US 52 Bus Rapid Transit
TCL Future Recommendations and Implementation Plan Technical Memo

Berkeley-Charleston-Dorchester Council of Governments

April 25, 2025

BCDCOG
BERKELEY-CHARLESTON-DORCHESTER COUNCIL OF GOVERNMENTS
PLANNING, PARTNERSHIP & PROSPERITY

US 52 BUS RAPID TRANSIT STUDY

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INTRODUCTION

PROJECT OVERVIEW

The Berkeley-Charleston-Dorchester Council of Government (BCDCOG) is the government agency responsible for transportation planning in Berkeley, Charleston, and Dorchester counties along the coast of South Carolina. In response to regional growth and increasing mobility needs, BCDCOG completed the Regional Transit Framework Plan (RTFP) in 2018 to identify a multimodal transit vision for the region, priority transit corridors, and potential solutions to growing traffic volumes. The results of RTFP identified five priority corridors (US 52, Glenn McConnell Parkway/US 17, US 17, Dorchester Road, and Folly Road) within these three counties and recommended Bus Rapid Transit (BRT) systems to improve regional mobility and address growing traffic volumes.

BRT is a public transit mode that includes sections of dedicated bus lanes, off-board fare collection, level boarding, and signal priority at intersections to ensure faster and more reliable service. BRT systems are designed to provide efficient, high-capacity transit service options.

STUDY AREA AND EXISTING SERVICE

TriCounty Link (TCL) provides transit services for several routes within the US 52 Study Area. The Study Area is served by five deviating fixed local routes, B101, B102, B104, B105, and D305; two commuter routes, CS1 and CS2; and an on-demand zone, the CS8 Link 2 Lunch. All of these services either partially run along the US 52 corridor or make connections to routes operating within the corridor. Through a contract with Unity Bay, an organization that provides adult day services for people with intellectual and developmental disabilities, TCL also provides transit service for clients from their homes to Unity Bay facilities.[1] This contract is specific to routes B101, B102, B104, and B105. The service is contracted by Unity Bay to help provide transit service for their clients, and routing is determined to meet these needs while also serving the general public. Table 1 provides additional details on each existing service in the corridor. Figure 1 displays the US 52 Study Area and related transit service components. Existing service operating statistics are provided in the Appendix.

[1] Unity Bay. Our Services. 2025.

Figure 1 US 52 Transit Overview

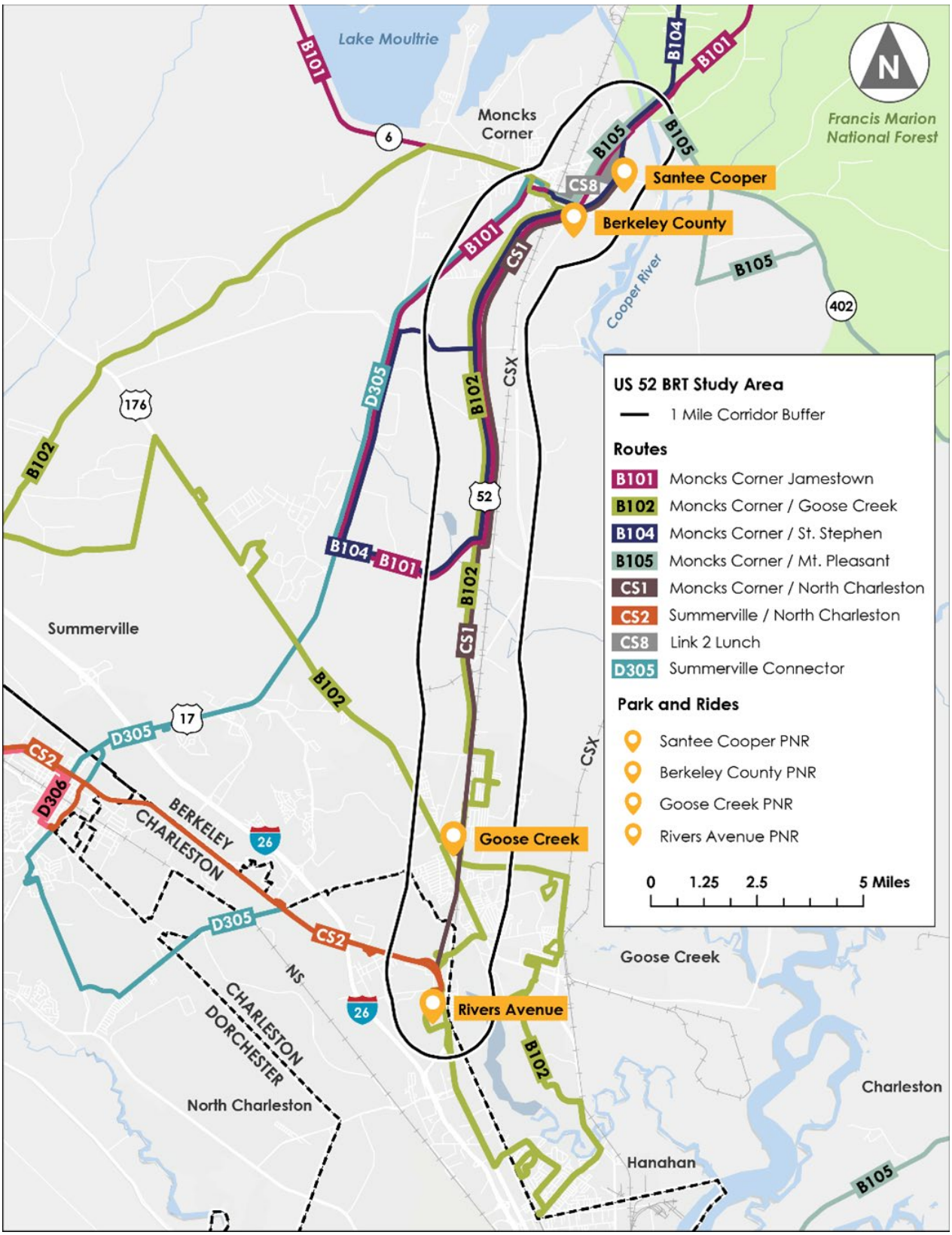


Table 1 Existing Service Plan

Route	Direction	Service Span	Trips / Day
B101	AM Loop (counterclockwise)	5:40AM to 9:20AM	1
	PM Loop (clockwise)	1:30PM to 5:05PM	1
B102	AM Loop (counterclockwise)	5:35AM to 9:25AM	1
	PM Loop (clockwise)	2PM to 5:30PM	1
B104	Inbound	7:05AM to 9:10AM	1
		4:10PM to 4:50PM	1
	Outbound	3:40PM to 4:10PM	1
B105	Inbound	5:45AM to 7:25AM	1
		2:00PM to 4:25PM	1
	Outbound	7:30AM to 9:15AM	1
		5:05PM to 6:30PM	1
D305	Inbound	5:55AM to 11:57AM	4
		12:04PM to 5:30PM	4
	Outbound	7:15AM to 11:58AM	4
		12:03PM to 6:25PM	4
CS1	Inbound	5:30AM to 8:25AM	5
		3:30PM to 7:25PM	6
	Outbound	6:15AM to 8:50AM	4
		4:20PM to 7:20PM	4
CS2	Inbound	5:30AM to 8:10AM	5
		3:10PM to 6:50PM	6
	Outbound	6:15AM to 9:00AM	5
		4:10PM to 7:30PM	6
CS8	n/a – On-Demand Service	10:45AM to 1:00PM	n/a

SHORT-TERM RECOMMENDATIONS

Short-term transit recommendations are made for the B101, B102, B104, CS1, and CS8. Table 2 outlines modifications recommended for each route. These recommendations are also shown on a map in Figure 2. Currently, no short-term changes are recommended for routes B105, D305, or CS2. These recommendations focus on service concepts that were agreed upon during a September 2024 meeting with BCDCOG and TCL staff to address the following goals over the next two years:

1. Optimize routing and operations
2. Build consistent ridership
3. Orient service towards future BRT service on the US 52 corridor

In addition to routing, the short-term recommendations include suggested service plans that highlight trip/frequency and service span recommendations.

KEY ASSUMPTIONS

Baseline operating statistics were modeled from published schedules or generated from average hours provided between July 2023 and July 2024. Annual costs shown are planning-level and focused on identifying incremental changes compared to the existing service. Costs were developed based on total hour estimates per route.[2] Operating statistics and costs were annualized based on weekday operations only.[3]

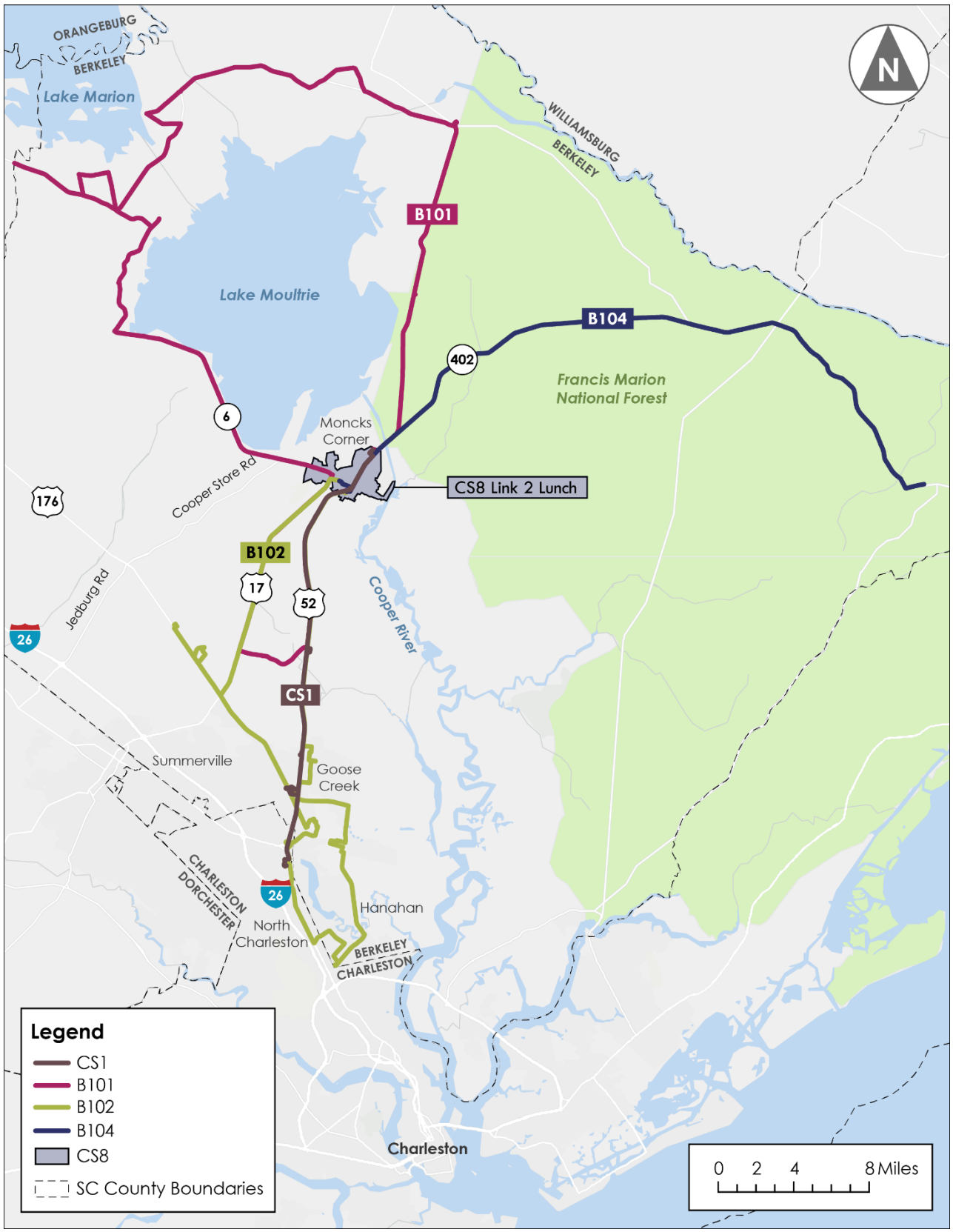
Service spans were generalized based on existing service and estimated running times. Average speeds used to develop running times were calculated based on estimated speeds from schedules, existing operations, and Google Maps.

