APPENDIX O

CORPUS CHRISTI RTA
LONG RANGE FLEET FORWARD



Corpus Christi Regional Transportation Authority

Fleet Forward
Long Range System Plan Final Report

December 2022

FLEET forward 2022
Enhancing the Rider Experience, Together.

NELSON NYGAARD

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1 INTRODUCTION

In January 2022, the Corpus Christi Regional Transportation Authority (CCRTA) initiated a long range planning process to evaluate the agency's existing transit services and determine how service can best be provided to serve the growing region over the next 20 years.

Through this project, branded as Fleet Forward, the agency reviewed existing service performance and productivity, identified service needs and opportunities, and used this information to lay out a strategic plan to address gaps and opportunities, with the goal of improving service delivery, efficiency, and cost effectiveness while ground truthing the findings and recommendations through public engagement.

In addition to identifying opportunities for fixed-route bus service improvements, the study also evaluated the suitability for new flexible public transit options and a variety of capital investments.

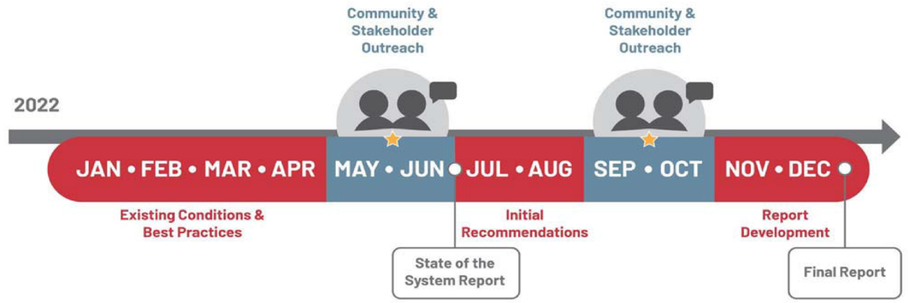
WHY FLEET FORWARD 2022?

The Corpus Christi region is already home to more than 400,000 people, and new residents and workers (in addition to technology developments affecting transportation) are bringing new opportunities and challenges for our current system. This effort will prepare Corpus Christi for future challenges while also improving transportation options, helping our community's residents be better connected to jobs, services, and educational opportunities.

STUDY TIMELINE

The first phase of the Fleet Forward study consisted of a comprehensive review of existing transit and market conditions, as well as best practices. This analysis was followed by community and stakeholder outreach that focused on understanding transit needs and desires. Stakeholders representing social service organizations, advocacy groups, educational institutions, recreation centers, and major employers participated in group discussions regarding the transit needs of clients, customers, and employees. Based on findings and feedback, initial recommendations were presented to community members and stakeholders. Finally, service and capital recommendations were refined and prioritized over a 20-year planning horizon.

Figure 1 - Study Timeline



REPORT ORGANIZATION

This Long Range System Plan Report includes an analysis of the existing conditions of CCRTA's transit services, details of its community engagement and feedback process, long range recommendations, and funding plan and strategies. This report is organized into six chapters and three appendices:

- Chapter 2: State of the System
- Chapter 3: Community Feedback
- Chapter 4: Short-Range Recommendations
- Chapter 5: Long Range Vision
- Chapter 6: Financial Plan
- Chapter 7: Appendices
    - Timed Transfer Scenario
    - High-Frequency Corridors Scenario

2 STATE OF THE SYSTEM

This section of the report includes results from the initial analysis of transit services in the study area and the service area characteristics. The following subsections include the following topics:

- Overview of Transit Services
- Summary of Related Plans
- Future Land Use Plans
- Market Analysis
- Population and Job Forecasts
- Overview of the System
- Commute Flows to Institutions

OVERVIEW OF TRANSIT SERVICES

The Corpus Christi Regional Transportation Authority (CCRTA) operates public transportation in Nueces and San Patricio Counties. The service area includes Corpus Christi, Port Aransas, Robstown, Bishop, Banquete, Agua Dulce, Driscoll, San Patricio, and Gregory. Currently, CCRTA operates 34 fixed routes on weekdays, 27 fixed routes on Saturdays, and 19 fixed routes on Sundays, although several are currently suspended. Many fixed routes are operating at lower capacity due to the COVID-19 pandemic, with the majority following Saturday schedules on weekdays and Sunday schedules on weekends.

