

MERIT CRITERIA

The Catawba Crossings Project is expected to provide regional travel benefits including enhancing connectivity, accessibility and mobility between Gaston, Mecklenburg and York counties, while also improving equitable access to employment, medical, educational and recreational opportunities in each county. An additional crossing would also be expected to reduce traffic volumes and congestion along some of the existing transportation corridors in the area, improving the vitality and resiliency of these existing corridors for years to come.

The Catawba Crossings Project will provide a critical connection between Gaston County, York County, SC, and Mecklenburg County, creating community, access, jobs, and opportunity.

A. SAFETY

CRASH ANALYSIS

For the Catawba Crossings Feasibility Study, crash data was provided by NCDOT for crashes that occurred between June 1, 2015 and May 31, 2020 for the corridors to the right. Over this five-year period, 4,436 total crashes were reported along the identified corridors.

- ▶ I-85 – just west of Exit 26 (Belmont-Mt. Holly Rd) in Belmont to Tuckaseegee Rd in Charlotte
- ▶ US 29/74 – Archibald St/Palisades Cir in Belmont to Tuckaseegee Rd in Charlotte
- ▶ NC 279 – Stowe Rd in Gastonia to Conservancy Dr in Belmont
- ▶ NC 273 – YMCA Dr in Mount Holly to NC 279 in Belmont

The map below shows the approximate locations within the study area that experienced the highest number of crashes (at least 100 crashes per 0.25-mile segment) and the breakdown of crashes by severity is shown in Table 1 on the following page.



Corridor	Limits	Number of Crashes				Property Damage	
		Fatal	Class A	Class B	Class C	Only	Total
I-85	Just west of Exit 26/Belmont Mt. Holly Rd in Belmont to Tuckaseegee Rd in Charlotte	6	10	60	366	2088	2530
US 29/74	Archibald St/Palisades Cir in Belmont to Tuckaseegee Rd in Charlotte	5	5	47	211	671	939
NC 279	Stowe Rd in Gastonia to Conservancy Dr in Belmont	2	3	9	19	79	112
NC 273	YMCA Dr in Mount Holly to NC 279 in Belmont	1	7	35	111	701	855

Table 1. Crash Severity Summary

The most common crash type within the study area is rear-end collisions caused by slowing or stopping vehicles, making up approximately 50% of the total crashes on average. Rear end collisions are often associated with higher levels of congestion at signalized intersections or with stop-and-go conditions on congested roadways and interstates. The second most common crash type within the study area is sideswipe collisions caused by vehicles traveling in the same direction, making up approximately 19% of the total crashes. Sideswipe collisions are often associated with vehicles attempting to pass too closely around queued vehicles at signalized intersections or vehicles changing lanes on roadways and interstates in a congested area.

Based on review of the traffic forecast data, the Catawba Crossings Project is projected to decrease the AADT along I-85 and US 29/74 within the study area and along NC 273 north of the Catawba Crossings Corridor. Since most of the reported crashes were a result of crash types that are often associated with higher levels of congestion and along corridors that are currently congested, reducing congestion along these corridors through a reduction in traffic volumes could reduce the frequency of rear end and sideswipe crashes. Reduced incident rates would improve reliability of these Strategic Transportation Corridors.

The quantitative safety measures include impacts to injury, fatality, and property damage only (PDO) crashes. The cost savings from reducing injury crashes are much greater than those from reducing PDO crashes because of the societal cost associated with injuries. The safety analysis was based on the time range (2015 to 2020), study area, and roadway segments identified in the **Transportation Technical Memorandum (TTM) (Attachment 13)**. Accordingly, there was a total of 112 crashes on NC 279, 855 crashes on NC 273, 939 crashes on US 74/US 29, and 2,530 crashes on I-85 considered in the analysis.

The Catawba Crossings will improve the safety along key roadways in the project area by reducing the number of vehicles and thus reducing crash likelihood along roadway segments, at

intersections, and at the I-485 interchange. Over the 30-year analysis period, the roadway improvements are projected to reduce the expected number of crashes by 218 crashes.