Table 2 Short-Term Service Change Recommendations

Route	Change Justification
CS1	Adjustments to optimize operations, build ridership, move towards future BRT
B101	Optimize operations, reduce customer travel times
B102	Optimize operations, reduce customer travel times
B104	Maintain coverage for previous B101 service
CS8	Explore expansion/pilot of on-demand service
CS2	No changes recommended
B105	No changes recommended
D305	No changes recommended

[2] Total hours were calculated for each service based on ratios of revenue to total hours between July 2023 and July 2024. $76 per total hour was used to develop costs. This rate was developed based on the FY22 – 23 reported system operations, escalated to 2025 dollars using an inflation rate of three percent and rounded.
[3] 255 weekdays per year.

Figure 2 Short-Term Recommendations



CS1 SERVICE RECOMMENDATIONS

Existing Service

Route CS1 is a fixed commuter route providing service between the Santee Cooper headquarters in Moncks Corner and the Rivers Avenue Park-n-Ride in Goose Creek. The route operates along the US 52 corridor for much of its alignment. The route provides service from 5:30 AM to 8:50 AM and from 3:30 PM to 7:25 PM with eleven inbound and eight outbound daily trips. In addition to Santee Cooper headquarters, the CS1 serves the following key destinations: Berkeley County Admin Building and Goose Creek Magistrate's Office. At the southern terminus of the CS1, the route will connect to the Lowcountry Rapid Transit (LCRT) BRT project.

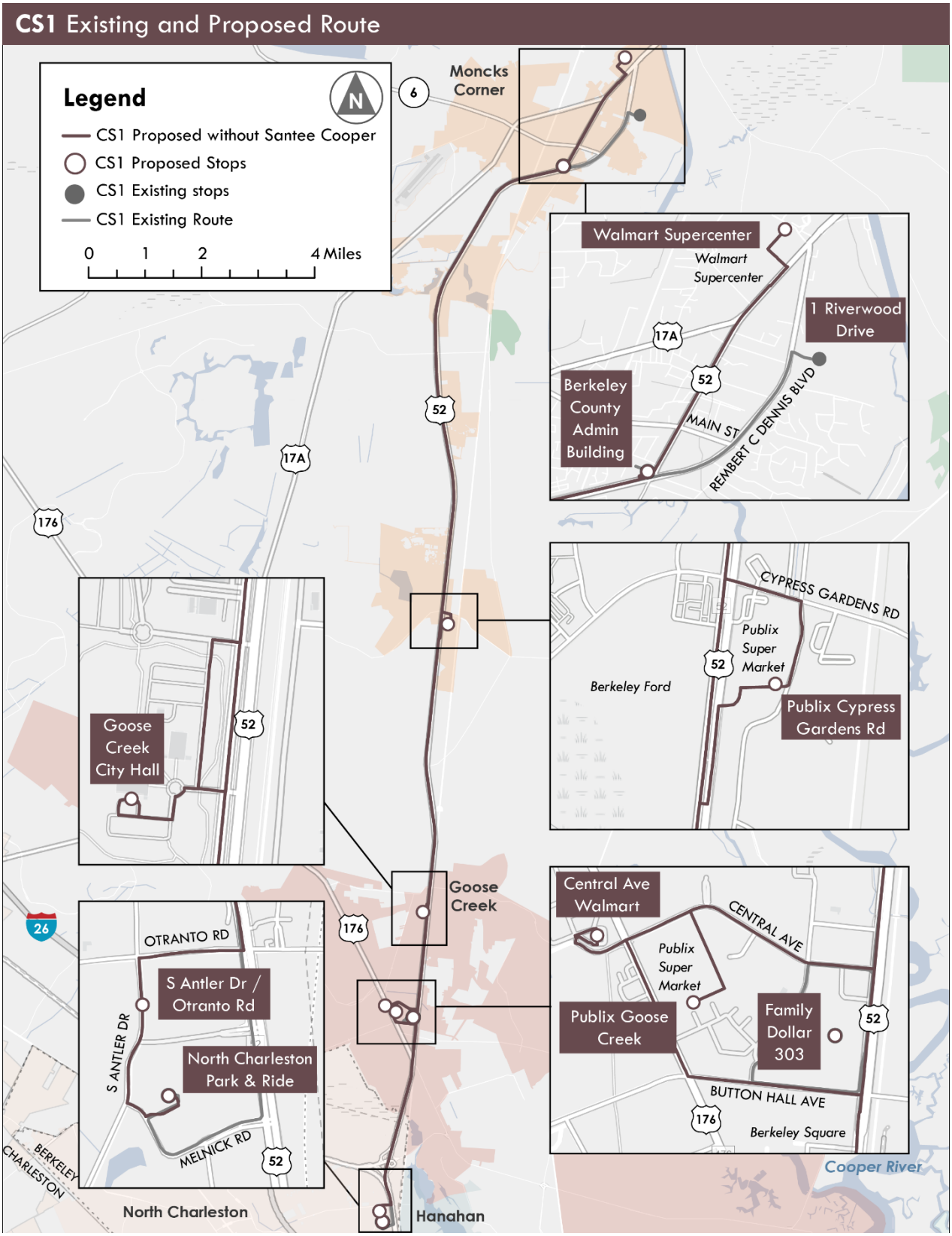
Short-Term Service Goals and Recommendations

Recommended changes for Route CS1 are focused on the goal of developing the service into a more traditional fixed route to help build ridership and work towards developing the transit market to support future service in the corridor. By optimizing operations through expanding the hours of service, increasing trip frequency, and serving more riders, service on CS1 will become more consistent and reliable. In addition to making the CS1 a route that can more feasibly be used for commuting, increasing the number of key destinations served will also help build ridership. These recommended service changes will strengthen the route and help develop US 52 into a BRT- supportive corridor in the long term.

The recommended CS1 service will operate between 5 AM and 6 PM with 14 trips in each direction per day. It will provide service between Walmart Supercenter in Moncks Corner and Rivers Avenue Park-n-Ride in Goose Creek. The recommended service primarily operates along US 52 and also serves key destinations, including Walmart Supercenter in Moncks Corner, Publix on Cypress Gardens Road, Goose Creek City Hall, Walmart on Central Avenue, and several destinations at the intersection of S Antler Dr and Otranto Rd including the Rivers Avenue Park-n-Ride. While the CS1 currently stops at the Goose Creek Magistrate's Office, it is recommended that more circulation be added in that area to better serve the key destinations in the adjacent shopping centers (e.g., Family Dollar, Walmart, Publix, Aldi, etc.). With the increased number of trips and added stops, Route CS1 is likely to trigger the United States Department of Transportation (USDOT) requirement for complementary paratransit service to be provided for the three-quarter mile area around foxed routes.

Figure 3 displays the existing and proposed Route CS1.

Figure 3 Route CS1 Existing and Proposed Alignments and Stops



B101 SERVICE RECOMMENDATIONS

Existing Service

Route B101 is a deviating fixed local route operating in a loop around Lake Moultrie with service between Moncks Corner, Cross, Pineville, Saint Stephen, and Jamestown. The route provides service from 5:40AM to 9:20AM and then from 1:30PM to 5:05PM with one inbound trip (counterclockwise) and one outbound trip (clockwise) each day. The B101 serves the following key destinations: TCL Terminal, Unity Bay, SC Vocational Rehab, Alvin Community Center, and Believers Temple.

Short-Term Service Goals and Recommendations

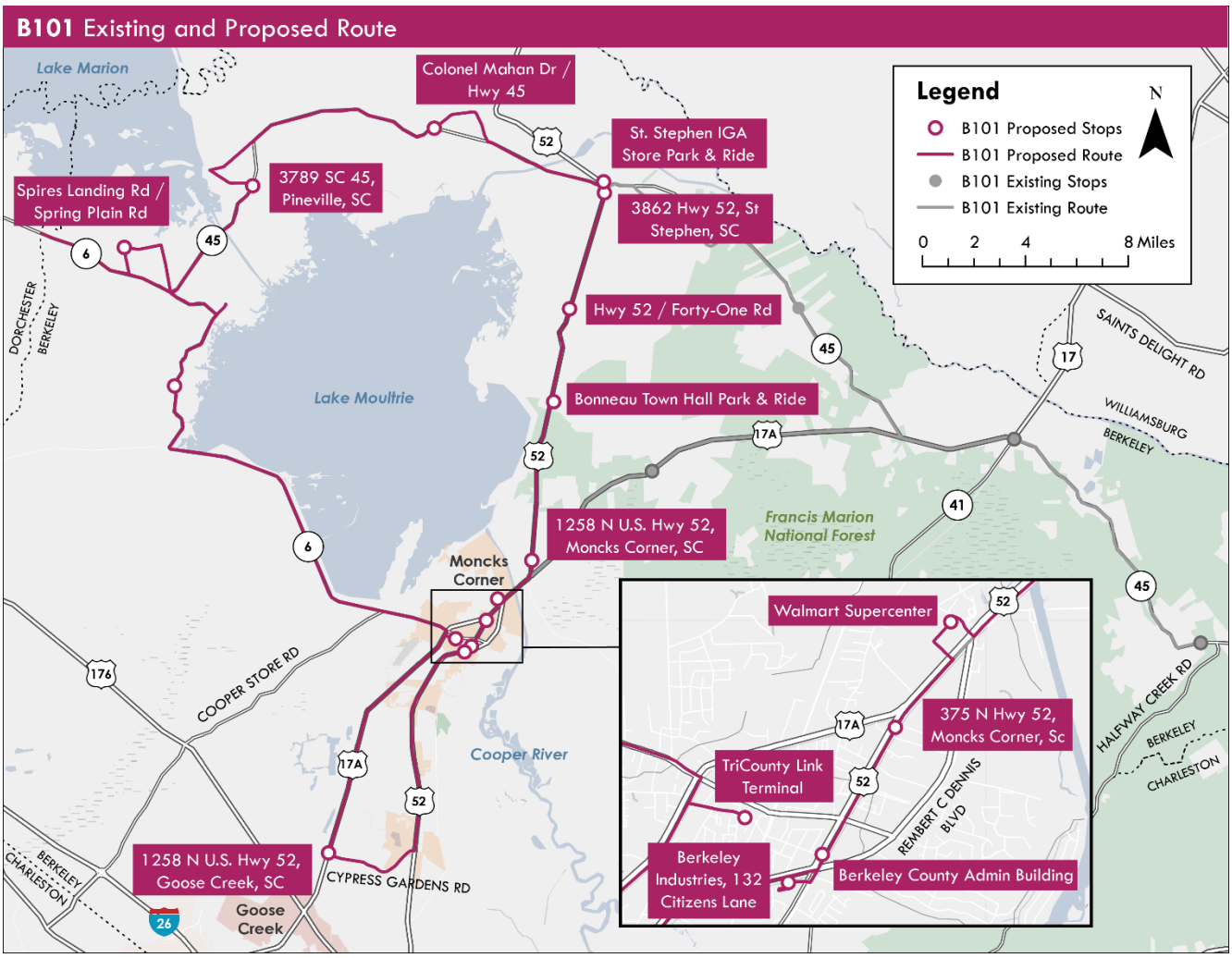
Recommended changes for Route B101 are focused on optimizing the customer experience by reducing travel times. With these recommendations, Route B101 can provide more efficient service and serve more destinations along US 52 in Moncks Corner. Shorter travel time and increased destinations served will help to build Route B101 ridership, bring more customers to the US 52 corridor, and increase connectivity between routes.