CCRTA's service standards classify fixed routes in the following typologies:

- **Primary Transit Network (PTN):** Frequent routes serve one or more CCRTA transfer stations and operate along primary arterial streets with high ridership demand.
- **Standard Routes:** Services operating in high to medium ridership demand areas and connect various areas with CCRTA transfer stations.
- **Connector Routes:** Services connecting outlying portions of service area with urban area at major CCRTA transfer stations. Connector routes may be demand response in outlying areas but have fixed stops within the urban area.

- **Local Circulators:** Services operating within lower population and employment density areas with medium to low ridership demand.
- **Flex Routes:** Services operate along a defined route path with designated stops. Upon customer request, vehicles deviate to pick up or drop off passengers at stops within a defined geographic service area.
- **Demand Response Service:** On-demand service transporting individuals which requires advanced scheduling by the customer, including services provided by the CCRTA or contracted service providers.
- **Commuter Routes:** Services, including Express, operate primarily during peak hours along highways or other major corridors with a limited number of stops.
- **Downtown Routes:** Services provide transportation to downtown areas from transfer stations. Services are geared toward providing workers or visitors with access to employment and tourism attractions.
- **Shuttle Services:** Shuttle service is a higher frequency, short service offered for specific trip attractors such as a university where parking is limited or difficult.

Additional services provided by CCRTA include:

- **B-Line**: Paratransit service offered within ¾ mile of fixed routes to eligible riders, with the option for travel outside the ¾ mile boundary for a surcharge. Passengers can schedule a ride up to 3 days in advance, but must call one day in advance, at a minimum, to guarantee a ride.
- **Flexi-B:** Route that connects Corpus Christi to Port Aransas with several scheduled stops, as well as the option to deviate and serve additional points of interest. Passengers must call a day in advance to schedule their trip.
- **Kleberg County Paisano Transit:** offers services that range from taking people to buy groceries or driving them to area cities, such as Corpus Christi, for medical purposes. This public transportation, available to Kleberg and Kenedy counties' residents.
- **R.E.A.L Transportation Services:** The Rural Economic Assistance League (REAL) operates general public transportation to residents of Aransas, Bee, Brooks, Duval, Jim Hogg, Jim Wells, Live Oak, Refugio and San Patricio counties. This demand response system is provided for any trip purpose but requires reservations in advance.
- **Vanpool Services:** CCRTA operates a fleet of vans to transport groups of people between common pickup locations, such as transit stations and

workplaces, at a reduced cost. A vanpool matching service is available by phone.

Fares

CCRTA fares are amongst the lowest in the United States. Even amid rising inflation, base fares have remained consistent since 2006. In order to keep transit accessible, CCRTA strives to keep fares simple, easy to understand, and affordable. Customers may purchase passes online, at HEB locations, or through human services agencies. The GoPass mobile app allows customers to use their mobile phones for payment purposes.

In 2020, fares accounted for about 4% of the agency's annual operating revenue. However, rising costs have caused fare revenue to decrease in recent years. A fare study conducted in 2019 recommended slight fare increases along with strategies to mitigate the impact of higher fares, although these changes have not yet been implemented.

Figure 2 - CCRTA Fares

Fixed Route Fare

- Base Fare **$0.75**
- Day Pass **$1.75**
- 7-Day Pass **$7.50**
- 31-Day Pass **$30.00**

Reduced Fixed Route Fare

Students, Seniors, People with Disabilities

- Reduced Fare **$0.25**
- Off-Peak Reduced Fare **$0.10**
- 31-Day Pass **$11.00**

Premium Fare

Express, Rural, and Park & Ride Services

- Premium Fare **$1.25**
- 11-Trip Pass **$12.50**

Reduced Premium Fare

Express, Rural, and Park & Ride Services

- Premium Fare **$.25**

B-Line Fare

- Within ADA Service Area **$1.25**
- Outside ADA Service Area **$3.25**
- Monthly Pass **$50.00**

Transfers made within a 2-hour time limit are included with single passes

Seniors over 60 and people with disabilities qualify for reduced fares.

Students, faculty, and staff at TAMU-CC and Del Mar College ride at no charge.

Other students qualify for reduced fare with valid ID.

Fleet

CCRTA has a fleet that includes 122 revenue vehicles, 65 of which are allocated to RTA-operated fixed route services. MV Transportation, the agency's contracted paratransit operator, is assigned 53 vehicles for demand-response, paratransit, and some fixed route service. Port Aransas express and shuttle routes are assigned 4 vehicles.