B. ENVIRONMENTAL SUSTAINABILITY

Climate change is threatening the whole world, but minority and low income communities are suffering the negative consequences at a disparate rate. The Gaston-Cleveland-Lincoln MPO is committed to protecting and enhancing the environment, promoting energy conservation, and improving the quality of life for all, particularly those in the areas of disproportionate negative impacts who are living, working and visiting the area, while ensuring equity among all races, nationalities and incomes.

An overall reduction in travel time and more consistent travel speeds based on reduced congestion once the Catawba Crossings is constructed will result in emissions reductions. The quantitative environmental sustainability benefits of the Catawba Crossings include air quality impacts, water quality impacts, and fuel consumption impacts. Emissions reductions for the Project have been calculated based on VMT savings. Average in-use emission rates for both passenger cars and heavy-duty trucks from EPA documentation were used for VOCs, NO_x and PM_{2.5}. Average in-use Carbon Dioxide emissions rates for passenger cars were from EPA documentation while Carbon Dioxide emissions rates for heavy duty vehicles have been calculated using EPA documentation and FHWA Statistics on heavy duty vehicles. Sulfur Dioxide emissions rates for both passenger cars and heavy-duty trucks are based on a University of Nebraska-Lincoln study. The Catawba Crossings Project will result in over 1.1M metric tons of emissions saved over a 20-year period.

In addition, bicycle and pedestrian accommodations are an important component of the Catawba Crossings' vision. Mode shift from SOVs to active transportation modes will result in less fuel consumption by travelers. Each 1% shift from automobile to active travel typically reduces fuel consumption 2-4% based on case study research.

C. QUALITY OF LIFE

Quality of life benefits are evident in the Catawba Crossings' purpose, including travel time savings, improved access to daily destinations, inclusion of bicycle and pedestrian accommodations, and improved equity.

TRAVEL TIME SAVINGS

The Hwy 49 bridge crossing in York County is located approximately 10 miles from the southernmost bridge crossing in Gaston County (US 29/74). Providing an additional crossing over the Catawba River between Hwy 49 and US 29/74 is expected to significantly decrease travel times for citizens of southern Gaston and northern York counties traveling to/from Mecklenburg County by reducing distance traveled and providing an alternate route that allows travelers to

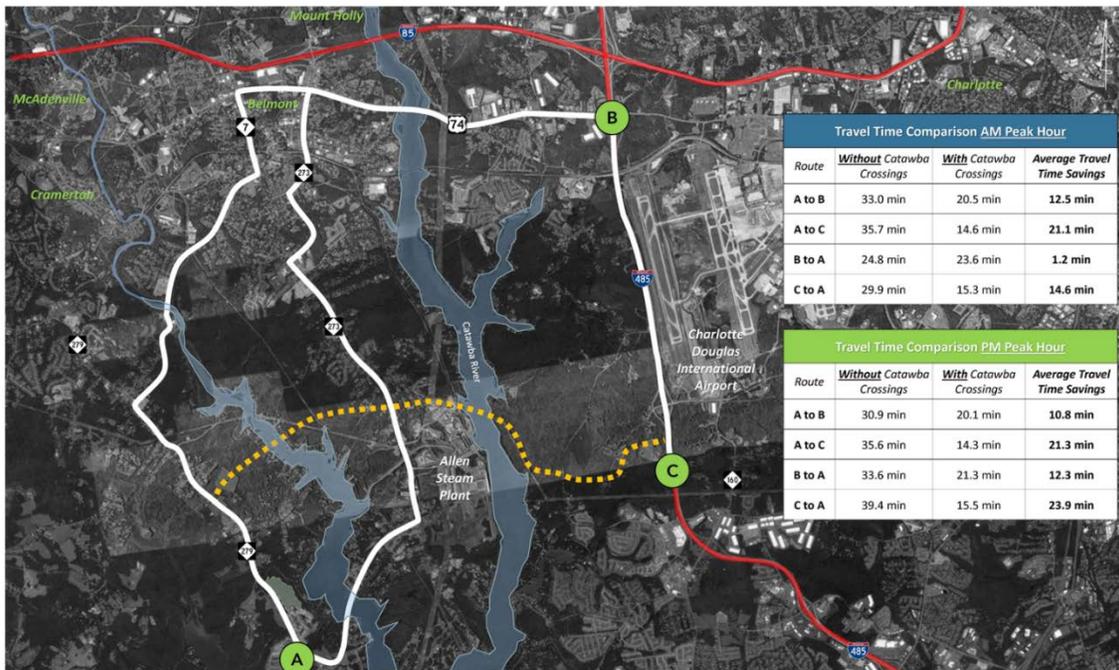
bypass the downtown/commercial areas of Belmont, including the NC 273, NC 279, and/or US 29/74 corridors. By doing so, the Catawba Crossings Project would not only reduce travel times for these travelers, but also reduce the traffic volumes and congestion along portions of these corridors north of the Catawba Crossings Project and at the two adjacent I-485 interchanges: US 29/74 and NC 160, improving conditions for inter- and intrastate travelers.