It is recommended that the portion of Route B101 east of US 52 be removed, with the alignment instead continuing south on US 52. With this adjustment, Route B101 will serve the B104 stops along US 52 in Moncks Corner. The stops along B101 that are no longer served will be served by Route B104.

The recommended B101 service will operate from 5:30AM to 8:30AM and then from 2:00PM to 5:00PM with one inbound trip in the morning and one outbound trip in the afternoon. It will provide service between Moncks Corner, Cross, and Saint Stephen. Key destinations added to the route include Walmart Supercenter in Moncks Corner and Berkeley County Admin Building.

Figure 4 shows the existing and proposed Route B101.

Figure 4 Route B101 Existing and Proposed Alignments and Stops



B102 SERVICE RECOMMENDATIONS

Existing Service

Route B102 is a deviating fixed local route operating in a loop with service between Moncks Corner traveling along Cooper Store Road into Jedburg, then through Summerville along US Highway 176, into Goose Creek, and returning to Moncks Corner via US 52. The route provides service from 5:35 AM to 9:25 AM and from 2:00 PM to 5:30 PM, with one inbound trip (counterclockwise) and one outbound trip (clockwise) each day. The B102 serves the following key destinations: TCL Terminal, Alexander Circle, Goose Creek's Magistrates Office, Unity Bay, Yeamans Hall Plaza, and Rivers Avenue Park-n-Ride.

Short-Term Service Goals and Recommendations

Recommended changes for Route B102 are based on the goal of reducing travel time while maintaining service for existing customers. Recommendations for B102 allow the route to provide faster travel times while serving additional destinations. These benefits will increase ridership for Route B102 while maximizing the route's efficiency.

It is recommended that the western portion of Route B102's alignment be shifted from Cooper Store Road to South Live Oak Drive. This adjustment will reduce the overall travel time of the route while providing an opportunity for the route to serve additional destinations along South Live Oak Drive. From South Live Oak Drive, the B102 will travel along State Road until Cane Bay Boulevard.

The recommended B102 service will operate from 5:35 AM to 9:10 AM and from 2:00 PM to 5:35 PM with one inbound trip in the morning and one outbound trip in the afternoon. It will provide service from Moncks Corner along South Live Oak Drive to State Road and Saint James Avenue to Goose Creek, circulating around Goose Creek Reservoir along Rivers Avenue to Hanahan, and eventually back to Moncks Corner along US 52. Key destinations added to the route include the Publix off Cane Bay Boulevard, Trident Technical College, and the South Carolina Vocational Rehabilitation.

Figure 5 shows the existing and proposed Route B102.

Figure 5 Route B102 Existing and Proposed Alignments and Stops

B104 SERVICE RECOMMENDATIONS

Existing Service

Route B104 is a deviating fixed local route operating in Moncks Corner. The route operates inbound along US 52, looping between Goose Creek Boulevard, Cypress Gardens Road, and South Live Oak Drive before going north on Goose Creek Boulevard and terminating at TCL Terminal. Outbound Route B104 operates from Santee Cooper headquarters to Saint Stephen IGA Park-n-Ride. The route provides service from 7:30 AM to 9:10 AM and then from 3:40 PM to 4:50 PM with two inbound trips and one outbound trip each day. The B104 serves the following key destinations: Santee Cooper headquarters, Bonneau Town Hall, South Carolina Vocational Rehabilitation, Unity Bay, Berkeley County Admin Building, Saint Stephen IGA Park-n-Ride, and TCL Terminal.

Short-Term Service Goals and Recommendations

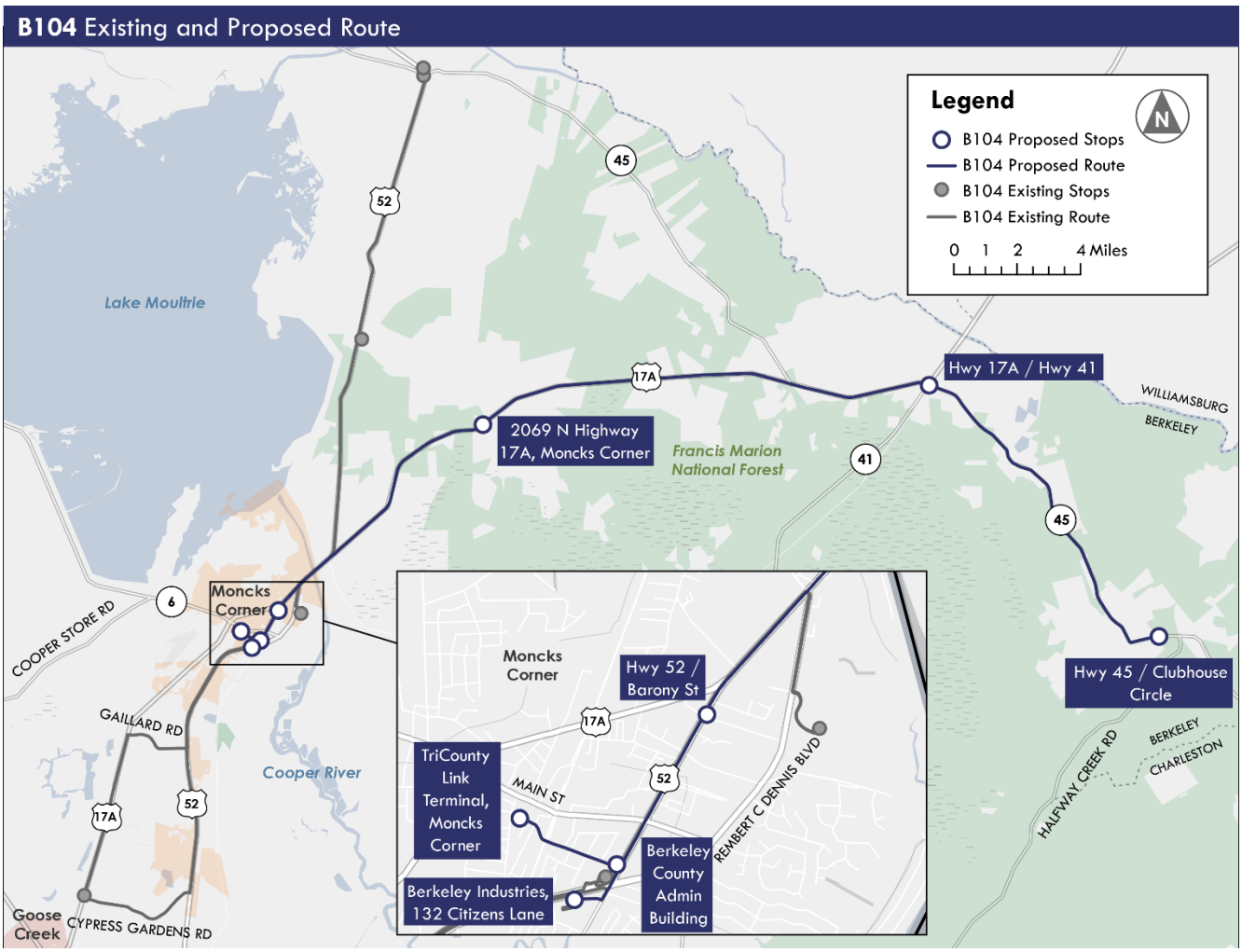
The goal of the recommendations for Route B104 is to eliminate the redundancy of the B101 and B104 alignments. The existing B101 and B104 currently follow the same alignment and serve many of the same locations between Goose Creek Boulevard, Cypress Gardens Road, South Live Oak Drive, and the TCL Terminal. By eliminating this redundancy, the service will be streamlined to operate more efficiently and be easier for riders to understand.

It is recommended that Route B104's alignment be adjusted to operate beginning at the TCL Terminal and continuing along N Highway 17A and French Santee Road. This re-routing removes the redundancy with adjacent routes while maintaining service for customers along the easternmost portion of Route B101's alignment.

The recommended B104 service will operate from 7:00 AM to 8:40 AM and 3:30 PM to 5:10 PM with two inbound trips and two outbound trips each day. It will provide service from TCL Terminal in Moncks Corner onto North US Highway 17 Alternate along the existing B101 alignment through Macedonia, Calestown, and Jamestown on French Santee Road with service ending at the intersection of French Santee Road and Clubhouse Circle. Key destinations added to the route include Providence Baptist Church and the Dollar General in Jamestown.

Figure 6 shows the existing and proposed B104.

Figure 6 Route B104 Existing and Proposed Alignments and Stops



CS8 SERVICE RECOMMENDATIONS

Existing Service

Route CS8 is a fixed-zone on-demand route serving Moncks Corner along US 52 between Rembert C Dennis Boulevard and Dock Road. The route provides service during typical lunch hours from 10:45AM to 1:00PM. Rides can be requested by phone during service hours or through the TCL OnDemand app. Because Route CS8 is an on-demand route, there is no assumed speed or fixed travel times.

Short-Term Service Goals and Recommendations

Recommended changes for Route CS8 are focused on expanding service as a pilot to evaluate the application of an on-demand service that will operate for more of the day and be used by residents for getting home and traveling around Moncks Corner. A more robust service offering for Route CS8 could identify any latent demand in the area for more on-demand zone-level service and be used as a case study for expanding on-demand service into other portions of the TCL service area.