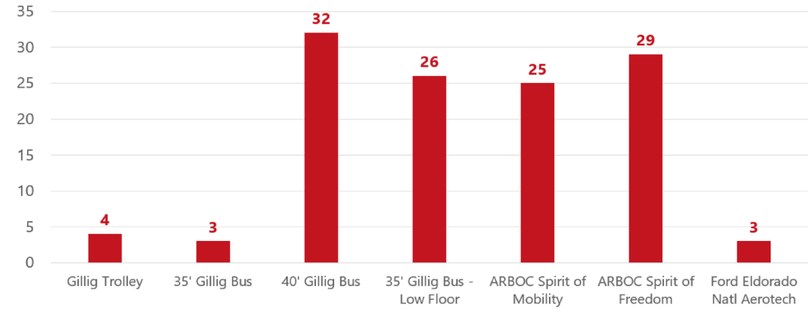
Figure 3 - CCRTA Bus



Figure 4 - CCRTA Fleet Specifications

Vehicle Type	Length	Seating
Gillig Trolley	35'	32
Gillig High Floor Bus	35'	31
Low Floor Bus		29
Gillig High Floor Bus	40'	38
Low Floor Bus		38
ARBOC SOF Cutaway	27'	12 + 3 WC
ARBOC SOM Cutaway	26'	9 + 3 WC
Eldorado Natl Aerotech Cutaway	25'	16 + 2 WC

Figure 5 - CCRTA Revenue Vehicle Fleet



Passenger Facilities

Bus Stops

Existing bus stops range in amenities depending on ridership, available right-of-way, and adjacent land use and infrastructure. All bus stops are marked by a pole with signage displaying routes served and CCRTA branding. CCRTA installs shelters at bus stops with at least 30 average daily boardings.

Figure 6 - Bus Shelter



Shelters may also be installed at bus stops that have 10 or fewer average daily riders if they are at a frequent transfer point, are served by routes with higher wait times, or are located within ¼ mile of major employment centers, grocery stores, schools, apartments, social services offices, medical facilities, or senior centers.

Benches without shelters may be installed at lower ridership stops. A bus stop location with a minimum of 10 average daily boardings with adequate right-of-way warrants an advertising bench. Stop locations with 5-10 boardings warrant a standard bench. Stop locations below 5 daily boardings warrant small benches or similar products.

Figure 7 - Stop Amenities Guidelines

Avg Daily Boardings	Stop Amenities
5 or fewer	Pole and signage, potentially a small bench or similar
6 to 29	Bench, trash can, pole, signage
30 or more	Shelter, bench, trash can, pole, signage

Transfer Stations

CCRTA offers four transfer stations in Corpus Christi and Robstown. Each transfer station provides covered waiting areas and seating for customers. Transfer stations vary in terms of age, accessibility, capacity, and usage.

Staples Street Station

Figure 8 - Staples Street Station



Staples Street Station is the busiest transfer point for CCRTA routes, averaging 1,157 weekday boardings[1]. Staples Street Station, is located in Downtown Corpus Christi within one block of the intersection of Leopard and Staples. Staples Street Station is an off-street facility located within one block of Corpus Christi City Hall and Nueces County Courthouse. This location also houses the Greyhound Bus Station.

Southside Station

Figure 9 - Southside Station



Southside Station is the second busiest transfer station in terms of bus activity and third highest in terms ridership (456 average weekday boardings) after Staples Street and Port Ayers Station. Southside Station is an off-street facility conveniently located across the street from La Palmera Mall, the largest retail destination in the Coastal Bend.

[1] Stop level ridership is from a Spring 2022 ridership count, which counted riders at every stop for every trip. Systemwide ridership has increased since Spring 2022.

Southside Station is approximately 6-7 miles from Staples Street Station, or about 30 minutes on Route 29.

Port Ayers Station

Port Ayers Station is the second highest ridership stop in the CCRTA system, averaging 562 weekday boardings. The station is not entirely off-street as buses access the facility from a bus pull-out on Ayers and an access lane on Port. One of the bus bays along Port is not currently ADA accessible, and pedestrian access to the station is hindered by high traffic volumes and multiple vehicular turn lanes.

Port Ayers Station is in the process of being replaced with a new 10-bay station. Construction is scheduled to begin Spring 2023 with an estimated completion of December 2023.