The TTM ([Attachment 13](#)) evaluated intersection Level of Service (LOS) and delay for each signalized, unsignalized, and roundabout study area intersection under the 2045 No-Build (without the Catawba Crossings) and the 2045 Build (with Catawba Crossings) conditions during the AM and PM peak hours. Overall, intersection delay was observed to decrease throughout the study area in the 2045 Build scenario when compared to the 2045 No-Build scenario. When a portion of future traffic shifts to the Catawba Crossings Corridor, some of the congestion along the US 29/74 corridor is expected to be alleviated with delays at the signalized intersections along US 29/74 closest to the Catawba River (i.e., NC 273 and I-485 Inner and Outer Loops) decreasing by up to 38 seconds on average per vehicle during the peak hours. Similarly, an additional crossing over the Catawba River is expected to alleviate congestion at the NC 160/ I-485 interchange by approximately 5-25 seconds per average vehicle as some traffic previously traveling from northern York County along Hwy 49 to the NC 160/I-485 interchange reroutes to the Catawba Crossings/I-485 interchange.

Further, a reduction in cumulative delay is expected along the US 29/74 corridor in the 2045 Build scenario. Vehicles traveling eastbound from Main Street in Belmont to I-485 during the AM peak hour are expected to experience less delay along the corridor at each of the study intersections with the Catawba Crossings Project in place, resulting in improved travel times. Similarly, vehicles traveling westbound along US 29/74 from I-485 to Main Street during the PM peak hour are expected to experience less delay along the corridor at each of the study area intersections with the Catawba Crossings Project in place. Reducing the delay and congestion along the US 29/74 corridor not only helps to improve traffic operations along the corridor upon build out of the Catawba Crossings Project, but is also expected to help improve the vitality and resiliency of the US 29/74 corridor for years to come.

The TTM also compared future No-Build and Build travel times between the NC/SC state line (on NC 279) in Gaston County and two different I-485 interchange locations in Mecklenburg County: the US 29/74 interchange with I-485 and the potential future West Boulevard/Catawba Crossings interchange with I-485. The analyses concluded that the average peak-hour travel time for travelers between the NC/SC state line and the US 29/74 interchange with I-485 is expected to be reduced by approximately 30% on average with the Catawba Crossings Project in place. The travel time benefit is considerably greater for travelers between the NC/SC state line and the potential future West Boulevard/Catawba Crossings interchange with I-485 with the average peak-hour travel time expected to be reduced by approximately 60% on average with the Catawba Crossings Project in place.

While the Catawba Crossings Project is expected to provide a significant travel-time savings for local, regional, and interstate drivers between southern Gaston/northern York County and Mecklenburg County, adding an additional crossing over the Catawba River is also expected to provide a benefit to local peak-hour travel time between southern Gaston County and both US 29/74 and I-85. Travel time savings are expected along NC 279 and NC 273 between southern Gaston County and the commercial corridor of US 29/74 in Belmont, as well as I-85, with a projected reduction of approximately 1-5 minutes per vehicle traveling northbound during the AM peak hour, on average, and 3-8 minutes per vehicle traveling southbound during the PM peak hour, on average.