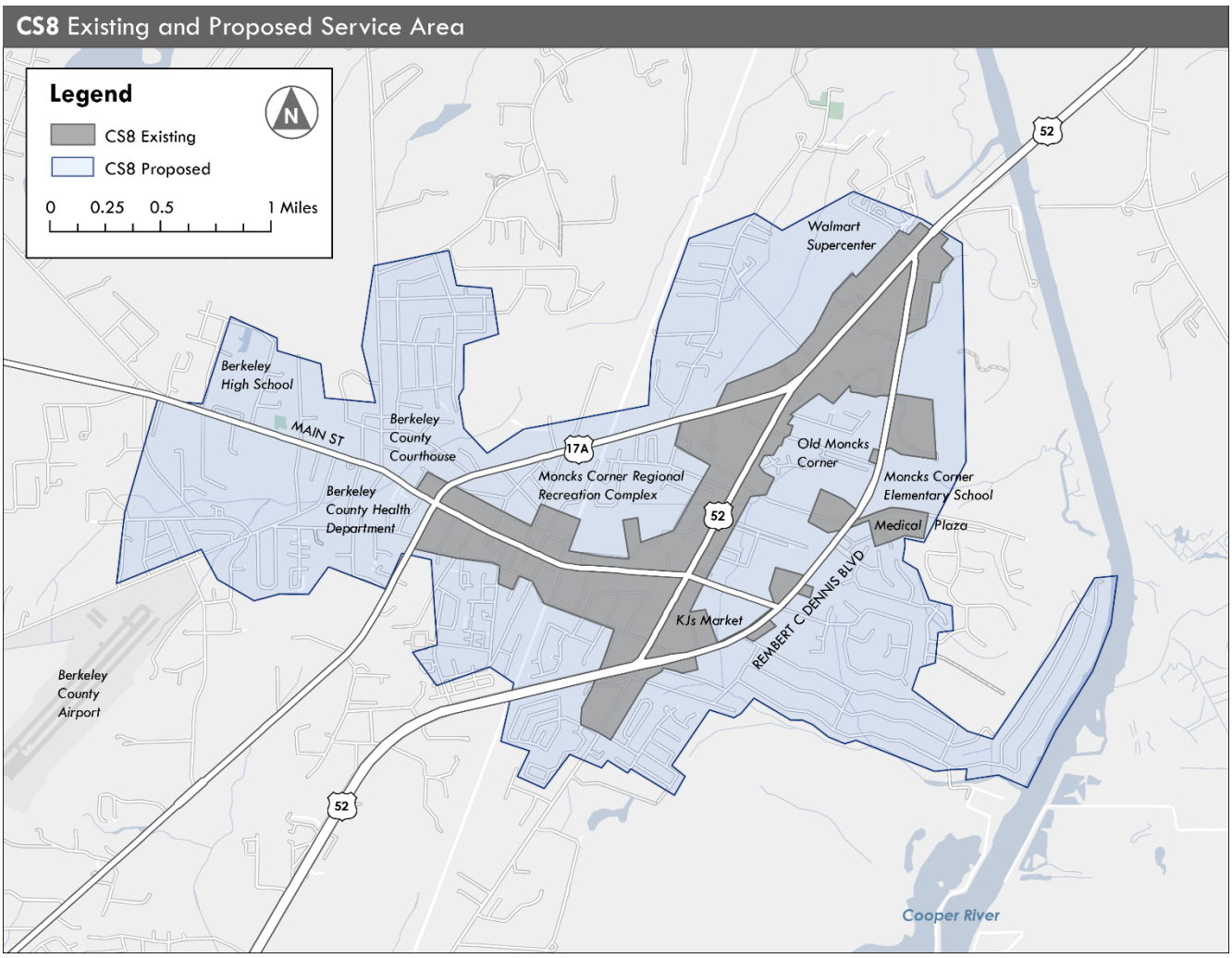
Two service variations were modeled for the CS8:

- Variation 1 requires one vehicle
- Variation 2 requires two vehicles

It is recommended that a pilot program be developed for Route CS8 as an all-day on-demand service. Through this recommendation, the service area zone is expanded from the US 52 corridor to cover the surrounding residential areas in Moncks Corner. Hours of service for Route CS8 are recommended to be expanded to 6:00AM to 6:00PM to better align with the hours of service of other routes from which customers of the CS8 might transfer, like the CS1.

Figure 7 shows the existing and proposed CS8.

Figure 7 CS8 Existing and Proposed Service Area Zones



SHORT-TERM RECOMMENDATIONS OPERATING SUMMARY

Baseline operating statistics were developed from TCL service data from July 2023 to July 2024 and are provided in the Appendix. Based on the short-term recommendations, incremental changes to these baseline statistics for recommended service changes were calculated to understand the impact of implementing these recommendations. The difference in resources required to provide service based on the short-term recommendations was determined based on added trips, adjusted spans of service, assumed speeds, and estimated running times. Table 3 provides the proposed operating statistics based on short-term recommendations and Table 4 lists the changes to revenue hours, total hours, total cost, and peak vehicles. Total hours increase by 95 percent. Additional details on proposed operating statistics are provided in the Appendix.

Table 3 Short-Term Proposed Operating Statistics

Route	Pattern	General Span	Trips
B101	AM Loop (counterclockwise)	5:30 AM to 8:30 AM	1
B101	PM Loop (clockwise)	2:00 PM to 5:00 PM	1
B102	AM Loop (counterclockwise)	5:35AM to 9:10AM	1
B102	PM Loop (clockwise)	2:00 PM to 5:35 PM	1
B104	Inbound	7:00 AM to 7:50 AM; 3:30 PM to 4:20 PM	2
B104	Outbound	7:50 AM to 8:40 AM; 4:20 PM to 5:10 PM	2
CS1	SB (inbound)	5:00 AM to 6:00 PM	14
CS1	NB (outbound)	6:00 AM to 7:00 PM	14
CS8	Moncks Corner On-Demand – 1 vehicle	6:00 AM to 6:00 PM	-
CS8	Moncks Corner On-Demand – 2 vehicles	6:00 AM to 6:00 PM	-

Table 4 Short-Term Annual Operating Summary Table (2 vehicles for CS8)

Route	B101	B102	B104	CS1	CS8	Total
Base						
Rev Hours	1,849	2,009	829	3,064	1,148	8,898
Total Hours	1,943	2,009	850	3,097	1,254	9,153
Total Cost	$147,650	$152,671	$64,598	$235,367	$95,325	$695,612
Peak Vehicles	1	1	1	2	2	7
Recommended						
Rev Hours	1,530	1,825	816	6,754	6,120	17,045
Total Hours	1,608	1,825	837	6,826	6,690	17,807
Total Cost	$122,193	$138,720	$63,604	$518,813	$508,403	$1,351,733
Peak Vehicles	1	1	1	2	2	7
Change						
Rev Hours	–319	–184	-13	3,690	4,972	8,147
Total Hours	–335	–184	-13	3,729	5,436	8,654
Total Cost	–$25,457	–$13,951	-$994	$283,446	$413,078	$656,121
Peak Vehicles	0	0	0	0	0	0

Operating metrics impacted by the short-term recommendations include cost, total hours, and number of vehicles. Baseline metrics, metrics based on the short-term recommendations, and the incremental change between these two sets of metrics are provided in the Appendix. Additional operating considerations are also provided in the Appendix.

LONG-TERM RECOMMENDATIONS

To support future transit needs, long-term recommendations were developed for existing services in the Study Area building upon the previous short-term recommendations. These recommendations were developed to address the following long-term goals:

1. Develop TCL into a fixed route and on-demand zone transit system
2. Support the development of BRT service on the US 52 corridor

These recommendations were developed through a multi-step process of evaluating each of TCL's routes against the short-term recommendations outlined in the previous section, the US 52 Preferred Scenario Report, and 2040 projected population and employment growth for the Study Area. The key assumptions and service planning considerations used to develop the short-term recommendation service plans were also applied to develop the long-term recommendation service plans. Table 5 summarizes the recommended long-term changes for each route. The X in the table indicates whether the long-term recommendation is based on the short-term recommendation or the Preferred Scenario Report recommendation. These recommendations are also shown on a map in Figure 8. More detailed maps of these recommendations are provided in the Appendix.

METHODOLOGY AND CONSIDERATIONS

The short-term recommendations outlined in the previous section were reviewed against the US 52 Preferred Scenario Report. For each route, a quarter mile service area was evaluated for 2040 projected population and employment growth. Long-term recommendations for each route are based on either the short-term recommendations or Preferred Scenario Report recommendations, whichever option had the highest projected growth for each respective route.

Almost all the recommended on-demand zones are a part of the US 52 Preferred Scenario Report. These zones were evaluated for 2040 projected population and employment growth as well as for connectivity to the developed recommended long-term routes. For some of the on-demand zones, boundaries were expanded to serve adjacent areas with high projected growth or to provide more connections to future routing.

Unity Bay

Long-term recommendations for TCL routes are based on the goals of developing TCL into a multimodal system and supporting the development of BRT service along the US 52 corridor. Recommendations for service are based on areas within the Study Area with the highest projected population and employment growth, representing potential future demand and transit ridership. TCL has an existing contract with Unity Bay which requires several of the system's routes to deviate to serve Unity Bay customers. These deviations reduce TCL routes' ability to run more regular service and build towards long-term goals. For long-term planning, it is recommended that TCL reevaluate its current-term contract with Unity Bay and explore different means through which they can serve these customers. This will ensure that routes are oriented towards serving as many people as possible instead of deviating to serve specific customers. This will streamline routes, reduce roundtrip travel times, allow for more frequent service, make routes more reliable, build consistent ridership, and support the long-term goals of building TCL into a multimodal system supportive of BRT service.

Paratransit Service

As routes transition from deviated fixed routes to more structures fixed routes, TCL will need to provide complementary paratransit service for the three-quarter mile area around fixed routes. This is a USDOT

requirement for fixed route service. These will include routes CS1, B101, 1, 2, 4, and CS2. This will only serve eligible riders that are unable to access vehicles, transit stops, facilities, or to independently navigate the system and will operate within a designated area, providing door-to-door service. This service can be added around each individual fixed route or operated in a larger area (e.g., county-wide). Costs for providing complementary paratransit service were not estimated as part of this effort and additional analysis will be required to further understand service and cost impacts for TCL.[4] Additionally, it is important to note that the short-term recommendation for Route CS1 is likely to also trigger this requirement for complementary paratransit service for the three-quarter mile area around the route. Other short-term route recommendations do not require complementary paratransit service as they operate as specialized routes (i.e., commuter and deviating routes) that do not trigger the requirement by law.

[4] National Rural Transit Assistance Program. ADA Complementary Paratransit Service Requirements. January 2025.