Robstown Station

Robstown Station is transfer station and park-and-ride that serves 4 CCRTA routes, REAL, and Paisano Transit, and averages 99 weekday boardings. The facility occupies a quarter block in downtown Robstown and is adjacent to an HEB store. The facility includes an indoor waiting area and 2-bus bay. Park and Ride facilities make it easier for passengers to access the bus via a car. CCRTA Park and Rides are served by bus routes that provide connections from three outlying areas to the Corpus Christi Army Depot/ Naval Air Station. CCRTA Park and Rides consist of a shelter, drop off area, lighting, and parking lots.

Figure 10 - CCRTA Park and Rides

Park and Ride	Parking Spaces	Routes Serving
Calallen Park and Ride	60	Route 50
Gregory Park and Ride	50	Route 51 Route 54
Robstown Station	33	Route 53
Greenwood Walmart	Shared Lot	Route 53

System Ridership

CCRTA currently has 42 high-volume stops that experience over 30 average boardings per weekday. Most of these are transfer centers, transfer points, or key destinations such as TAMU-CC, Walmart or HEB locations, and higher-density housing.

Figure 11 - Average Daily Boardings

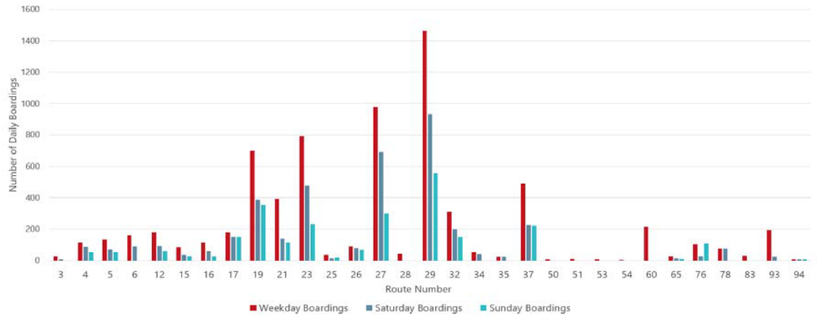
Avg Daily Boardings	Stop Name
1,157	Staples Street Station
562	Port Ayers Station
456	Southside Station
298	Texas A&M CC University
141	Islander Way @ Izzy
99	Avenue A @ 4th St. @ Robstown Station
67	Port @ Tarlton H.E.B. NS
57	Port @ Tarlton HEB
56	Staples @ Carmel
55	Compton @ Waldron
51	Office Depot in Six Points Area
46	77 Access Road @ Walmart MB
45	Port across from Post Office MB
44	Staples @ Laredo NS
43	5262 S Staples across Moore Plaza H.E.B.
40	Ennis Joslin @ La Joya Apts. FS
36	Northwest Blvd. @ Wildcat NS
35	Crecy @ Bldg 8 CCAD
32	Leopard @ Lantana NS
31	Staples between Elizabeth & Booty MB

System Ridership

Route ridership varies significantly due to differences in headway, service span, and route length. Route 29 is the highest ridership route in the CCRTA system on weekdays, Saturdays, and Sundays.

Total system ridership is lower on weekend days. Saturday total ridership is 55% of weekday ridership, and Sunday total ridership is 35% of weekday ridership. Routes 19, 23, 27, and 29 have the greatest total ridership across every day of the week. These routes run every 20 to 30 minutes on weekdays and Saturdays, with Routes 23 and 27 dropping to every 60 minutes on Sundays.

Figure 12 - Ridership by Route

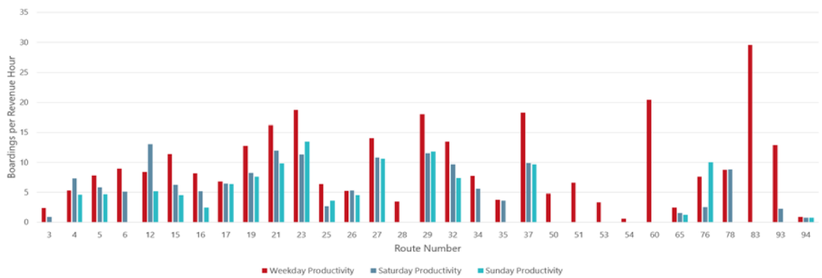


Ridership Productivity

Ridership productivity, measured by boardings per revenue hour, can show how a route is performing compared to the rest of the system. Routes experiencing high ridership demand despite lower service levels means that increased frequencies may be warranted, while less productive routes may be candidates for service reductions when reallocating resources.