BICYCLE AND PEDESTRIAN CONNECTIVITY

Bicycle and pedestrian accommodations are an important component of the Catawba Crossings' vision. Preliminary discussions with NCDOT-Integrated Mobility Division (IMD) have resulted in recommendations for wide roadway shoulders and separated bicycle and pedestrian facilities. Unprotected on-street bicycle traffic would not be encouraged given the proposed posted speed range of 40 to 60 mph. NCDOT-IMD and GCLMPO acknowledged that some cyclists would use the roadway and for this reason the conceptual design includes three-foot roadway shoulders and two-foot concrete curb and gutter. A separated multi-use path (MUP) would be included on one side of the road and a



separated sidewalk on the other side of the road. Further coordination, and agreement, will need to occur to determine the preferred MUP width, as different standards exist across the various jurisdictions. Continued coordination with the Carolina Thread Trail may further inform the MUP dimensions and location in conjunction with regional bicycle and pedestrian plans.

IMPROVED EQUITY

Gaston County and the project partners are working together to shape a community where everyone can thrive by advancing equity and inclusion and dismantling systemic inequities. Through dedicated Diversity, Equity, and Inclusion Departments, the project partners are committed to the integration of DEI into the delivery of public services in pursuit of equitable and just outcomes for everyone. The project partners are also committed to collaborating to facilitate a coordinated and innovative approach to this work. The Catawba Crossings also includes multimodal investments in accessible bicycle and pedestrian accommodations, as well as an opportunity to extend public transportation into an area that is not currently being served.

The combined benefits will allow different populations (children, elderly, and economically, socially, or physically disadvantaged people) to fairly use and share in public resources by increasing accessibility, connectivity, and affordability. More than 50% of older Americans who do not drive stay home on a given day because they lack transportation options.

HOSPITAL ACCESS

Residents on the west side of the proposed Catawba Crossings Project, specifically in lower Gaston County, are potentially impacted by the amount of time it takes to cross the river and access Charlotte-area hospitals during an emergency. Per the Federal Emergency Management Agency (FEMA) standards, a 1-mile increase in distance to emergency services increases the likelihood of community deaths due to Acute Myocardial Infarction (AMI) by 6.12 percent and the likelihood of community deaths due to unintentional injuries by 4.76 percent. As such, the current travel time and distance for lower Gaston County residents' results in a higher likelihood of death from a life-threatening injury or AMI compared to the travel time and distance with the Catawba Crossings Project in place. The amount of time to get patients to and from lower Gaston County during an emergency is critical.

It is recognized that a new hospital is planned to be in the Belmont Area, off Interstate 85 in Gaston County, and will include a 66-bed hospital, a 16-room emergency department, a labor and delivery unit, operating rooms, a medical office building and a parking deck. This new hospital and medical campus will likely serve a significant portion of the emergency room visits of Gaston County residents. To account for this facility, it was assumed that 60 percent of emergency room visits from Gaston County would be served by the new Belmont facility (or by other existing medical facilities west of the Catawba River). The remaining 40 percent of emergency room visits would be served by Charlotte area hospitals and thus would benefit from the reduced travel distance/time that would result from Catawba Crossings Project.

D. IMPROVES MOBILITY AND COMMUNITY CONNECTIVITY

The Catawba River creates a natural barrier to mobility between Mecklenburg County to the east and Gaston and York counties to the west. There are currently five bridges connecting Gaston and York counties to Mecklenburg County (NC 16, NC 27, I-85, and US 29/74 in Gaston County and Hwy 49 in York County). The four bridge crossings in Gaston County are located approximately one to four miles apart. The bridge crossing in York County (Hwy 49) is located approximately 10 miles from the closest bridge crossing in Gaston County (US 29/74).



South of I-85 in Gaston County, the lack of continuous east-west roadways makes travel circuitous and limits mobility. The limited inter-county connections force drivers with origins/destinations in southern Gaston and northern York (SC) counties traveling to and from Mecklenburg County to cross the Catawba River via I-85, US 29/74, or Hwy 49, each of which provide critical regional, intrastate, and interstate connections.

As a result, the I-85, US 29/74, and Hwy 49 corridors experience overcapacity conditions by being forced to combine traffic streams to serve much of the local, regional, and interstate traffic crossing the Catawba River leading to increased congestion and safety concerns. The limited east-west connectivity also contributes to congestion and safety concerns on the primary north-south arterials serving the area (e.g., NC 273 and NC 279) because all east-west trips in the area must use these routes to access one of the existing crossings of the Catawba River identified above.

