

Project Definitions

Updated October 2022

Alternatives Analysis: The evaluation of all reasonable alternatives and general alignment options for identified transportation needs in a particular, broadly defined travel corridor. (In the case of LCRT, that corridor is the I-26 Corridor.)

BCDCOG (Berkeley-Charleston-Dorchester Council of Governments): BCDCOG is an association of, by and for local governments that was established to assist Berkeley, Charleston, and Dorchester County leaders in working collaboratively. The three-county regional planning agency is also the federally recognized project sponsor for Lowcountry Rapid Transit.

Bi-directional Bus Lane: A single bus lane, typically in the center of the road, that enables buses to have priority over congested traffic. If two buses arrive at the bi-directional bus lane at the same time, the bus that is travelling opposite of the majority of vehicles will yield to the bus travelling in the peak-direction (the same direction as the majority of vehicles). Locations with limited right-of-way may be a candidate for this type of application.

BRT (Bus Rapid Transit): Bus Rapid Transit is a high-quality, bus-based transit system that leverages modern technology to deliver fast, frequent, and reliable service that may include dedicated lanes, busways, traffic signal priority, off-board fare collection, elevated platforms and enhanced stations.

BRT Corridor: A section of road or roads served by a bus route or multiple bus routes that includes dedicated bus lanes.

Capital Investment Grants Program (CIG) Project Rating: The CIG Project Rating is the score FTA uses to determine whether to approve a project's advancement into the next phase in the New Starts and Core Capacity approval process. It is based on a defined set of criteria. FTA computes this overall project rating by averaging the summary ratings of the project justification criteria and local financial commitment criteria. At Entry into Engineering, LCRT received a medium-high rating, the second highest on the rating scale.

CARTA (Charleston Area Regional Transportation Authority): CARTA operates the Charleston metro area's public transportation system. It is the state of South Carolina's largest public transportation provider.

CHATS (Charleston Area Transportation Study): CHATS is the designated Metropolitan Planning Organization (MPO) for our region. CHATS is staffed by BCDCOG, which facilitates the MPO's programs and initiatives.

CIG (Capital Investment Grants Program): FTA’s CIG program is a discretionary and competitive federal grant program. Through the FTA, CIG funds more than \$2 billion per year to construct new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit, ferries and more. This program will fund up to 80% for major transit construction projects. LCRT will compete for these funds and, as the system expands, funding can be pursued through the program to fund future BRT corridors identified in the Regional Transit Framework plan.

Class of Action: A class of action indicates the seriousness of the impacts and the resulting level of documentation required in the NEPA process. The three classes of actions, in order of increasing complexity, are: Categorical Exclusions, Environmental Assessments, and Environmental Impact Statements. The current class of action for LCRT is a Documented Categorical Exclusion (DCE). A DCE is a type of Categorical Exclusion that requires additional detail but does not involve significant environmental impacts to require the level of documentation of an Environmental Assessment.

Commuter Express: A commuter express bus service is a fixed-route bus characterized by service predominantly in one direction during peak periods, limited stops, use of multi-ride tickets and routes of extended length. Service is usually between the central business district and outlying suburbs.

Contactless Ticketing: Transit customers pay fare through electronic communication that allows two devices (i.e., a mobile phone and fare box on bus) to communicate wirelessly when they are within a specific distance of one another using radio-frequency identification.

Design Criteria: To assist the engineering team, design criteria are developed to document general requirements or regulations that cover project elements like stations, roadway, storm water, street lighting and bike/pedestrian facilities.

Design Exception: A design exception is a documented design decision that does not meet minimum design criteria for a project.

Edge of Pavement: The extent of pavement, including concrete, asphalt, gravel, or landscaping, and the location of curbing for a project.

FAST Act: The Fixing America’s Surface Transportation (FAST) Act is a funding and authorization bill to govern federal surface transportation spending. It was passed in December 2015 and was completed in December 2020.

Fixed Guideway: A fixed guideway is any public transportation infrastructure that uses and occupies a separate right-of-way for the exclusive use of public transportation and other high occupancy vehicles. BRT incorporates fixed guideways to improve reliability and travel speed along the corridor.

Fixed Route Service: Buses, vans and other vehicles that operate on a predetermined route according to a predetermined schedule.

FTA (Federal Transit Administration): The Federal Transit Administration is the lead federal agency providing financial and technical assistance for the LCRT project. FTA also oversees the National Environmental Policy Act (NEPA), which is ultimately the deciding factor in whether to permit projects.