Route 83 is the most productive weekday route due to its low number of revenue hours, only making 2 trips each weekday. The other most productive routes include Routes 23, 29, 37 and 60. Routes that are more productive on weekends than weekdays include Routes 4, 12, 76, and 78. These routes operate for fewer hours but still serve riders on weekends.

Figure 13 - Productivity by Route



Transfer Survey

In April 2022, a transfer survey was conducted among CCRTA weekday riders. Respondents were asked to indicate if they had transferred, if they were planning to transfer,

the route they were currently riding, and the routes they had transferred from and/or were planning to transfer to. Surveys were distributed in English and Spanish.

A total of 975 survey responses were collected. Approximately 42% of passengers indicated that they would transfer to or from another route to reach their final destination. 31% of those passengers indicated that they would transfer between two or more routes. The high transfer rates, particularly for more than one transfer, indicate the importance of making sure transfers work well between routes.

Figure 14 - Transfer Survey

From/to	3	4	5	6	12	15	16	17	19	19G	19M	21	23	25	26	27	29	29F	32	34	35	37	65	76	78	Total
4	1	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	7
5	0	0	-	0	0	0	0	2	2	0	0	0	1	0	0	0	7	0	0	0	0	1	0	0	0	13
6	0	0	0	-	1	1	5	0	0	0	0	2	2	0	0	3	1	0	2	0	0	0	0	0	3	20
12	0	0	0	0	-	0	1	0	3	1	0	1	2	0	1	1	1	0	0	0	0	0	0	1	0	12
15	0	0	1	1	0	-	0	0	1	0	1	3	3	1	0	0	1	0	0	0	0	0	0	0	0	12
16	0	0	0	4	1	0	-	0	1	0	1	2	4	0	0	1	1	0	0	0	0	0	0	3	0	18
17	0	0	3	0	2	0	0	-	4	0	0	0	2	0	0	3	5	0	1	0	1	3	0	0	0	24
19	0	0	0	1	1	1	1	1	-	0	0	2	3	0	0	6	2	0	1	0	0	1	0	3	0	23
19G	0	0	0	0	0	5	0	0	0	-	2	3	1	3	0	1	1	0	4	0	0	0	0	0	1	21
19M	0	0	0	0	0	1	0	0	1	1	-	0	0	0	1	0	1	0	5	0	0	0	0	0	0	10
21	0	0	0	2	0	4	0	0	0	1	0	-	3	0	0	1	1	0	2	0	0	0	0	0	1	15
23	0	0	0	2	2	0	2	4	6	1	1	7	-	1	0	4	3	0	0	0	0	3	0	0	0	36
25	0	0	0	0	0	1	0	0	0	3	0	0	1	-	0	0	1	0	0	0	0	0	0	0	0	6
26	0	0	0	1	0	0	0	1	0	0	0	0	0	0	-	0	7	0	1	0	0	2	0	0	0	12
27	0	0	0	5	0	4	0	2	3	3	0	1	1	0	0	-	3	0	1	2	2	0	0	3	0	30
28	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	0	6
29	1	4	5	5	1	1	4	1	1	1	0	2	1	0	4	4	-	0	4	0	0	4	1	5	1	50
29F	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	-	4	0	0	0	0	0	0	5
29SS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4
32	0	0	0	2	0	0	0	1	3	0	1	2	4	0	1	0	3	0	-	0	0	2	0	0	0	19
34	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	-	1	0	0	0	0	6
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	-	0	0	0	0	4
37	0	1	0	1	0	1	0	1	1	0	0	0	1	1	0	0	6	0	4	0	0	-	0	0	0	17
60	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	1
76	0	0	2	1	0	0	0	0	1	0	1	0	4	0	0	4	3	0	0	0	0	0	0	-	1	17
78	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	0	-	4
Total	2	5	12	25	8	19	14	13	28	13	7	27	33	6	7	37	53	1	31	2	4	20	1	17	7	392

The routes that are transferred to or from the most include Routes 6, 19, 21, 23, 27, and 29. Route pairs with strong transfer relationships include:

- **Route 21 and Route 23** - Both serve Port Ayers Station
- **Route 26 and Route 29** - Both serve Southside Station and the Christus Spohn South Hospital terminal loop
- **Route 5 and Route 29** - Both serve Staples Street Station and Six Points area
- **Route 19 and Route 23** - Both serve Staples Street Station and Six Points area

- **Route 19 and Route 27** - Both serve Staples Street Station
- **Route 29 and Route 37** - Both serve Southside Station

The high number of transfers between Routes 21 and 23 to Route 19 may indicate a travel pattern from Westside and Molina to employment and retail destinations along McArdle and the north side of SPID. The high number of transfers involving Route 5 with Route 19 and 29 suggests a need to extend to Staples Street Station.