The nature of the existing transportation network places incredible pressure on critical regional, intrastate, and interstate facilities. High crash frequencies on I-85 (see Section 2.1) contribute to unexpected delays on the interstate facility. During such incidents, interstate traffic commonly reroutes to avoid the traffic incident and exacerbates normal congestion conditions on US 29/74. As a result, travel time reliability for I-85 and US 29/74 are closely aligned and eroded daily. Because these two close parallel routes (US 29/74 and I-85) serve the basic function to provide connectivity between Gaston and Mecklenburg counties and because they accept traffic from the other due to incidents, US 29/74 and I-85 tend to function as a single thoroughfare.

Western Mecklenburg, southern Gaston, and northern York counties are currently experiencing significant growth with increasing growth pressures anticipated in the coming years. This will increase the local traffic in these areas and create additional stress on the existing transportation networks within the region.

The combination of existing transportation deficiencies and future development anticipated in the region produces a significant need for additional mobility options in the area. Options that will improve the vitality and resiliency of the regional transportation network, offer mobility choices, and enhance the quality of life for residents and users in the area.

Creating a new crossing over the Catawba River between US 29/74 and Hwy 49 would be expected to provide regional travel benefits including enhancing connectivity, accessibility, and mobility between Gaston, Mecklenburg, and York counties, while also improving equitable access to employment (e.g., CLT and job centers in western Mecklenburg County), medical, educational, and recreational opportunities in each county. An additional crossing will reduce traffic volumes and congestion on some of the existing area transportation corridors, improve the capacity and throughput of freight and long-distance intrastate travel for motorists, while also increasing their longevity and reliability and improving safety.

E. ECONOMIC COMPETITIVENESS AND OPPORTUNITY

In September 2017, the Greater Gaston Development Corporation commissioned MXD Development Strategists Ltd. to prepare the **Gaston County CLT Airport Connected Economic Positioning Strategy**. Through a collaborative public-private approach, the Strategy is designed to fully leverage Gaston County's close proximity and access to the Charlotte Douglas International Airport (CLT) and its Norfolk Southern Intermodal Center. The Strategy is in place to inform and help guide Gaston County in long-range planning and economic development initiatives as they relate to the CLT Airport. As Charlotte's economy continues to grow, it creates opportunities for growth among businesses that have an economic relationship to the CLT Airport. By leveraging Gaston County's proximity to the CLT Airport to attract private/public sector Airport Connected Development industries, new opportunities for regional economic growth will arise.

According to the **Gaston County CLT Airport Connected Economic Positioning Strategy**, by virtue of providing a direct connection to the CLT Airport, the Catawba Crossings Project would dramatically improve economic development and employment opportunities in Gaston County and western Mecklenburg County in addition to providing a secondary relief route for vehicle congestion on I-85 and US 29/74.

"Once complete, the Catawba Crossings Project would have a significant impact on future economic development and transportation access for Gaston County and the region. Having another access route to CLT and its Intermodal Center, as envisioned with the proposed Catawba Crossings, would contribute greatly to unlocking the potential of strategic land in Gaston County for economic growth and development. The Project would also facilitate continued development of strategic projects in Charlotte and Mecklenburg County."

Gaston County CLT Airport Connected Economic Positioning Strategy

An improvement in travel accessibility will generate increased opportunities in business and the labor market. Improvement in travel time and convenience creates a greater field of opportunities from a larger geographic catchment for the same cost of travel. Increasing accessibility between labor markets and industries results in:

- Agglomeration economies include business time savings, improved reliability, and increased output in imperfectly competitive markets.
- Improved labor market conditions are created from the fact that as generalized costs fall, firms and workers in their existing locations will be closer to each other, and the locations become more accessible, which results in:
 - More people choosing to work because of commuting travel time savings.
 - Some people choosing to work longer hours because they spend less time commuting.
 - Some people changing to a higher paid and a more productive job, as better transportation improves the accessibility of firms and workers.
- Greater tax revenues from increased business and employment.

In addition, construction of the Catawba Crossings will create temporary quality jobs during construction, increasing wages in the local economy and providing economic benefits to local suppliers and contractors.