Table 5 Long-Term Service Change Summary & Recommendations

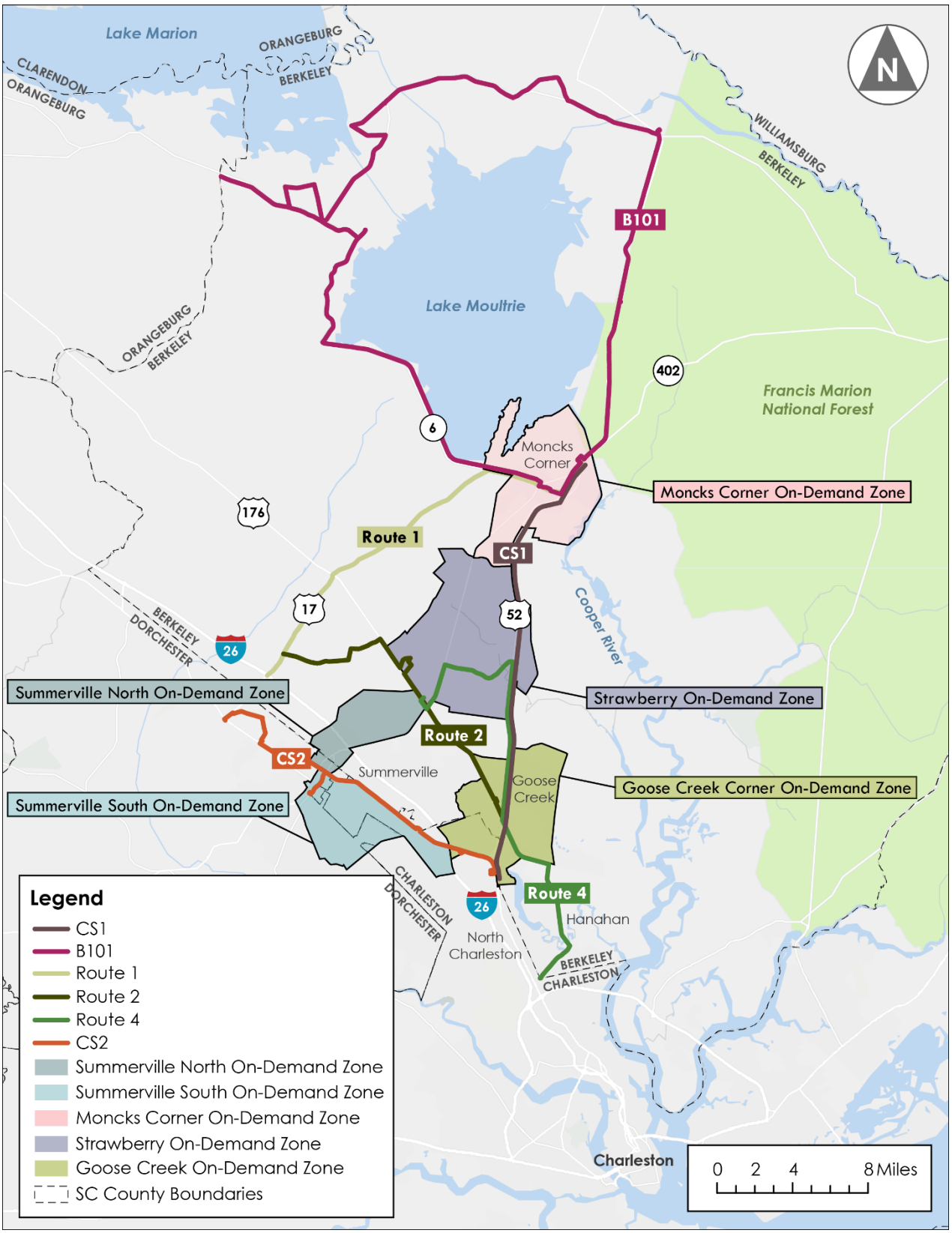
Route	Short-Term Rec	Preferred Scenario Rec	Change Justification	Service Description
CS1		X	Adjustments to streamline route, optimize operations, build ridership, move towards BRT.	Operates between Moncks Corner and Goose Creek along US 52.
B101	X		Adjustments to short-term recommendation to further streamline route and reduce travel time by removing the southern loop to reduce redundancy with Moncks Corner On-Demand Zone, Strawberry On-Demand Zone, and Route CS1.	Operates in a loop around Lake Moultrie primarily along SC 6, SC 45, and US 52.
B102/ Route 1		X	Split Route B102 into three separate routes (Route 1, Route 2, Route 4) to optimize operations and reduce customer travel time[5].	Operates between Moncks Corner and Summerville primarily along Cooper Store Rd and Jedburg Rd.
B102/ Route 2		X	Split Route B102 into three separate routes (Route 1, Route 2, Route 4) to optimize operations and reduce customer travel time.	Operates between Summerville and Goose Creek primarily along Wildgame Rd and US 176.
B102/ Route 4		X	Split Route B102 into three separate routes (Route 1, Route 2, Route 4) to optimize operations and reduce customer travel time.	Operates between Strawberry and North Charleston primarily along S Live Oak Dr, Cypress Gardens Rd, US 52, and Henry E Brown Jr Blvd.

[5] Route naming comes from the US 52 Preferred Scenario Report.

Route	Short-Term Rec	Preferred Scenario Rec	Change Justification	Service Description
CS2			This route was not included in the short-term recommendations or Preferred Scenario Report, but it is recommended to continue service long-term based on 2040 projected population and employment growth for the route's service area.	Operates between Summerville and North Charleston along US 78.
D305/ Summerville N On-Demand Zone and Summerville S On-Demand Zone			This route was not included in the short-term recommendations but in the Preferred Scenario Report portions of the route are recommended for on-demand zone service. It is recommended that the remaining route service area be covered by two additional on-demand zones.	Summerville N On-Demand Zone serves Summerville between US 78, US 176, and N Main St. Summerville S On-Demand Zone serves Summerville between S Main St, US 78, and Old Trolley Rd.
CS8/Moncks Corner On-Demand Zone	X	X	Extend short-term recommended pilot boundary to become Moncks Corner On-Demand Zone. This on-demand zone was also included in the Preferred Scenario Report. Boundaries were expanded to include adjacent areas with high 2040 projected population and employment growth.	Zone serves Moncks Corner between Lake Moultrie, Cooper River, and Gaillard Rd.
Strawberry On-Demand Zone		X	This on-demand zone was included in the Preferred Scenario Report. Boundaries were expanded to provide more connectivity to fixed routes.	Zone serves Strawberry between Gaillard Rd, Old Highway 52, and the Forest Acres area.

Route	Short-Term Rec	Preferred Scenario Rec	Change Justification	Service Description
Goose Creek On-Demand Zone		X	This on-demand zone was included in the Preferred Scenario Report.	Zone serves Goose Creek between Medway Rd, Henry E Brown Jr Blvd, US 78, and the area adjacent to Crowfield Plantation Lake.
B104	X		This route is not recommended to continue service long-term because most of its existing alignment will be covered by Route B101 and Route CS1. The short-term alignment recommended for Route B104 had the purpose of maintaining service for Unity Bay customers, but long-term it is recommended that TCL reevaluate its service contract with Unity Bay.	
B105			This route is not recommended to continue service long-term based on the projected population and employment growth. Additionally, the existing Route B105 alignment primarily serves Unity Bay customers, and that contracted service is not recommended to continue fixed route service long-term.	

Figure 8 Long-Term Recommendations



SERVICE PLANNING

It is recommended that service across TCL be standardized to make it more reliable and to better facilitate transfers between routes, on-demand zones, and future BRT service. All routes and on-demand zones are recommended to operate weekdays between 5AM and 7PM. Table 6 provides proposed operating statistics for the US 52 corridor routes and Table 7 provides proposed operating statistics for the additional adjacent routes based on implementation of the long-term recommendations. Additional details are provided in the Appendix.

Table 6 US 52 Corridor Routes- Long-Term Proposed Operating Statistics

Route	Pattern	General Span	Trips	Frequency	Existing Vehicles	Long-Term Vehicle Needs
CS1[6]	Roundtrip	5:00 AM to 7:00 PM	56	30	2	4
B101	Roundtrip	5:00 AM to 7:00 PM	28	60	1	5
Route 1	Roundtrip	5:00 AM to 7:00 PM	28	60	2[7]	2
Route 4	Roundtrip	5:00 AM to 7:00 PM	56	30	0	5
Moncks Corner	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	2	2
Strawberry	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	n/a	2
Goose Creek	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	n/a	3

[6] As transit demand grows along the US 52 corridor, and in support of future BRT service, frequency for Route CS1 may be increased to trips every 20 or 15 minutes.
[7] Existing B102 and B104 vehicles are included. Each of these routes currently utilizes one vehicle.

Table 7 Additional Adjacent Routes- Long-Term Proposed Operating Statistics

Route	Pattern	General Span	Trips	Frequency	Existing Vehicles	Long-Term Vehicle Needs
Route 2	Roundtrip	5:00 AM to 7:00 PM	56	30	0	3
CS2	Roundtrip	5:00 AM to 7:00 PM	56	30	2	4
Summerville N	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	n/a	1
Summerville S	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	n/a	1

Fixed Routes

BCDCOG published the Transit and Bus Stop Design Guidelines in 2021 to guide future route planning for the region. The document notes that, in the short-term, the guidelines were developed for Charleston Area Regional Transit Authority (CARTA) bus routes, but as TCL develops into an urban area system the guidelines can be applied to TCL routes as well. It is noted that while the document provides guidelines, in dense or sparse areas variations to the standard are warranted.[8]

Frequency and stop spacing for each route were determined based on these guidelines, through analysis of the projected population and employment density within the quarter mile service area of each route, as well through assessment of the planned type of service for each route. These guidelines informed the following long-term recommendations for TCL route frequency and stop spacing. Recommendations for frequency range from buses running every 30 to 60 minutes. High-level stop requirements and spacing recommendations were assumed for stops every two to four miles for future planning purposes. Table 8, Table 9, Table 10, and Table 11 below detail the recommended frequency and stop requirements, including spacing and stops needed, for the US 52 corridor fixed routes and the additional adjacent fixed routes.

[8] BCDCOG. Bus Stop Design Guidelines. October 2021.

Table 8 US 52 Corridor Routes- Route Frequency 2040 Population and Employment Projections

Route	Frequency	2040 Population Density (per sq. mile)	2040 Employment Density (per sq. mile)
CS1	30	2,080	859
B101	60	222	308
Route 1	60	610	982
Route 4	30	2,504	542

Table 9 Additional Adjacent Routes- Route Frequency 2040 Population and Employment Projections

Route	Frequency	2040 Population Density (per sq. mile)	2040 Employment Density (per sq. mile)
Route 2	30	2,784	651
CS2	30	2,548	4,057

Table 10 US 52 Corridor Routes- Route Frequency and Stop Requirements

Route	Frequency (minutes)	Long-Term Vehicle Needs	Stop Spacing (miles)	Roundtrip Route Length (miles)	Stops per Route
CS1	30	4	2	38	19
B101	60	5	4	133	33
Route 1	60	2	4	35	9
Route 4	30	5	2	42	21

Table 11 Additional Adjacent Routes- Route Frequency and Stop Requirements

Route	Frequency (minutes)	Long-Term Vehicle Needs	Stop Spacing (miles)	Roundtrip Route Length (miles)	Stops per Route
Route 2	30	3	2	30	15
CS2	30	4	2	36	18

On-Demand Zones

Peak vehicle requirements for the on-demand zones were taken from Remix transit planning software. The software provides peak vehicle needs based on estimated ridership for each on-demand zone. Ridership is estimated using a model that factors in demographics, housing, socioeconomic data, jobs, job type, worker demographics, car ownership, walkability, and key points of interest.[9] 2040 projected population and employment growth were also considered. The on-demand zone peak vehicle requirements and associated projected population and employment densities of each zone are provided in Table 12 for US 52 corridor on-demand zones and Table 13 for additional adjacent on-demand zones.

Table 12 US 52 Corridor On-Demand Zones- Long-Term Vehicle Requirements

On-Demand Zone	Long-Term Vehicle Needs	2040 Population Density (per sq. mile)	2040 Employment Density (per sq. mile)
Moncks Corner	2	1,534	885
Strawberry	2	1,722	146
Goose Creek	3	2,966	723

Table 13 Additional Adjacent On-Demand Zones- Long-Term Vehicle Requirements

On-Demand Zone	Long-Term Vehicle Needs	2040 Population Density (per sq. mile)	2040 Employment Density (per sq. mile)
Summerville N	1	4,658	2,129
Summerville S	1	4,122	5,025

[9] Remix. On-Demand Planning, January 2025.

IMPLEMENTATION PLAN

SERVICE

The short-term and long-term recommendations serve as steps toward a more reliable multimodal transit system. Implementation of the TCL route recommendations need to begin with the smaller short-term service changes and build up to the long-term standardizations of service. As changes are implemented, it will be important to track how development is occurring in the Study Area to ensure the TCL system is consistently meeting the needs of the changing demographics and built environment.

Short-Term Recommendations

Short-term recommendations for routes CS1, B101, B102, B104, and CS8 are recommended to begin with the changes that are relatively cost-neutral, like removing portions of routes or moving stops from one route to another. Following cost neutral changes, implementation of these recommendations shall occur as TCL identifies funding for the increased costs. Some short-term recommendations, like the expansion of Route CS8's service and on-demand zone, may need to occur in phases depending on availability of vehicles, operators, and funding. TCL can monitor the ridership for the CS8 over time to test out the applicability and determine the utilization of the new service offering. This will inform at what pace TCL determines for permanently implementing the program. Changes recommended for each route are categorized as immediate or intermediate in Table 14. Operating and capital costs for the short-term recommendations are listed in the next section.