Transfer Challenges

CCRTA has been operating reduced service since the pandemic. In Spring 2022, operator shortages have prevented restoration of service. One result of this is less frequent buses, which makes transfers more inconvenient.

Transfers at Port Ayers Station, Southside Station, and at Flour Bluff are not timed. Routes at these locations are typically not frequent, so long waits for passengers connecting routes are normal.

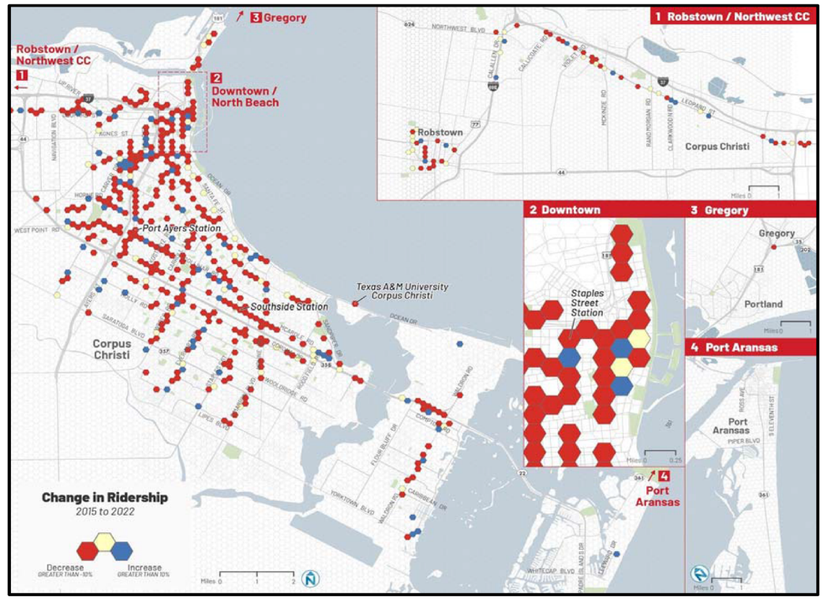
The Impact of COVID-19 on CCRTA

CCRTA's current average daily ridership is nearly 64% less than it was in 2015. CCRTA is also operating less service at this time due to challenges posed by COVID-19 and operator shortages. Routes 30, 55, 56, and 66 are not currently operating, and all routes end service earlier.

Many areas with high-activity destinations have seen a loss in ridership, such as TAMU-CC, parts of Downtown. A sustained decrease can be seen along segments of some corridors including Gollihar Rd, McArdle Rd, Alameda St, Port Ave, Leopard St, and SPID in Flour Bluff.

Parts of Robstown show clusters of consistent ridership levels. Ridership has increased at some stops, including at NAS, the HEB on Port Ave, South Bay Apartments, the Walmart on Staples St, and several other shopping centers.

Figure 15 - Change in Ridership (2015 to 2022)



SUMMARY OF RELATED PLANS

This section summarizes planning documents that pertain to city and regional transportation, and future CCRTA system improvements.

¡Vamonos! Long Range System Plan

CCRTA worked on the development of this plan in 2011–12 to help determine what the system should look like in 20 years. This Long-Range Plan considered master plans for surrounding cities and counties, possible challenges, cost, and people's needs at the time and as they were expected to change in the next two decades following the development of the plan.

- Plan reviewed system strengths and issues, including the fact that the network does not have a clear structure.
- The Plan set goals for long-term service, including the listing of different route types

- Primary Transit Network with frequent service
- Standard service for well-utilized corridors where PTN is not appropriate
- Basic routes for places with less demand
- Express commuter and downtown shuttle options
    - For rural and low-density areas, demand response zones were proposed (especially for locations immediately north and south of Corpus Christi, locations in Mustang Island, and in Robstown and locations to its east and southeast).
    - Recommendations were included for the B-Line, CCRTA's curb-to-curb service, and for Ferries servicing the area.

