,856,917	$1,070,632	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$580	$5,921	$1,219,824	$326,610.93
2057								$328,724	$2,864,919	$1,076,735	$129,291.93	$100,264.27	$2,691.54	$1,101.88		$583	$5,955	$1,219,824	$328,472.62
2058		$320,829	$948,051					$978,063	$9,120,768	$1,082,872	$129,291.93	$100,264.27	$2,691.54	$1,101.88	$6,247,802	$586	$5,989	$1,219,824	$330,344.91
Total	**$22,343,367**	**$558,879**	**$1,278,377**	**$1,523,439**	**$1,650,000**	**$24,991,209**	**$20,261,050**	**$28,292,314**	**$89,112,472**	**$29,952,382**	**$3,878,758**	**$3,005,822**	**$80,704**	**$33,038**	**$6,247,802**	**$16,216**	**$165,649**	**$36,594,720**	**$9,137,382**

BCR 0%	3.19
BCR 3%	1.27

Project Schedule



City of TUSCALOOSA

Project Costs

BUILD FY26 - NOFO COST ESTIMATE TABLES - STILLMAN BLVD BRIDGE REPLACEMENT

Funding Source	Stillman Blvd Bridge Replacement (Component 1)
BUILD Funds	$22,641,209
Other Federal Funds	$0
Non-Federal Funds	$4,000,000
Total Project Cost	$26,641,209

Cost Classification	BUILD Funds	Other Federal Funds	Non-Federal Funds	Total Project Costs
Preliminary Engineering[1]	$0	$0	$0	$0
Design[1]	$0	$0	$0	$0
Environmental[1]	$0	$0	$0	$0
ROW	$1,402,264	$0	$247,737	$1,650,000
Utility Relocation	$3,526,905	$0	$623,095	$4,150,000
Construction	$14,347,384	$0	$2,534,738	$16,882,122
CE&I	$1,319,473	$0	$233,110	$1,552,583
Contingency	$2,045,183	$0	$361,321	$2,406,504
Total Funding	$22,641,209	$0	$4,000,000	$26,641,209

1 - Cost Classifications have already been paid before from previously incurred expenses

2020 Census Tracts	Project Costs per Census Tract
Census Tract 116	$19,505,907
Census Tract 118	$7,135,302
Total Project Cost	**$26,641,209**

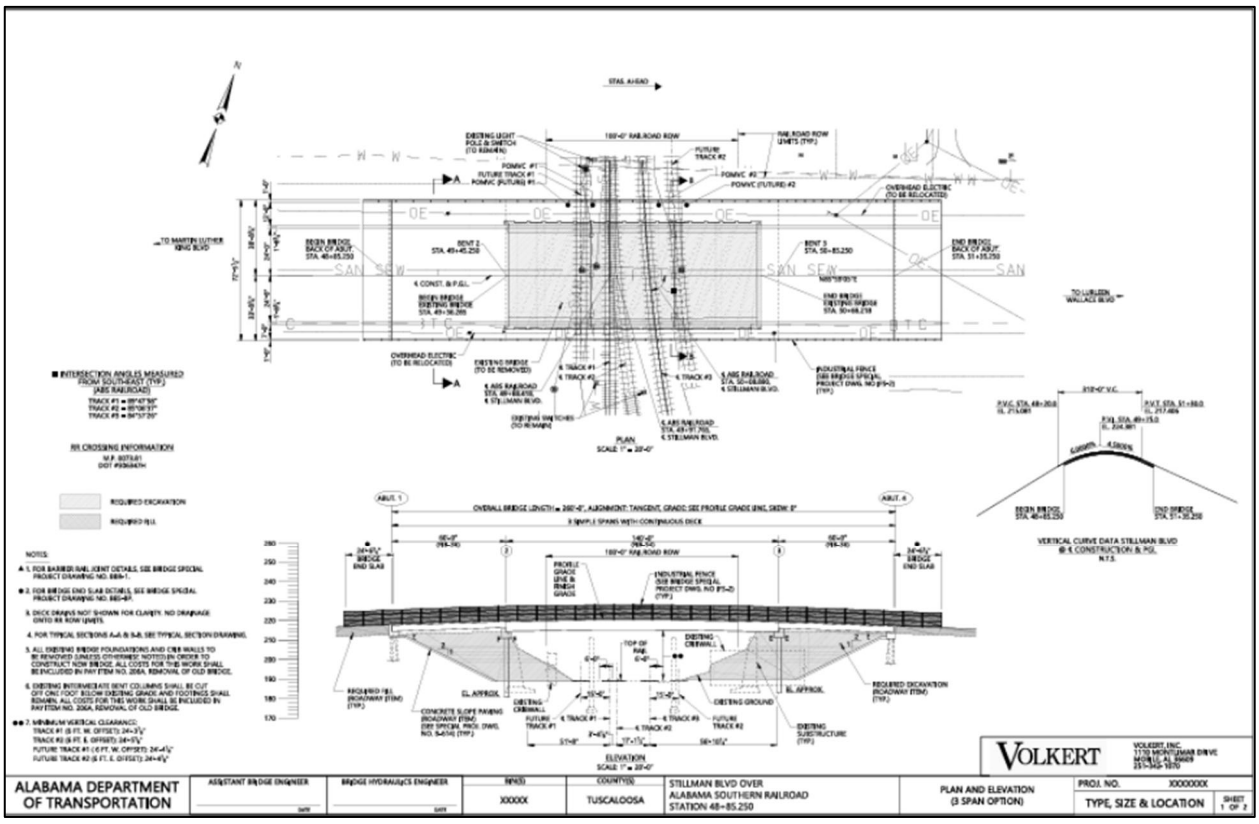
Urban and Rural	Project Costs
Urban	$0
Rural	$26,641,209
Total Project Cost	**$26,641,209**