F. STATE OF GOOD REPAIR

As congestion continues to worsen in southeastern Gaston County, the Catawba Crossings Project reduces the potential for conflicts between all modes, reduces travel time, and improves air quality in this area, which is currently in a maintenance area for ozone levels.

The Charlotte MSA (Charlotte Metro) region is one of the fastest growing regions in the United States. Over the last decade, more than 888,000 people moved to this area, many of whom have made their homes in Gaston County. This impactful growth has created a decade-long growth rate of 59.6%. This tremendous growth has placed a significant burden on the region's transportation facilities, particularly the I-85 corridor through Gaston County. It is not uncommon for several miles-long (+7 miles) queues to form on I-85 during the AM and PM peak hours.

G. PARTNERSHIP AND COLLABORATION

Community engagement and participation in decision-making is a fundamental principle of EJ, and is critical to achieving outcomes that reflect the needs of all affected stakeholders to the greatest extent possible. Low-income and minority communities have historically borne disproportionately high or adverse human health or environmental effects of infrastructure projects.

The GCLMPO developed a Catawba Crossings Community Engagement Plan (CEP) to guide an extensive public and stakeholder program throughout the development of the Catawba Crossings Feasibility Study. Outreach included social media and email announcements, stakeholder interviews, steering committee meetings, resource and regulatory agency coordination, elected official briefings, and public meetings. Additionally, the Project Team was routinely engaged throughout development of this study. All pertinent documents and memoranda generated in the development of this Feasibility Study, as well as public meeting summaries and comment responses, can be found in [Attachment 14](#). Extensive public outreach and engagement identified broad local support, both public and political, for the Catawba Crossings Project.

The GCLMPO and regional transportation partners must continue to advance the Project in a transparent manner and continue to build on this support, ensuring that there is robust and inclusive public engagement throughout the Environmental Document process, paying particular attention to how the project partners engage with underrepresented community members to not only inform and include adjacent residents in the study, but document their vision, ideas and concerns.

Gaston County is working to shape a community where everyone can thrive by advancing equity and inclusion and dismantling systemic inequities. Through a dedicated Diversity, Equity, and Inclusion Department, Gaston County is committed to the integration of DEI into the delivery of public services in pursuit of equitable and just outcomes for everyone.

RECENT PUBLIC COMMENT OPPORTUNITIES

Two (2) 30-day review and comment periods were held during the development of the Catawba Crossings Feasibility Study. Outreach materials were translated to Spanish and distributed via social media, email, and targeted placement of hard copy material (i.e., fliers, yard signs).

Virtual Public Comment Opportunity 1

The first public comment opportunity was conducted “virtually” between January 6 and February 4, 2021. The public was invited to visit the Project Webpage, review project materials, and provide written feedback via an online MetroQuest survey or by email.

One thousand one hundred seventy-five (1,175) individuals took the MetroQuest survey which consisted of a variety of questions including current travel behavior and experiences, transportation needs, and priorities and preferences to consider in the development of the Catawba Crossings Project. Additionally, 509 written comments were received.



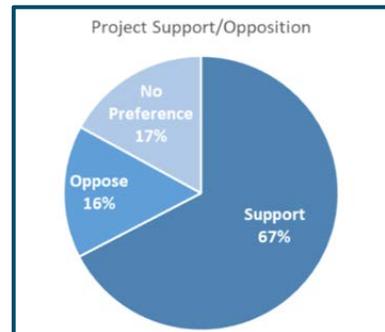
Most survey respondents reported a Belmont zip code (53%) with Clover (SC) and Gastonia rounding out the top three with 16.8% and 7.6%, respectively. Demographic data collected by the survey revealed approximately 50% were male and 46% female between the ages of 25 and 64. Most survey respondents reported as “white” (86.5%) with “prefer not to say” and African American rounding out the top three with 9.3% and 1.5%, respectively. Hispanic/Latino participation in the survey was under 1%.

Public Comment Opportunity 2

The second public comment opportunity was conducted as a hybrid public meeting, consisting of a virtual, on-line open house coupled with an in-person Public Meeting Open House. The public was invited to visit the Online Open House at the Project Webpage, review project materials, and provide written feedback via an online Story Map, Survey123, or by email.