FTA NEW Starts Program: New Starts is one of the discretionary programs in the CIG grant program. New Starts is for large investments over \$300M and/or seeking more than \$100M in CIG funds. It is required that over 50% of the project's guideway must be exclusive, meaning it must run in dedicated lanes.

HDR: The Program Management consulting firm for LCRT project, providing oversight and guidance of engineering and design, project controls, FTA coordination and reporting and communications.

Infrastructure Investment and Jobs Act (IIJA): The IIJA is a funding and authorization act for Federal-aid highways, highway safety programs, transit programs and for other purposes. It was passed in November 2021 and will be completed in November 2026.

LCRT (Lowcountry Rapid Transit): The Lowcountry Rapid Transit project is a proposed bus rapid transit system connecting Ladson, North Charleston and Downtown Charleston that would provide reliable public transportation with frequent service, connect communities, and energize economic opportunities along the corridor.

Mobile Ticketing: Transit customers can pay for, obtain and/or validate tickets using mobile phones without the need for a physical ticket.

MPO (Metropolitan Planning Organization): A Metropolitan Planning Organization is a federally funded organization that is required to carry out short- and long-term transportation planning for the urbanized portions of metro areas.

NEPA (National Environmental Policy Act): The National Environmental Policy Act is the primary law governing the Federal Transit Administration's (FTA) environmental protection process. The NEPA process must be followed in order to qualify for federal funding. The act has four primary purposes:

1. to declare a national environmental policy;
2. to promote efforts to protect the environment;
3. to improve national understanding of environmental issues; and
4. to establish the Council on Environmental Quality.

Off-Board Fare Collection: Transit passengers pay fares before boarding, typically via ticket vending machines on the platform. This increases speed of BRT operations.

Paratransit Service: Any type of passenger transit that is distinct from conventional transit, operating on schedules and routes determined by the needs of passengers rather than a fixed route. Paratransit services function as a “safety net” for persons whose disabilities prevent them from using a regular fixed route system.

Platform Level Boarding: Trains or buses that have interiors that are level with station platforms so that passengers do not have to climb steps to board. This configuration speeds up the boarding process and allows passengers in wheelchairs to board quickly and easily without any special assistance.

Preferred Alignment: The preferred alignment is the recommended routing that addresses the project’s purpose and need and is supported by stakeholders and the community.

Railroad Agreement: In several locations, LCRT construction will interface with railroad property. Navigating these intersections will require agreements with railroad operators in the region. Railroad agreements identify key considerations related to safety, engineering, customer service, operations, legal and regulatory matters, expense, risk, and other issues specific to any proposed project and define a path forward for coordination and construction approvals.

Right-of-Way: The legal right, established by usage or grant, to pass along a specific route through grounds or property belonging to another.

SCDOT (South Carolina Department of Transportation): SCDOT is a state government agency that provides systematic planning, construction, maintenance and operation of the South Carolina highway system, as well as the development of a statewide mass transit system that is consistent with the needs and desires of the public. The majority of the roads and right-of-way in the LCRT corridor are controlled by SCDOT.

SHPO (State Historic Preservation Office): The State Historic Preservation Office was created by the federal government under the [National Historic Preservation Act](#). The purposes of a SHPO include surveying and recognizing historic properties, reviewing nominations for properties to be included in the [National Register of Historic Places](#) and reviewing projects for their impact on historic properties in addition to supporting federal organizations, [state](#) and [local governments](#), and the private sector.

Signal Warrant: A warrant is a condition that an intersection must meet to justify a signal installation. LCRT will follow the SCDOT warrant process, which includes volume requirements, corridor context and safety.

STOPS Model (Simplified Trips-on-Project Software): The FTA Simplified Trips on Project Software (STOPS) application is a ridership estimation modeling tool designed exclusively for fixed guideway systems such as commuter rail, light rail, subway, BRT and streetcar. STOPS was developed by FTA to assist project sponsors in developing ridership forecasts for their New Starts or Small Starts projects. STOPS is

also used by FTA to evaluate ridership forecasts and level the playing field for all projects (whether they use STOPS or another tool) applying for New Starts and Small Starts funds. (Note: LCRT is pursuing FTA New Starts funding.)

TOD (Transit Oriented Development): Transit Oriented Development and design strategically focuses redevelopment and new construction into areas where transit is convenient, attractive and easy to access. This type of planning supports the preservation, redevelopment and new development of distinct community centers where people can live, work and play with greater access to reliable public transit.