City of TUSCALOOSA

Project Costs continued

Item No	Item	Qty	Unit	Unit Cost	Total Cost	Remarks
Removals						
201A002	Clearing and Grubbing	1	LS	$ 48,000.00	$ 48,000.00	6 acres @ $8000 per acre
205A001	Removal of Structures (Sturctures 1-5)	5	EA	$ 50,000.00	$ 250,000.00	Includes Asbestous Remediation
206A000	Removal of Old Bridge, Sta 49+36.32	1	LS	$ 250,000.00	$ 250,000.00	Deck Size 128' x 55' Incl Abut and Be
206C000	Removing Concrete Sidewalk	620	SY	$ 70.00	$ 43,400.00	
206D001	Removing Guardrail	1065	LF	$ 15.00	$ 15,975.00	
206D003	Removing Curb & Gutter	2980	LF	$ 30.00	$ 89,400.00	
206D008	Removing Retaining Wall	350	LF	$ 300.00	$ 105,000.00	Crib Retaining Wall
206E001	Removing Inlets	10	EA	$ 1,750.00	$ 17,500.00	
206E008	Removing Guardrail End Anchor (All Type)	4	EA	$ 400.00	$ 1,600.00	
Earthwork						
210A000	Unclassified Excavation	10630	CY	$ 45.00	$ 478,350.00	
210D011	Borrow Excavation (A4 or Better)	18532	CY	$ 45.00	$ 833,940.00	
230A000	Roadbed Processing	19	STA	$ 1,500.00	$ 28,500.00	
650A000	Topsoil	1050	CY	$ 50.00	$ 52,500.00	
Base & Pavement						
301A012	Crushed Aggregate Base Course, Type B, Plant Mixed, 6" Compacted Thickness	5750	SY	$ 30.00	$ 172,500.00	
408B001	Micro-Milling Existing Pavement (Approximately 1.10" Thru 2.00" Thick)	2850	SY	$ 7.50	$ 21,375.00	
424A360	Superpave Bituminous Concrete Wearing Surface Layer, 1/2" Maximum Aggregate Size Mix, ESAL Range C/D	610	TN	$ 140.00	$ 85,400.00	135 lb/sy
424B650	Superpave Bituminous Concrete Upper Binder Layer, 3/4" Maximum Aggregate Size Mix, EASL Range C/D	825	TN	$ 145.00	$ 119,625.00	265 lb/sy
424B680	Superpave Bituminous Concrete Lower Binder Layer, 3/4" Maximum Aggregate Size Mix, ESAL Range C/D	825	TN	$ 165.00	$ 136,125.00	265 lb/sy
424B658	Superpave Bituminous Concrete Upper Binder Layer, Leveling, 3/4" Maximum Aggregate Size Mix, ESAL Range C/D	350	TN	$ 175.00	$ 61,250.00	Avg 4" along 300' x 44'
450B000	Reinforced Cement Concrete Bridge End Slab	325	SY	$ 350.00	$ 113,750.00	
618A000	Concrete Sidewalk, 4" Thick	2345	SY	$ 125.00	$ 293,125.00	Includes Multi-Use Path
618C001	Detectable Warning Surface	300	SF	$ 75.00	$ 22,500.00	
618D000	Curb Ramp	170	SY	$ 350.00	$ 59,500.00	
623C000	Combination Curb & Gutter, Type C	3240	LF	$ 65.00	$ 210,600.00	
630A001	Steel Beam Guardrail, Class A, Type 2	890	LF	$ 40.00	$ 35,600.00	
630C079	Guardrail End Anchor, Type 13 (MASH)	4	EA	$ 4,500.00	$ 18,000.00	
630C080	Guardrail End Anchor, Type 20 (MASH)	4	EA	$ 4,500.00	$ 18,000.00	
Retaining Walls						
529A021	Retaining Wall #1 (NW Quad)	4160	SF	$ 200.00	$ 832,000.00	
529A022	Retaining Wall #2 (SW Quad)	4369	SF	$ 200.00	$ 873,800.00	
529A025	Retaining Wall #5 (NE Quad)	2028	SF	$ 200.00	$ 405,600.00	
529A026	Retaining Wall #6 (SE Quad)	3248	SF	$ 200.00	$ 649,600.00	
Subtotal Roadway Items						$ 2,761,
					$ 6,342,515.00	
Roadway Allowance Items						
	Drainage (5% of Roadway Items)				$ 317,125.75	
	Erosion Control (2.5% of Roadway Items)				$ 158,562.88	
	Roadway Incidentals (10% of Roadway Items)				$ 634,251.50	
	Signing and Striping (1.5% of Roadway Items)				$ 95,137.73	
	Traffic Control (3.5% of Roadway Items)				$ 221,988.03	
Roadway Subtotal						
					$ 7,769,580.89	
Electrial (Lighting and Signals)						
	Traffic Signal at Stillman Blvd / MLK Blvd	1	LS	$ 125,000.00	$ 125,000.00	Signal Modification
	Traffic Signal at Stillman Blvd / Nick's Kids Ave	1	LS	$ 375,000.00	$ 375,000.00	Signal Replacement and Ped Featur
	Signal Timing Adjustments to Lurleen Wallace and 15th Street	1	LS	$ 250,000.00	$ 250,000.00	Signal Timing Adj and Maint during Cons
	Roadway Lighting	1635	LF	$ 175.00	$ 286,125.00	Non-Decorative
	Path Lighting	1635	LF	$ 75.00	$ 122,625.00	Non-Decorative
Roadway Subtotal						
					$ 8,928,330.89	
Bridge						
	Required Bridge (3 Span: 140' x 72.5' Main Span FIB 54 Girders, 2 - 60' Approach Spans FIB 36 Girders)	18850	SF	$ 350.00	$ 6,597,500.00	
Design Subtotal						
					$ 15,525,830.89	
Additional Construction						
	Mobilization (5%)				$ 776,291.54	
	Engineering Controls (0.5%)				$ 77,629.15	
	Utility Relocation Cost (City of Tuscaloosa Water & San Sewer)				$ 1,900,000.00	
	Utility Relocation Cost (APCO - Power)				$ 2,250,000.00	Relocation of Distribution Not Includ
	Right-of-Way and Relocations				$ 1,400,000.00	
	Right-of-Way Acquisition				$ 250,000.00	Including Appraisal and Review
	Railroad Costs (Construction Administration)				$ 40,000.00	
	Railroad Costs (Flagmen during Construction)				$ 540,000.00	360 days @ $1500 per day
	Construction Engineering & Inspection (10%)				$ 1,552,583.09	
Project Total						
					$ 24,312,334.67	
Contigency						
	Design Contingency (15%)				$ 2,328,874.63	
Grand Total						
					$ 26,641,209.30	