Mobility CC

Mobility CC is part of the City's comprehensive plan, representing its transportation element. The plan provides the framework for transportation initiatives under four focus areas: plan, design, operate and maintain. While previous plans and studies evaluated the relationships between the different parts of Corpus Christi's multimodal transportation system, Mobility CC represents the first attempt to integrate these pieces into a single cohesive strategy.

- The plan calls for street infrastructure that provides balanced transportation options and design features into street design and construction to create safe and inviting environments for all users to walk, bicycle, and use public transportation.
- The focus of the plan promotes bicycle, pedestrian, and public transportation rider safety, and prioritizes making public transportation an interconnected part of the transportation network.
- To increase accessibility, the plan includes an ADA Master Plan, including infrastructure improvements interconnecting major transportation routes.
- Design standards are established to create a more balanced street network, including crossing treatments and signalization improvements that could help transit riders.

CCRTA 2020 National Transit Database Report

The FTA compiles critical information for each transit agency in the country every year on the Annual National Transit Database Reports. Profiles contain general agency information, financial, and modal data, as well as performance and trend indicators. 2020 CCRTA's Annual Agency Profile provides a detailed look on key ridership indicators.

Figure 16 - CCRTA's Ridership Indicators

Service Consumption	
Annual Passenger Miles	15,926,336
Annual Unlinked Trips	2,984,594
Average Weekday Unlinked Trips	9,576
Average Saturday Unlinked Trips	6,212
Average Sunday Unlinked Trips	3,483
Service Supplied	
Annual Vehicle Revenue Miles	4,453,642
Annual Vehicle Revenue Hours	294,841
Vehicles Operated in Maximum Service	123
Vehicles Available for Maximum Service	147
Assets	
Revenue Vehicles	152
Service Vehicles	45
Facilities	12

Transit Plan 2020

This plan consists of a comprehensive analysis of Corpus Christi Regional Transportation Authority's bus system. The main purpose of this report is to highlight weaknesses and strengths of the existing system and provide a basis for service recommendations. It includes existing conditions section, which evaluates service design, ridership, and demographic information, and a peer review of similar transit agencies to identify opportunities for improvement.

- The corridors with the highest ridership included Port, Staples, Ayers, Leopard, and Alameda. The plan recommended additional service along Leopard, Weber, Everhart, and Saratoga. It was determined that most other areas of high transit demand have adequate service levels.
- Regarding service design, various routes in the westside of the city overlap. Detours and extended lengths make several routes have poor on-time performance. Service levels on Sunday are significantly diminished in comparison to other days.
- Other scheduling and service improvement recommendations included:

- Upgraded service to the south
- More frequent service on Leopard and Port
- Expanded service on Sunday
- More direct service on the west side of the city
- Improved frequency and directness in Robstown
- Expanded Express service
- Consolidated Port Aransas service
- Improved reliability and speed

2020 Comprehensive Annual Financial Report

This annual report is prepared every year in compliance with state and federal requirements. It includes financial statements and schedules prepared by the Corpus Christi Regional Transportation Authority's Finance Department. Additionally, this report provides an overview of CCRTA's service area, including local economy information and economic outlooks.

Includes key financial information, including:

- Net position was $89,110,279 in December 2020, representing an increase of $7,998,492 from December 2019.
- The pandemic negatively affected service revenues, which were down 38.61%.
- Operating expenses were $33,522,831 in 2020, compared to $31,027,863 in 2019 -representing an increase of 8.04%. This was due to higher operating costs incurred due to the COVID-19 response, along with an additional expenses related to a change in pension plan assumptions.

Provides information regarding future plans of CCRTA, including:

- Routing a shuttle within the campus of a local university. The location chosen will be using a pre-determined route for the testing of the autonomous control systems: the autonomous vehicle which is named the "Surge" began operations early January 2020.
- Efforts continue for replacing maintenance equipment and to increase accessibility to all riders with ADA compliant bus stop shelters (including federal funding sources ranging from 80% - 85% of costs).
- The agency's five-year financial plan for 2020-2024 includes a capital investment of $58,558,532, aligning with its fleet replacement schedule (anticipated to be funded at 85% from federal grants).

Plan CC Comprehensive Plan

The Plan CC Comprehensive Plan helps guide, regulate, and manage future development within Corpus Christi and its extraterritorial jurisdiction. It is based on a 20-year time horizon and includes a vision for the future and strategies and goals for the physical development of the city. Its hope is to allow Corpus Christi to take advantage of opportunities, investments in the future, and making better choices resulting in an enhanced economy and quality of life.