Traffic Signal Prioritization: Traffic signal priority means giving precedence to transit systems at intersections with traffic signals. This means that signals would allow the LCRT to proceed ahead of vehicular traffic, allowing for the rapid, unhindered movement of large groups of transit riders.

Transit Dependent Communities: Communities with populations that rely on public transit due to a lack of access or the inability to use personal transportation like cars or vehicles.

Transit Network Analysis: Analysis of the current bus network to develop recommendations for service changes to connect passengers traveling between LCRT and local (CARTA and TriCounty Link) routes.

Transit Stations: LCRT is planned to have transit stations along the corridor that are more substantial than standard bus stops, including, for instance, large, custom-designed canopies/shelters, security cameras, level boarding, ticket vending, passenger information signage, canopy lighting, protective bollards at crosswalks, crossing signals and more.

30% Engineering: The level of project design that typically includes: advanced concept design defining edge of pavement, hydrological and geotechnical studies, final form and material selection for station designs. 30% engineering also sets the federal funding match for FTA grants. LCRT will need this level of design to understand key cost drivers.

LCRT Frequently Asked Questions

Updated October 2022

What is the purpose of the LCRT project? The Lowcountry cannot build its way out of traffic congestion. Our region is growing at three times the national average and our existing transportation network is overwhelmed. Providing multimodal transportation options, that is not entirely constrained by general traffic, is vital to achieving an attractive quality of life and keeping the Lowcountry a desirable place to live, work and play.

This corridor, the region's most heavily traveled, uniquely connects the community to health care (five hospitals and major care facilities), education (four colleges and universities) and employment centers.

What is the status of the project?

The Federal Transit Administration (FTA) announced in July that LCRT has received a medium-high rating based on the project's performance and funding criteria in the federal grants program.

In August 2022, FTA informed BCDCOG that LCRT meets all the requirements and shall be approved to enter the next phase of the Capital Investment Grants program, the Engineering phase, this means that the project meets the FTA grants program's criteria of balancing projected ridership with project costs, among other measures, and therefore is in the pipeline for federal funding to construct and begin operations.

LCRT's goal is to open service in late 2028.

How or why was the preferred alignment identified? LCRT is being designed as a 21.3-mile modern bus rapid transit system that will connect communities in our region like never before. Operating mostly in dedicated lanes, LCRT will provide safe, reliable and low-cost connections between Ladson, North Charleston and Downtown Charleston.

This route was identified because it is the most competitive in the FTA Capital Investment Grants program to be eligible for federal funding, which is needed to make LCRT a reality. This route ranked highest when compared to other alternatives because it has the highest annual ridership, minimizes railroad crossings, is the most cost-effective, and connects the highest number of employment areas.

What is bus rapid transit and how is it different from traditional bus service? A bus rapid transit system includes infrastructure improvements along an existing roadway corridor that allow for improved operations and reliability of transit, often in dedicated lanes.

A typical bus service operates in mixed traffic stopping every few blocks; it typically consists of only a sign and a bench or shelter at stops. A BRT system like LCRT will operate in separate, dedicated lanes, stop approximately every mile, and run every 10 minutes during peak travel times. BRT stations offer expanded rider amenities that include enhanced shelters and off-board pre-payment, electronic passenger information and security systems.

Why was BRT identified as the best mass transit option? A year-long study by BCDCOG identified BRT as the best alternative mode of transportation for the I-26 corridor for several reasons including current and projected regional population density, system flexibility and ability to expand, and cost effectiveness. BRT is the right fit at the right price to serve our region.

How is LCRT funded? In November 2016, Charleston County voters passed a half-cent sales tax to fund roadway, transit and green space projects. The requested federal funding represents 60% of the project cost, or about \$375 million. The anticipated local funding from Charleston County represents 40% of the project cost, or about \$250 million. These totals are estimates and may change.

What happens if you don't follow the FTA defined process for project development? The FTA grants program is defined in federal law and has specific rules for project development to receive funding. The project development process must be followed for the project to qualify for federal funding. A project that does not follow the specific rules of the program would be removed from consideration and would not be eligible for funding.

How much competition is there for this grant funding? The current "pipeline" — those projects in various stages of development that are currently pursuing CIG funding — totals approximately \$30 billion; \$12 billion of that includes projects with current grant agreements. There are approximately \$18 billion in outstanding funding requests from projects across the country.