Table 14 Implementation of Short-Term Recommendations

Route	Change Justification	Immediate Changes	Intermediate Changes
CS1	Adjustments to optimize operations, build ridership, move towards future BRT	Begin service at Walmart Supercenter in Moncks Corner, add circulation to Goose Creek stops	Expand service hours, add additional stops in Goose Creek, and upgrade all stops to standard bus stop typology
B101	Optimize operations, reduce customer travel times	Remove the portion of the route east of US 52, begin serving additional stops along US 52 in Moncks Corner, adjust service span	
B102	Optimize operations, reduce customer travel times	Shift western portion of alignment to South Live Oak Dr, begin serving additional stops, adjust service span	
B104	Maintain coverage for previous B101 service	Adjust routing to serve former Route B101 area and stops, adjust service span	
CS8	Explore expansion/pilot of on-demand service	Begin expanding boundaries of the on-demand zone and service hours	Continue expansion of on-demand zone boundaries and service hours

Long-Term Recommendations

Throughout the implementation of the short-term recommendations, the pace and density of development will inform at what point TCL begins planning for implementation of the long-term recommendations. Population density, employment density, and development of pedestrian facilities will determine when this implementation shall begin. Even as population and employment grow, without adequate pedestrian infrastructure, potential riders will not be able to access the enhanced service provided by the long-term recommendations. This infrastructure is specifically needed near bus stops, residential areas, and activity centers.

As these recommendations are based on 2040 projections, many may not be viable for 10 to 20 years. Recommendations need to be implemented wholistically, as possible, to optimize the connectivity and usefulness of each route. Recommended changes are categorized into two phases[10] for each US 52 corridor route in Table 15 and for each additional adjacent route in Table 16.

[10] The phasing of long-term recommendations first focuses on establishing service followed by expanding service levels and spans. Funding availability will dictate when the final phase service levels and spans can be implemented (i.e., the intermediate phase may include reduced service levels or spans); however, when possible, long-term recommendations should be implemented wholistically based on the final phase.

Table 15 US 52 Corridor Routes - Implementation of Long-Term Recommendations

Route	Change Justification	Intermediate Phase	Final Phase
B101	Adjustments to short-term recommendation to further streamline route and reduce travel time by removing the southern loop to reduce redundancy with Moncks Corner On-Demand Zone, Strawberry On-Demand Zone, and Route CS1.	Remove the southern loop from the route. Upgrade existing stop infrastructure to include amenities for the standard stop typology.	Expand service hours to 5am to 7pm and begin running buses every 60 minutes. Standardize stop spacing to every 4 miles.
Route 1	Split Route B102 into three separate routes (Route 1, Route 2, Route 4) to optimize operations and reduce customer travel time.	Separate Route 1 from Route B102. Upgrade existing stop infrastructure to include amenities for the standard stop typology.	Expand service hours to 5am to 7pm and begin running buses every 60 minutes. Standardize stop spacing to every 4 miles.
Route 4	Split Route B102 into three separate routes (Route 1, Route 2, Route 4) to optimize operations and reduce customer travel time.	Separate Route 4 from Route B102. Upgrade existing stop infrastructure to include amenities for the high activity stop typology.	Expand service hours to 5am to 7pm and begin running buses every 30 minutes. Standardize stop spacing to every 2 miles.
CS1	Adjustments to streamline route, optimize operations, build ridership, move towards BRT.	Upgrade existing stop infrastructure to include amenities for the high activity stop typology.	Expand service hours to 5am to 7pm and begin running buses every 30 minutes. Standardize stop spacing to every 2 miles.
Moncks Corner	Extend short-term recommended pilot boundary to become Moncks Corner On-Demand Zone. This on-demand zone was also included in the Preferred Scenario Report. Boundaries were expanded to include adjacent areas with high 2040 projected population and employment growth.	Expand Route CS8 service zone boundaries.	Expand service hours to 5am to 7pm.
Strawberry	This on-demand zone was included in the Preferred Scenario Report. Boundaries were expanded to provide more connectivity to fixed routes.	Begin on-demand zone service within the specified boundaries.	Expand service hours to 5am to 7pm.

Route	Change Justification	Intermediate Phase	Final Phase
Goose Creek	This on-demand zone was included in the Preferred Scenario Report.	Begin on-demand zone service within the specified boundaries.	Expand service hours to 5am to 7pm.

Table 16 Additional Adjacent Routes- Implementation of Long-Term Recommendations

Route	Change Justification	Intermediate Phase	Final Phase
Route 2	Split Route B102 into three separate routes (Route 1, Route 2, Route 4) to optimize operations and reduce customer travel time.	Separate Route 2 from Route B102. Upgrade existing stop infrastructure to include amenities for the high activity stop typology.	Expand service hours to 5am to 7pm and begin running buses every 30 minutes. Standardize stop spacing to every 2 miles.
CS2	This route was not included in the short-term recommendations or Preferred Scenario Report, but it is recommended to continue service long-term based on 2040 projected population and employment growth for the route's service area.	Upgrade existing stop infrastructure to include amenities for the high activity stop typology.	Expand service hours to 5am to 7pm and begin running buses every 30 minutes. Standardize stop spacing to every 2 miles.
Summerville N	This route was not included in the short-term recommendations but in the Preferred Scenario Report portions of the route are recommended for on-demand zone service. It is recommended that the remaining route service area be covered by two additional on-demand zones.	Begin on-demand zone service within the specified boundaries.	Expand service hours to 5am to 7pm.
Summerville S	This route was not included in the short-term recommendations but in the Preferred Scenario Report portions of the route are recommended for on-demand zone service. It is recommended that the remaining route service area be covered by two additional on-demand zones.	Begin on-demand zone service within the specified boundaries.	Expand service hours to 5am to 7pm.

COSTS

The following summarizes the planning-level cost estimates developed for the recommended short and long-term services. All costs have been estimated for 2025 dollars and rounded unless otherwise noted.[11]

Short-Term Recommendations

A one-vehicle scenario and two-vehicle scenario are proposed for Route CS8 short-term recommendations. Total operating cost for the one-vehicle scenario short-term recommendations is $1,098,000, and the total operating cost for the two-vehicle scenario is $1,352,000. Operating costs for these scenarios are provided in the Appendix.

Capital costs for the short-term recommendations include the upgrade of Route CS1's bus stops to BCDCOG's standard bus stop typology. No new vehicles need to be purchased to implement the short-term recommendations. The total capital cost for short-term recommendations is $105,000. Development of capital costs for short-term recommendations is described in the next section. Additional details on amenities included in each bus stop typology and associated costs are provided in the Appendix.

Long-Term Recommendations

The total operating cost for the US 52 corridor route long-term recommendations is $5,782,000 and total operating cost for the additional adjacent routes is $2,290,000. Further details on these costs are provided in the Appendix. For future planning purposes, the long-term operating costs were also inflated from 2025 dollars to incremental future years, as shown in Table 17 for the US 52 corridor routes and Table 18 for the additional adjacent routes.

Table 17 US 52 Corridor Routes- Long-Term Recommendations Future Operating Cost

Year	2025 Existing	2025 Short-Term[12]	2030	2035	2040
Total Operating Cost	$696,000	$1,352,000	$6,703,000	$7,770,000	$9,008,000

Table 18 Additional Adjacent Routes- Long-Term Recommendations Future Operating Cost

Year	2025 Existing[13]	2025 Short-Term	2030	2035	2040
Total Operating Cost	$153,000	$139,000	$2,654,000	$3,077,000	$3,567,000

[11] $76 per total hour was used to develop costs. This rate was developed based on the FY22 – 23 reported system operations, escalated to 2025 dollars using an inflation rate of three percent and rounded.
[12] Cost shown is for the two-vehicle CS8 scenario.
[13] Costs shown are for Route B102. These costs are also reflected in Table 15 since long-term Route B102 is split into three separate routes that individually operate on US 52 and on adjacent corridors.

Capital costs for the long-term recommendations, which include installing bus stops (refer to Table 19 and Table 20) and purchasing additional vehicles (refer to Table 21 and Table 22), are estimated to cost $9,130,000 for US 52 corridor routes and $4,584,000 for additional adjacent routes. Up to 23 additional vehicles will need to be purchased to implement the long-term recommendations. The development of capital costs for long-term recommendations is described in the next section.

Bus Stops

Capital costs for long-term recommendations include bus stops and vehicles. Several TCL routes currently provide deviating service, traveling off-route to pick up passengers at their requested pickup location within a certain radius of fixed stops. As TCL moves towards a more urban multimodal system, routes can phase out deviations, flag stops where passengers wave down the bus anywhere along the route, to shorten runtimes and make schedules more reliable. Bus stops can be standardized to provide certain amenities that will make these stops more comfortable and informative regarding bus arrival times, transfer locations, and other useful information for trip planning.

The BCDCOG Bus Stop Design Guidelines include descriptions of varying bus stop typologies to be installed based on context and usage. Each typology includes minimum, preferred, and optional amenities to be included. Typology descriptions also include trip frequencies associated with each. Based on the recommended frequencies listed in Table 10 and Table 11, bus stops for the long-term TCL routes will be either Park-n-Rides, high-activity stops, or standard stops. Minimum amenities required for all BCDCOG fixed route bus stops include a bus stop post, sign, and ADA landing pad. Below are the estimated total costs for each of the three bus stop typologies:[14]

- Park-n-Rides: $78,000
- High activity stops: $39,000
- Standard stops: $6,000

Additional details regarding amenities included in each bus stop typology and associated costs are provided in the Appendix.

Based on these costs, Table 19 and Table 20 lists the bus stop typologies recommended for each of the long-term recommended routes. BCDCOG Bus Stop Design Guidelines provide recommendations for which bus stop typology is needed based on frequency. The bus stop typology suggested for each route is determined based on the recommended frequency (refer to Table 10 and Table 11). Because Park-n-Rides are dependent on co-location with existing parking lots, routes that could include Park-n-Rides are defaulted to the other applicable frequency-based recommended bus stop typology.

[14] No estimate was provided in the BCDCOG Bus Stop Design Guidelines for safety and security elements or car parking. When a range was provided for an amenity's cost, the average of the range was used to calculate costs per stop typology.

Table 19 US 52 Corridor Routes- Bus Stop Costs

Route	Bus Stop Typology	Stops per Route	Total Cost[15] (includes installation and engineering fees)
CS1	High activity stop	19	$718,000
B101	Standard stop	33	$187,000
Route 1	Standard stop	9	$50,000
Route 4	High activity stop	21	$810,000
Total bus stop cost			$1,765,000

Table 20 Additional Adjacent Routes- Bus Stop Costs

Route	Bus Stop Typology	Stops per Route	Total Cost[16] (includes installation and engineering fees)
Route 2	High activity stop	15	$579,000
CS2	High activity stop	18	$699,000
Total bus stop cost			$1,278,000

Vehicles

As routes increase in frequency and ridership increases, new vehicles will need to be purchased to expand TCL's fleet. Cutaway buses and standard 40-foot buses provide the capacity that will be needed based on this expanded service and long-term recommendations. All vehicles used for on-demand zone service need to also be wheelchair accessible. For vehicle cost estimates, 24-seat Star Trans cutaway buses ($153,000 each) currently used by TCL and an estimate for CARTA's 40-foot buses ($600,000 each) are used. These vehicle costs were used to estimate the capital costs for long-term recommendations based on peak vehicle needs which are detailed in Table 21 and Table 22. Vehicle cost calculations were determined by subtracting existing vehicles from vehicles needed for the long-term recommendations.