The GCLMPO collected 137 comments via the Online Open House between January 14 and February 13, 2022. An additional ten written comments were collected at the Public Meeting Open House on February 2, 2022, at which approximately 100 individuals signed in. Demographic surveys were completed by 14 individuals and revealed similar participation patterns despite the small sample size. In all, the GCLMPO received 147 written comments during the public comment opportunity 2. Though not specifically asked, of the 147 written comments received from the public, 122 explicitly voiced support or opposition for the Catawba Crossings Project (i.e., 99 in support, 23 opposed, and 25 no preference).



Stakeholder Interviews

The GCLMPO hosted 20 stakeholder interviews in November 2020 with individuals representing various organizations and interest groups across the Charlotte metropolitan area. Stakeholders were provided a questionnaire prior to the scheduled one-hour interview to organize discussion.

The questionnaire touched on the following discussion topics:

- transportation need(s) and challenges meeting those needs;
- primary objectives, goals, and priorities for the future transportation system;
- ongoing planning activities or planned developments the Project Team should be aware of;
- feedback on the Project’s preliminary need and purpose statements;
- potential impacts of special concern to you/your organization;
- potential opportunities for consideration during planning; and
- identification of other local organizations or civic groups the Project Team should coordinate with.

PARTNERSHIPS

The Catawba Crossings is a top priority for Gaston County due to the potential for local and regional benefits. This project represents a unique conglomeration of stakeholders and partnerships. The Catawba Crossings is a joint undertaking between local, regional, state and private entities.



Gaston County’s mission is clear as it seeks to be among the finest counties in North Carolina by providing effective, efficient and affordable services leading to a safe, secure and healthy community, an environment for growth, and promoting a favorable quality of life. The County supports the Catawba Crossings Project as an important part of this mission.



The Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO) is a multi-jurisdictional entity made up of 34 local governments, NCDOT, FHWA, and other providers of transportation services to jointly plan for transportation improvements in the three-county region. The Catawba Crossings has been included in the MPO’s long-range

transportation plans for many years. The MPO is committed to the success of this project with the recent completion of the Catawba Crossings Feasibility Study. In addition, the MPO stands ready to process any amendments to the TIP and Metropolitan Transportation Plan (MTP) that may be required when the Catawba Crossings Project is funded.



The Charlotte Regional Transportation Planning Organization (CRTPO) is the federally designated Metropolitan Planning Organization (MPO) for the Charlotte Urbanized Area. The CRTPO’s Comprehensive Transportation Plan (CTP) includes the

Catawba Crossings Project (referenced as the Western Parkway) and the CRTPO continues to be a key partner in the project, working closely with the GCLMPO on the completion of the Catawba Crossings Feasibility Study.



NCDOT was the majority funder of the Catawba Crossings Feasibility Study. Close collaboration and coordination with the Department continues to be imperative for the success of this project.



Reducing traffic congestion and investing in transportation are consistently identified as top priorities for the City of Belmont. The Catawba Crossings is included in the City’s Comprehensive Land Use Plan, noting that the diversion of through travel on the Catawba Crossings would reduce traffic growth on US Highway 74/Wilkinson Boulevard and provide a much needed connection between Belmont and the currently separated adjacent communities.



It is noted in the Cramerton Land Use Plan that the Town will support the implementation of the Catawba Crossings project, an important connection between Cramerton, southeastern Gaston County, and major job centers in Charlotte/east of the Catawba River, and will continue to work with NCDOT and GCLMPO on pursuing future funding.



The City of Gastonia's elected leadership is setting the overall tone for the importance of transportation in the city by their promotion of the Catawba Crossings as one of the top transportation priorities for the City. The Goals and Objectives for 2022-2024 states that the City of Gastonia will continue to partner with the GCLMPO, CRTPO, NCDOT, Gaston County, surrounding municipalities, the City of Charlotte, and private property owners to study and construct a new southern boulevard connection from Gaston County to Mecklenburg County over the South Fork and Catawba Rivers, with a new interchange at I-485.