Why was the Lowline alignment eliminated from consideration? While the Lowline route in downtown Charleston ranked high from a ridership perspective, the City of Charleston expressed its vision for the corridor that included reserving the Lowline as a public park and greenspace. As a transit corridor, the Lowline would present challenges related to speed, as well as separation of vehicles from bicyclists and pedestrians. Additionally, potential environmental cleanup of the former rail corridor could drive LCRT costs and schedule outside grant program requirements and available funding.

Can we use this process and the associated funding to solve other problems along the corridor like flooding? LCRT is designed to address mobility issues within the project corridor and will bring numerous benefits related to transportation, bike and pedestrian safety and transit oriented development. While it will not directly address other issues, such as flooding, regulations prevent it from making problems worse. However, the LCRT project is being designed to be resilient to the effects of flooding. The project can be referenced separately by other entities when seeking improvements in the corridor.

When will the system be in operation? The current project schedule is based on the federally mandated grant process. The LCRT goal is to begin operations in late 2028.

Is there any way to shorten this process? While the FTA grant program requires a project to work through set phases of evaluation, the approach to complete both the engineering and construction of a project can accelerate a schedule. The LCRT project team is evaluating the most effective project delivery approach to complete engineering and construction efficiently.

Will BRT service be provided to other parts of the region in the future? Possibly, yes. The Regional Transit Framework developed by BCDCOG has identified a network of potential high-capacity bus rapid transit corridors throughout the region. Among them are US Hwy. 52 to Moncks Corner, Dorchester Road, US Hwy. 17 through West Ashley and Mount Pleasant and Folly Road.

Are there similar projects in operation? Several cities in the United States have successfully implemented BRT systems, including Richmond, Cleveland, Columbus, San Antonio, Orlando, Los Angeles, and Eugene.

Public & Stakeholder Involvement

Will the public have the opportunity to comment on the design? Yes, there have been and will continue to be regular opportunities for the public to engage with the project and project team at public meetings, pop-up events, community workshops and other events, both in person and digitally. Beyond that, the project team is reviewing and responding to public comments outside of the traditional comment periods. The public's feedback is integral to the success of LCRT.

How can business owners along the corridor get involved and/or have input into the system design process? An engaged and highly involved community is crucial to the success of the project. LCRT Communications and Outreach specialist Morgan Grimes is actively working to ensure citizens, businesses and neighborhood associations have open access to two-way communication throughout the process. You can reach her at morgang@bcdcog.com or at (843) 529-2119 (ext. 5035).

How can citizens and neighborhood associations get involved in the project? Can someone come to our meeting to give a project presentation to our members? Contact LCRT Communications and Outreach specialist Morgan Grimes at morgang@bcdcoq.com or at (843) 529-2119 (ext. 5035).

What role do local counties and municipalities play in the development and implementation of this project? As the current sole local funding source for the project, Charleston County is a key stakeholder in the project and in the decision-making process. The County is a member of the LCRT Executive Leadership Team, which serves to inform and approve important project recommendations before they are taken before the BCDCOG Board for approval. In November 2016, Charleston County voters passed a half-cent sales tax to fund roadway, transit and green space projects. Part of the transit funding identified in the referendum — about \$250 million — will be used for LCRT.

BCDCOG is the federally recognized project sponsor but will require the support and participation of stakeholders on key project decisions and final project approval. The Cities of Charleston and North Charleston, along with Berkeley and Dorchester Counties, are involved in regular coordination meetings with the project team. Their role is to inform and approve important project recommendations, provide insight into their community and constituent needs and help guide key project decisions before they are taken to the BCDCOG Board for approval.

Project Design

How are pedestrian/bicycle issues being addressed in this effort? By incorporating sidewalks, 10-foot-or-larger shared-use paths and safe pedestrian crossings, the LCRT will promote safety and transform connectivity for residents and businesses. The current concept includes approximately 8.5 miles of new/reconstructed sidewalk, 17.9 miles shared-use paths and 34 new pedestrian crosswalks.

How are safety concerns being addressed in the design? Two LCRT safety studies have been conducted. The first was to analyze road safety, including existing crash history along the corridor for vehicles, bicycles and pedestrians. There are several significant areas of concern along Rivers Avenue. The project is working with SCDOT to mitigate many of these identified issues through the design of the project by: reconfiguring and signaling median openings; adding raised medians; improving pedestrian crossings and providing shared-use paths for bike and pedestrians.