[15] All costs have been estimated for 2025 dollars and rounded. A 3 percent inflation rate was assumed.
[16] All costs have been estimated for 2025 dollars and rounded. A 3 percent inflation rate was assumed.

Table 21 US 52 Corridor Routes- Long-Term Vehicle Costs

Route	2025 Existing Vehicles	2025 Short-Term Vehicles	Long-Term Vehicles	Vehicle Type	Long-Term Cost
CS1	2	2	4	40' bus	$1,200,000
B101	1	1	5	40' bus	$2,400,000
Route 1	2[17]	1	2	40' bus	$0
Route 4	0	1	5	40' bus	$3,000,000
Moncks Corner	2	2	2	Cutaway bus	$0
Strawberry	-	-	2	Cutaway bus	$306,000
Goose Creek	-	-	3	Cutaway bus	$459,000
			Total vehicle cost		$7,365,000

Table 22 Additional Adjacent Routes- Long-Term Vehicle Costs

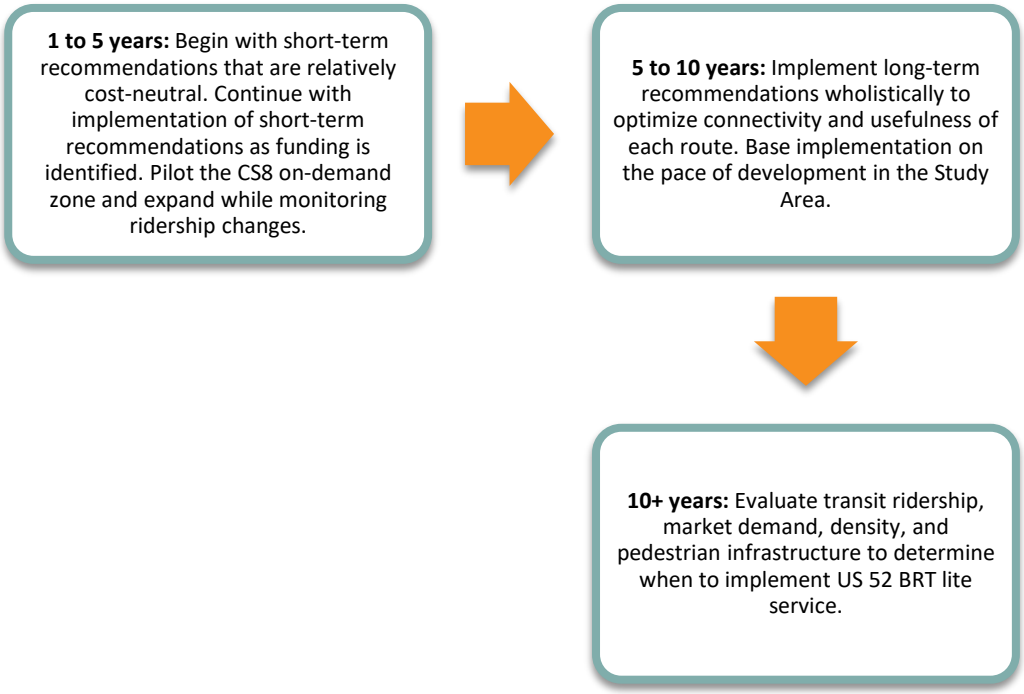
Route	2025 Existing Vehicles	2025 Short-Term Vehicles	Long-Term Vehicles	Vehicle Type	Long-Term Cost
Route 2	0	1	3	40' bus	$1,800,000
CS2	2	2	4	40' bus	$1,200,000
Summerville N	-	-	1	Cutaway bus	$153,000
Summerville S	-	-	1	Cutaway bus	$153,000
			Total vehicle cost		$3,306,000

[17] Existing B102 and B104 vehicles are included. Each of these routes currently utilizes one vehicle.

NEXT STEPS

Following the adoption of these planned short and long-term recommendations, TCL can begin to identify sources of funding for the estimated operating and capital costs. Policies that encourage greater housing, population, and employment density close to transit need to also be considered to support these recommendations. Greater density will result in greater potential ridership for TCL's system, making the short and long-term recommendations more impactful to the US 52 Study Area. Figure 9 provides a general timeline for implementation of these recommendations.

Figure 9 Implementation Timeline



APPENDIX

Table 23 Existing Operating Statistics

Route	Pattern	General Span	Trips	Assumed Speeds	Running Time Est (min)
B101	AM Loop (counterclockwise)	5:40 AM to 9:20 AM	1	34.2	220
B101	PM Loop (clockwise)	1:30 PM to 5:05 PM	1	33.5	215
B102	AM Loop (counterclockwise)	5:35 AM to 9:25 AM	1	19.4	242
B102	PM Loop (clockwise)	2:00 PM to 5:30 PM	1	20.2	231
B104	AM (inbound)	7:05 AM to 9:10 AM	1	19.1	125
B104	PM (inbound)	4:10 PM to 4:50 PM	1	28.6	40
B104	Outbound	3:40 PM to 4:10 PM	1	35.6	30
CS1	AM (outbound)	5:30 AM to 8:10 AM	4	27.6	45
CS1	PM (outbound)	3:30 PM to 6:38 PM	4	27.6	45
CS1	Short AM (outbound)	8:20 AM to 8:25 AM	1	34.6	5
CS1	Short PM (outbound)	6:45 PM to 6:50 PM; 7:20 PM to 7:25 PM	2	34.6	5
CS1	AM (inbound)	6:15 AM to 8:50 AM	4	32.4	35
CS1	PM (inbound)	4:20 PM to 7:20 PM	4	26.7	43
CS8	Fixed Zone On-Demand	10:45 AM to 1:00 PM	-	-	-

Table 24 Short-Term Proposed Operating Statistics

Route	Pattern	General Span	Trips	Assumed Speeds	Running Time Est (min)	Other Operational Metrics	
						Pattern Cycle Time	Layover %
B101	AM Loop (counterclockwise)	5:30 AM to 8:30 AM	1	30	180	180	0%
B101	PM Loop (clockwise)	2:00 PM to 5:00 PM	1	30	180	180	0%
B102	AM Loop (counterclockwise)	5:35 AM to 9:10 AM	1	19	215	215	0%
B102	PM Loop (clockwise)	2:00 PM to 5:35 PM	1	19	215	215	0%
B104	Inbound	7:00 AM to 7:50 AM; 3:30 PM to 4:20 PM	2	40	48	48	0%
B104	Outbound	7:50 AM to 8:40 AM; 4:20 PM to 5:10 PM	2	40	48	48	0%
CS1	SB (inbound)	5:00 AM to 6:00 PM	14	25	54	59	10%
CS1	NB (outbound)	6:00 AM to 7:00 PM	14	25	49	54	10%
CS8	Moncks Corner On-Demand – 1 vehicle	6:00 AM to 6:00 PM	-	-	-	-	0%
CS8	Moncks Corner On-Demand – 2 vehicles	6:00 AM to 6:00 PM	-	-	-	-	0%

Table 25 Short-Term Annual Operating Summary Table (1 vehicle for CS8)

Route	B101	B102	B104	CS1	CS8*	Total
Base						
Rev Hours	1,849	2,009	829	3,064	1,148	8,898
Total Hours	1,943	2,009	850	3,097	1,254	9,153
Total Cost	$147,650	$152,671	$64,598	$235,367	$95,325	$695,612
Peak Vehicles	1	1	1	2	2	7
Recommended						
Rev Hours	1,530	1,825	816	6,754	3,060	13,986
Total Hours	1,608	1,825	837	6,826	3,345	14,441
Total Cost	$122,193	$138,720	$63,604	$518,813	$254,201	$1,097,531
Peak Vehicles	1	1	1	2	1	6
Change						
Rev Hours	-319	-184	-13	3,690	1,912	5,088
Total Hours	-335	-184	-13	3,729	2,091	5,288
Total Cost	-$25,457	-$13,951	$994	$283,446	$158,876	$401,919
Peak Vehicles	0	0	0	0	-1	-1

*Assumes 1 vehicle required

Table 26 Short-Term Annual Operating Summary Table (2 vehicles for CS8)

Route	B101	B102	B104	CS1	CS8*	Total
Base						
Rev Hours	1,849	2,009	829	3,064	1,148	8,898
Total Hours	1,943	2,009	850	3,097	1,254	9,153
Total Cost	$147,650	$152,671	$64,598	$235,367	$95,325	$695,612
Peak Vehicles	1	1	1	2	2	7
Recommended						
Rev Hours	1,530	1,825	816	6,754	6,120	17,045
Total Hours	1,608	1,825	837	6,826	6,690	17,807
Total Cost	$122,193	$138,720	$63,604	$518,813	$508,403	$1,351,733
Peak Vehicles	1	1	1	2	2	7
Change						
Rev Hours	–319	–184	-13	3,690	4,972	8,147
Total Hours	–335	–184	-13	3,729	5,436	8,654
Total Cost	–$25,457	–$13,951	-$994	$283,446	$413,078	$656,121
Peak Vehicles	0	0	0	0	0	0

*Assumes 2 vehicles required

Table 27 Additional Operating Considerations

Short-term recommendations include options to consider for CS1 and CS8. Regardless of these route options, optimizing other services does not yield enough savings, and implementing these recommendations will lead to added costs if holistically implemented.

Route	Considerations
CS1	• Includes trade-offs of less commute-oriented trips (reduced peak frequency) and more consistent service (hourly) throughout the day to build a ridership base. Stop infrastructure (at minimum, signposts for posted stops) will be a consideration. • Converting the route to a fixed route service will require a complementary ADA paratransit service. The costs shown do not include the addition of this service. It is recommended that this be covered by other means, and the CS1 does not maintain a flex option to maintain more consistent and reliable service for daily riders.
B102	• TCL noted that the reduced alignment (Jedburg) is often not operated in practice by drivers. Potential coverage of this area by Spare or for specific Unity Bay riders was also discussed as additional options/considerations.
B104	• Estimated changes in operating costs are minimal and are mostly considered cost-neutral. • Base estimates were developed on the published B104 schedule and did not include B104 Flex. Additional savings/funding may be available if the B104 Flex service is still in operation. • This revised route was developed to assist with coverage to virtually 1 Unity Bay rider. Ridership is anticipated to be low, and operating this revised service may be a less efficient use of resources. If this service is no longer operated, the resources can be reallocated to assist with offsetting other costs.
CS8	• Remix transit planning software was used to develop estimates for on-demand zone ridership. Based on Remix estimates, ridership for a larger on-demand zone in Moncks Corner is estimated to be low (10-25 riders per day); however, the existing CS8 service already produces about 20-30 riders per day. The cost to ride the service may be the largest factor in determining overall demand. • The pilot service could likely be operated by 1 vehicle and adjusted with an additional vehicle depending on demand (impacting wait times).