In 2019, NCDOT initiated Feasibility Study No. H184060 to evaluate the Catawba Crossings corridor in Mecklenburg County to account for planned and permitted development in and around the Charlotte-Douglas International Airport (CLT). As a stakeholder in the Catawba Crossings Feasibility Study, CLT will continue to work with the project partners to evaluate viable alternatives to accommodate changes to the airport's mater plan, specifically the expansion of Norfolk Southern Railway's Multimodal Yard.



As a member of the Project Team for the Catawba Crossings Feasibility Study, the Charlotte Department of Transportation (CDOT) will continue to be a valuable project partner.



The Gaston Business Association (GBA), a Carolinas Accredited Chamber of Commerce, is a member organization committed to the support and growth of businesses in Gaston County. The GBA is building upon the work of the Gaston Regional Chamber of Commerce and the Greater Gaston Development Corporation to deliver a stronger, more unified voice of business to create, influence, and leverage economic opportunities throughout Gaston County. With transportation and access being a focus area of the GBA, the Catawba Crossings is instrumental to meeting their transportation and economic development objectives.

This project also exhibits wide support from the region's elected officials, businesses, and civic organizations. Letters and resolutions of support have been or are in the process of being secured from U.S. Senators Tedd Budd and Thom Tillis, U.S. Representative Jeff Jackson, the local NC General Assembly delegation, the GBA, the Charlotte Regional Business Alliance, GCLMPO,

NCDOT, and many other local support agencies. Letters of support for this project are included as [Attachment 9](#) and are also provided on the [project website](#) as additional letters are received.

H. INNOVATION

The Duke Energy Allen Steam Station and associated coal ash ponds are located south of the Project Corridor on the west bank of the Catawba River. As part of its goal to achieve net-zero carbon emissions by 2050, Duke Energy has announced that the power generating station will be decommissioned, though the exact schedule is unknown. The NC Department of Environmental Quality (DEQ) has approved a closure plan for the Allen Steam Station and outlines how nearly all the coal ash will be excavated and moved to three, new onsite lined landfills (NC DEQ, 2020).

As part of the ongoing development of the Catawba Crossings Project, the project partners will continue to research the beneficial use of coal ash stored at the Duke Energy Allen Steam Station in the construction of the Project. Duke Energy has been recycling coal ash for more than 40 years and now has three ash processing facilities located in North Carolina. The process changes the chemical composition of the coal ash so that it is suitable and safe for use in concrete-based construction materials.

According to Duke Energy:

“Ash-fortified construction materials are stronger and more durable for roads, bridges and other structures than standard materials. For some projects, like the Arthur Ravenel Jr. Bridge over the Cooper River in Charleston, S.C., engineers requested ash-infused concrete to support long spans and challenging designs. The use of coal ash in construction products dates to the 1930s when it was used in projects like the Hoover Dam across Nevada’s Colorado River. The U.S. Environmental Protection Agency has extensively studied the use of ash in concrete and found it to be safe.”

In addition, Project partners will explore a partnership with the **Energy & Environment Innovation Foundation, LLC**, established in 2017 to address the growing need for practical and cost-effective solutions for providing clean energy and clean water, as well as the **Coal Ash and Liquid Management (CALM) Initiative**, launched in September 2015 at UNC-Charlotte to develop practical, technology-based solutions for the energy production industry to address problems and challenges with coal ash and liquids management.

CONCLUSION

The Catawba Crossings Feasibility Study indicates that providing an additional crossing over the Catawba River between NC 279 (S New Hope Road) in Gaston County and NC 160 (Steele Creek Road) in Mecklenburg County would be expected to:

- Reduce travel time for commuters traveling between southern Gaston County, northern York County and I-485 in Mecklenburg County during the peak hours.
- Improve the resiliency of the US 29/74 corridor within the study area by decreasing traffic volumes and improving traffic operations along the corridor.
- Reduce congestion within the study area by reducing delay at study area intersections along US 29/74, NC 160, N Main Street, and NC 273 north of the Catawba Crossings corridor.
- Increase mobility options by providing an alternate route between southern Gaston/northern York County and Mecklenburg County.
- Reduce the frequency of crashes by reducing traffic volumes along portions of US 29/74, I-85, and NC 273 north of the Catawba Crossings corridor.