Are there dedicated bus lanes for the entire length of the project corridor? If not, why not? In areas of wide roadways with large medians (such as Rivers Avenue), dedicated lanes for LCRT will be provided. When dedicated lanes cannot be constructed due to narrow roadway widths, LCRT will operate in mixed traffic, such as in downtown Charleston. The goal is to improve speed and, most importantly, improve reliability of the system. To achieve this goal, LCRT will include technology

such as transit signal prioritization (TSP), and redesigned intersections to improve speed and reliability when operating in mixed traffic.

LCRT Features & Operations

How will I be able to tell the difference between a BRT bus and a traditional bus? BRT buses operate in mostly dedicated lanes, have stations approximately every half-mile and run every 10-20 minutes. When traveling in mixed lanes, BRT often uses signal priority systems to improve reliability and reduce delays from traffic congestion.

In typical BRT systems, passengers wait for the bus at high-quality stations and pay before boarding using off-board payment at the station. This experience creates efficient, reliable, frequent and convenient transit service that meets the needs of many types of travelers. In addition, the BRT system will have a recognizable brand that stands apart from local traditional bus service.

How much will it cost to ride? The price for Lowcountry Rapid Transit is projected to remain the same as a one-way local trip on CARTA. The current cost is two dollars.

Will the buses be battery electric? Yes, the buses used will be battery electric. CARTA is currently converting its fleet to battery electric buses and LCRT will use battery electric vehicles as well.

Will the buses be equipped to transport bikes? Yes, LCRT is being designed to be bike and pedestrian friendly. For transport, the intention is for vehicles to stow numerous bicycles.

How will you make sure the system stays on schedule? In dedicated lanes, vehicles can avoid traffic congestion and provide more reliable service. TSP will provide buses with an early green or extended green light to help buses get through intersections. This is typically applicable for buses that are running behind schedule.

What kind of technology will be used by the system and on the vehicles? Synchronized traffic signals will be used to give buses priority and help buses stay on schedule. Electric buses, real-time bus arrival information, security systems, WiFi, and pay kiosks are just a few examples of technology that will be deployed to make travel more reliable and to improve the customer experience.

How will existing bus service be impacted by the LCRT service? The short answer is positively. CARTA service will undergo a route optimization analysis to integrate its service with LCRT. That may result in modifications to routes, frequency, and timespan of service changes designed to complement the LCRT service.

Stations

How are station locations being determined? Through a series of workshops, stakeholder involvement, CIG testing, and station analysis, we've identified 20 station locations along the project corridor that offer the most connectivity to existing services and employment centers and provide the most benefit to communities and riders.

Will stations have parking/storage for bikes? Yes, bike racks and other bike-pedestrian amenities are being planned for stations.

FTA's Capital Investment Grants Program

What does "Project Rating" or "CIG Rating" mean? The [Capital Investment Grants Program](#) (CIG) is a discretionary and competitive federal grant program. Through the FTA, CIG funds approximately \$2 billion per year to construct new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit and ferries and more. This program will fund up to 80% for major transit construction projects. LCRT is competing for these funds and, as the system expands, funding can be pursued through the program to fund future BRT corridors identified in the Regional Transit Framework plan.

The CIG Project Rating is the score FTA uses to determine whether to approve a project's advancement into the next phase in the New Starts and Core Capacity approval process. It is based on a defined set of criteria. FTA computes this overall project rating by averaging the summary ratings of the project justification criteria and local financial commitment criteria. At Entry into Engineering, LCRT received a medium-high rating, the second highest on the rating scale.

What factors are evaluated to determine the project's rating? The CIG Project Rating is the score to determine whether to approve a project's move from one step to the next in the New Starts and Core Capacity approval process. FTA computes this overall project rating by averaging the summary ratings of the Project Justification criteria and Local Financial Commitment criteria. The Project Justification rating is based on mobility improvements, cost effectiveness, congestion relief, environmental benefits, land use and economic development. The Local Financial commitment rating is based on current financial condition, commitment of capital and operating funds and reasonableness of the financial plan. LCRT received an overall project rating of medium-high at the Entry into Engineering milestone.

How is the rating used by FTA to determine which projects receive funding and how much funding is awarded? To be eligible for federal funding in the CIG Program, projects require an overall rating of Medium or above. The five-point scale ranges from Low, Medium-Low, Medium, Medium-High, High.