The Stillman Bridge Project



Benefit-Cost Analysis

Calculations

Safety · Mobility · Economic Opportunity

City of TUSCALOOSA

Grant Program: FY 2026 BUILD Grant
Applicant: City of Tuscaloosa, Alabama
Grant Request: $22,641,209
Matching Funds: $4,000,000
Total Project Cost: $26,641,209

8. COST EFFECTIVENESS REVIEW: BENEFIT-COST ANALYSIS

The City of Tuscaloosa's *Stillman Bridge Project* evaluated existing road conditions as the baseline condition or No-Build scenario to the Build Scenario which represents the proposed road improvements. The BCA spanned a 33-year project period. Years one through three have been modeled to reflect the project's construction period. Project costs have been accounted for during those years. Project benefits begin to accrue in 2029, which is the first year after construction completion. Project benefits have been modeled over a 30-year period. This period was selected based upon the City's plan to undertake significant operation and maintenance activities throughout the 30-year operational time period. Based on these operations and maintenance plan, the City believes that a 30-year project's useful life is appropriate for this BCA modeling exercise.

The City believes that the four-lane road network on Stillman Boulevard Bridge will be used for at least 60 years with the required operations and maintenance. Therefore, the City has included a Residual Value and Remaining Service Life in the computation of project benefits but limited the residual benefit to an additional 10 years or a total useful life of 40 years.

Project benefits were collected by various methods and consistent with US DOT BCA 2025 Guidance. The City collected transportation data for accidents over a nine-year period in the project area and applied a crash modification factor based on planned road improvements to determine project benefits.

Current Status and Problem to be Addressed	Proposed Project to Address Problem	Example Impacts
Due to age and deterioration, the current carrying capacity of the Stillman Boulevard Bridge has been reduced by 20 – 30%.	Replace Stillman Boulevard Bridge to meet current regulations and standards and to remove restrictions on trucks.	Elimination of truck detours, reducing average travel distances by approximately 1.5 miles per trip.
The Stillman Boulevard Bridge does not provide adequate grade separation for the Railroad.	Replace Stillman Boulevard Bridge to meet current horizontal and vertical clearances for safe and compliant use.	Improved freight movement efficiency, lowering transportation costs, and fuel consumption.
Width of the sidewalks does not meet the current minimum standard.	Replace Stillman Boulevard Bridge to add additional access to bikes and pedestrians.	Improved safety and capacity for pedestrians and cyclists.