Figure 10 Long-Term Recommendations North Detail Map

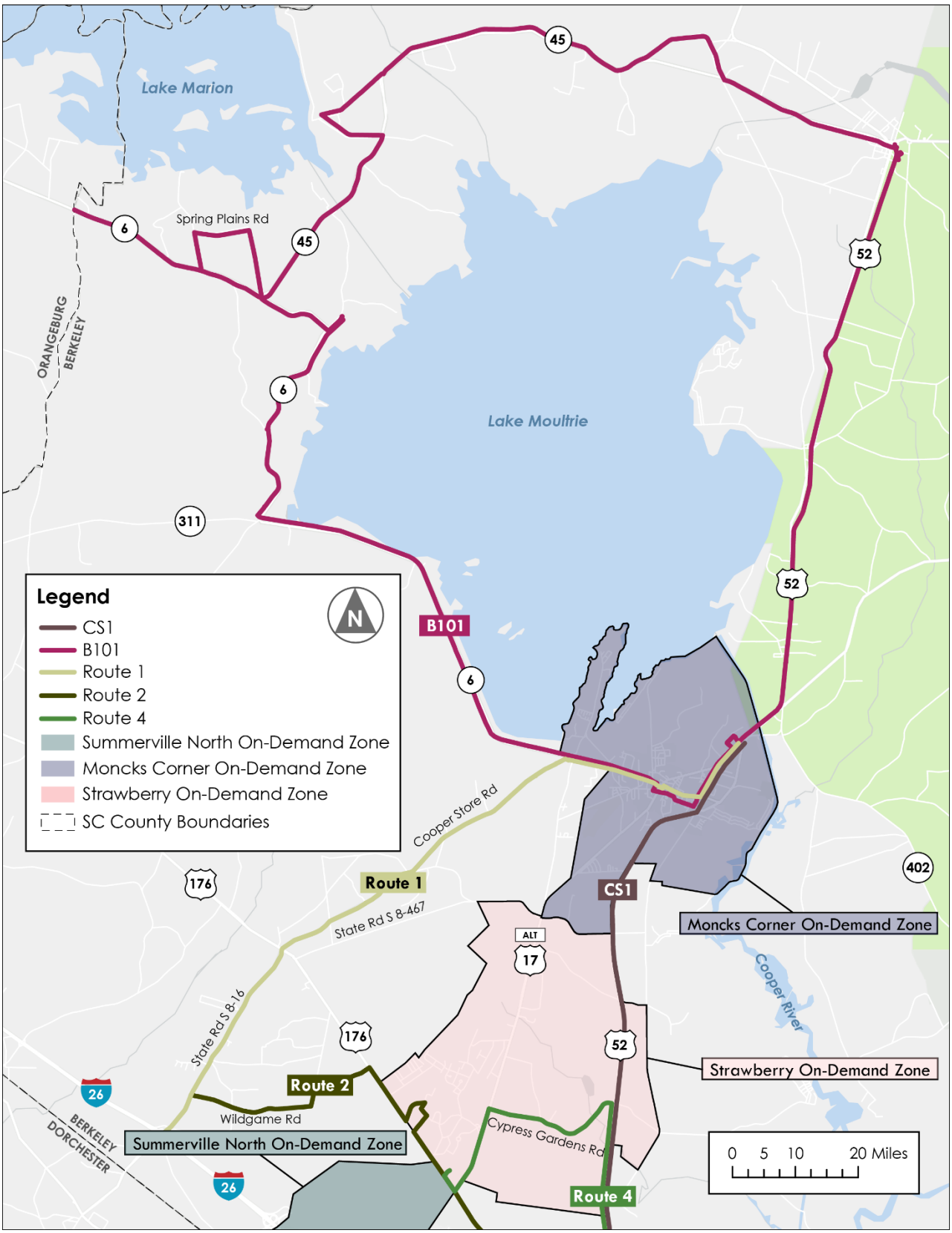


Figure 11 Long-Term Recommendations South Detail Map

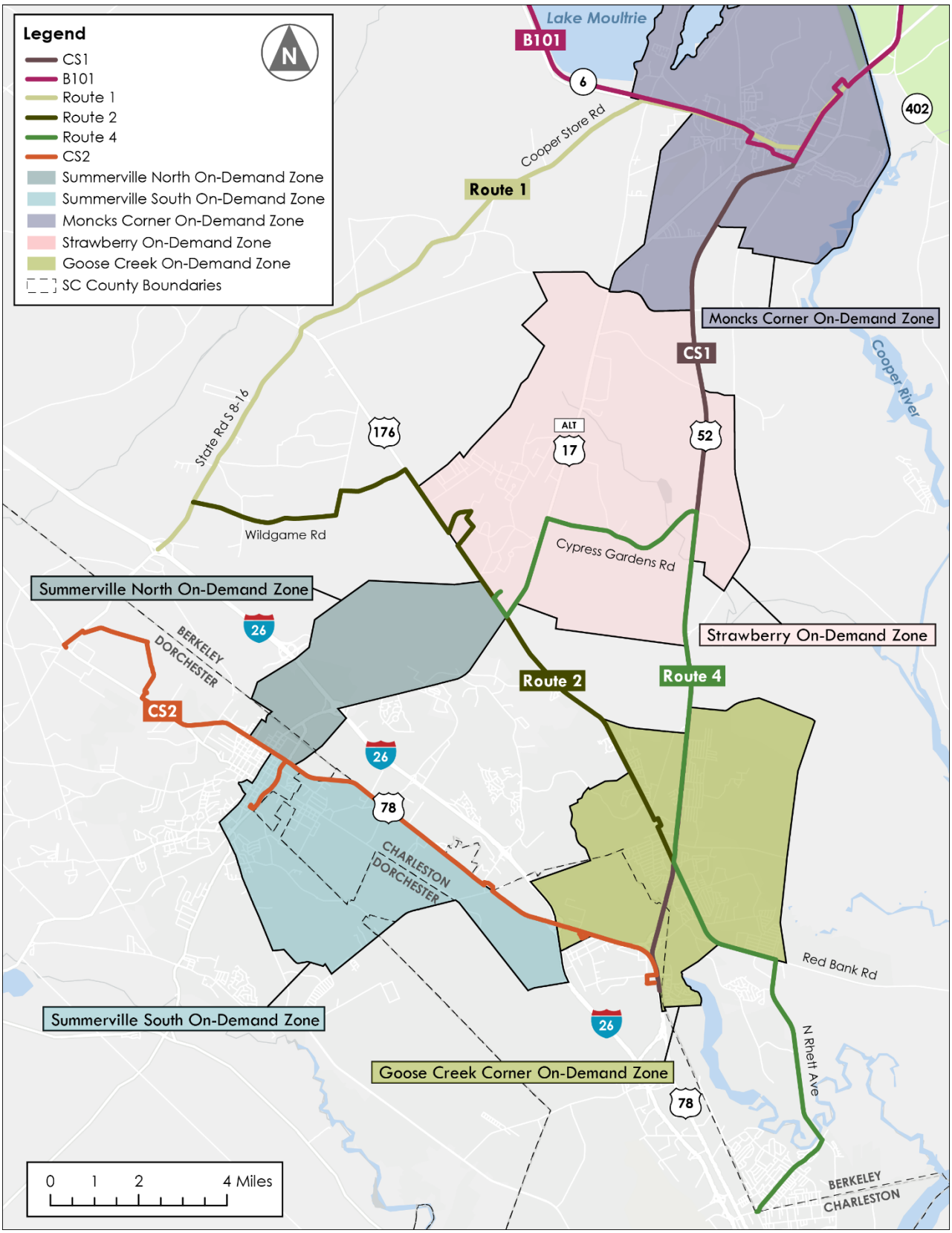


Table 28 Bus Stop Typology Amenities[18]

Stop Type	Description	Amenities
Park-n-Rides	Parking lots with connecting services to major activity centers	Required: • Landing pad • Bus stop post and sign • Shelter • Lighting • Real-time information • Enhanced passenger information • Trash can • Bench • Safety and security elements • Bike rack • Car parking Optional: • Fare machine • Electric bus charger

[18] BCDCOG. Bus Stop Design Guidelines, October 2021.

Stop Type	Description	Amenities
High Activity Stops	Stops where ridership, transfer activity, and/or proximity to a major activity center merit higher investment	Required: • Landing pad • Bus stop post and sign • Lighting • Real-time information • Enhanced passenger information • Trash can • Bench Preferred: • Shelter • Bike rack Optional: • Fare machine • Safety and security elements

Stop Type	Description	Amenities
Standard Stops	The most typical stops are often served by one route	Required: • Landing pad • Bus stop post and sign Preferred: • Shelter • Lighting • Enhanced passenger information • Trash can • Bench Optional: • Real-time information • Bike rack • Safety and security elements • Fare machine

Table 29 BCDCOG Bus Stop Amenity Costs[19]

Amenity	Cost[20]
Bus stop post and sign	$169
ADA-compliant landing pad	$5,431
Bike rack	$189
Solar shelter lighting	$1,745
Bench	$1,422
Trash can	$355
Shelter	$14,063
Digital signage	$10,034
The costs listed above do not include engineering or installation fees. These fees are listed here: • Engineering fees ranging from $16,883 per shelter/bench • Shelter installation: approximately $7,316 • Bench installation: approximately $1,688 • Digital signage installation: approximately $844 • LED signage installation: approximately $1,238	

[19] BCDCOG. Bus Stop Design Guidelines, October 2021.
[20] Costs are estimated for 2025 dollars and assume a 3 percent inflation rate.

Table 30 Long-Term Proposed Operating Statistics

Route	Pattern	General Span	Trips	Assumed Speeds	Running Time Est (min, one way)	Other Operational Metrics	
						Pattern Cycle Time	Layover %
CS1	Roundtrip	5:00 AM to 7:00 PM	56	25	46	120	10%
B101	Roundtrip	5:00 AM to 7:00 PM	28	35	115	300	10%
Route 1	Roundtrip	5:00 AM to 7:00 PM	28	23	47	120	10%
Route 4	Roundtrip	5:00 AM to 7:00 PM	56	23	55	150	10%
Moncks Corner	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	-	-	10%
Strawberry	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	-	-	10%
Goose Creek	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	-	-	10%

Table 31 Additional Adjacent Routes- Long-Term Proposed Operating Statistics

Route	Pattern	General Span	Trips	Assumed Speeds	Running Time Est (min, one way)	Other Operational Metrics	
						Pattern Cycle Time	Layover %
Route 2	Roundtrip	5:00 AM to 7:00 PM	56	23	39	90	10%
CS2	Roundtrip	5:00 AM to 7:00 PM	56	25	43	120	10%
D305 N	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	-	-	10%
D305 S	Fixed Zone On-Demand	5:00 AM to 7:00 PM	-	-	-	-	10%

Table 32 US 52 Corridor Routes- Long-Term Proposed Operating Summary Table

Fixed Routes					
Route	B101	Route 1	Route 4	CS1	Total
Rev Hours	15,035	6,147	14,342	11,938	47,462
Total Hours	15,787	6,454	15,059	12,535	49,835
Total Cost	$1,199,777	$490,499	$1,144,499	$952,659	$3,787,434
Peak Vehicles	5	2	5	4	16
On-Demand Zones					
Route	Moncks Corner	Strawberry		Goose Creek	Total
Rev Hours	7,140	7,140		10,710	24,990
Total Hours	7,497	7,497		11,246	26,240
Total Cost	$569,772	$569,772		$854,658	$1,994,202
Peak Vehicles	2	2		3	7

Table 33 Additional Adjacent Routes- Long-Term Proposed Operating Summary Table

Fixed Routes			
Route	Route 2	CS2	Total
Rev Hours	10,244	11,310	21,554
Total Hours	10,757	11,875	22,632
Total Cost	$817,499	$902,519	$1,720,018
Peak Vehicles	3	4	7
On-Demand Zones			
Route	Summerville N	Summerville S	Total
Rev Hours	3,570	3,570	7,140
Total Hours	3,749	3,749	7,497
Total Cost	$284,886	$284,886	$569,772
Peak Vehicles	1	1	2