- The plan calls for unemployed and underemployed workers to have access to training and support services that enable them to improve their employment status and qualify for jobs offered by local employers and calls for providing essential services to achieve this goal – including transportation services.
- The City's vision for mobility is for Corpus Christi to allow its residents to get around the city by multiple modes of transportation -including outstanding public transit. Goals and strategies related to public transportation include the following:
  - Support compliance with transportation design standards
  - Support the development of mode-choice corridors for bicycles, pedestrian and public transportation
  - Support the partnership with the Corpus Christi Regional Transportation Authority to increase ridership and reduce single-occupancy vehicle use while helping to reduce air pollution
  - Support an operations plan to increase the efficiency and lower the life-cycle costs of the public transportation system
  - Support transit-oriented development (TOD) near public transportation stations
  - Support the extension of transit services to all areas of the city to provide universal access to employment, social and recreational opportunities

Integrated Community Sustainability Plan

The Integrated Community Sustainability Plan for Corpus Christi considered issues impacting the whole city as well as opportunities in certain locations and provides a range of recommendations ranging from bicycle trails to urban agriculture. Associated to this effort, around one dozen development and land use codes were revised or developed to foster better development in the City.

- The plan provides alignments that could be utilized for the development of a circulator in Downtown Corpus Christi based on existing and planned developments, centers of activity, and other factors. It also calls for a

downtown circulator to make the area more connected and promote equity and growth.

- Other mobility recommendations included in the plan include: bike and hike trails across the city, road diets, roundabouts, and pedestrian and bike treatments at intersections.
- The plan identified nine destination nodes across its study area, which include: Downtown/Uptown, Annaville, Morgan Avenue/Baldwin Boulevard, Six Points, Bear Lane, Weber Road/Saratoga Boulevard, Old Sunrise Mall, Flour Bluff, The Island. Concept plans were developed for each of those nodes, highlighting opportunities with the potential to guide development and land uses in the future.

2045 Metropolitan Transportation Plan

The Corpus Christi MPO is required to develop and maintain a long-range transportation plan for the region. This plan establishes the goals and vision for transportation in the region, evaluating the system, and finding strategies to be implemented. The plan includes a list of fiscally constrained projects, including improvements to facilities and transit stations, replacement of buses, and other support for CCRTA.

- The plan reviews region's demographics, including forecasting future population (population is expected to grow to around 611,000 by 2045, and jobs will increase to 265,000).
- Provides an overview of the transportation system in the region, including a synopsis of CCRTA, highlighting its vision, values and mission and existing services.
- Offers an overview of the benefits of public transit, which include helping protect the environment and improving the quality of air, helping improve health, improving traffic, and its potential on helping households save money.
- The plan underscores the importance of connecting CCRTA to other regions and cities across the nation, highlights Amtrak and Greyhound connections, and emphasizes that further efforts are necessary to provide mobility to individuals without access to a vehicle.
- The plan also includes a Bicycle Mobility Plan, with the following goals:

– Develop a cohesive, strategic network of bicycle facilities that accommodates a diversity of riders.
– Increase the percentage of trips of all types that are made by bicycle.
– Promote health and wellness through bicycling.

– Enhance safety for bicyclists.

2021-2024 Transportation Improvement Program

The Transportation Improvement Program is the plan for transportation investments in the Corpus Christi region for the following four years: projects listed in the TIP are programmed in the Metropolitan Transportation Plan. In a collaborative manner with state and local transportation bodies, the Transportation Improvement Program is revised every two years.

Includes funding supporting various CCRTA projects, including:

- Bus stop amenities and improvements
- Preventive maintenance
- Equipment and facilities
- Hardware and software
- Bus support
- Support/Relief Vehicles

MPO Strategic Plan for Active Mobility: Bicycle Mobility Plan

The Bicycle Plan aims to encourage cycling as a significant transportation alternative and was developed to provide more certainty about bicycle infrastructure investments, including design and maintenance. The plan sets the following vision: The metropolitan area of the Coastal Bend is a place where walking and biking are integral to the community culture and represent viable, safe travel and recreation options for residents and visitors of diverse abilities.

- The recommended network is expected to deliver riders within a five-minute walk of 83% of transit stations and stops.
- The Bicycle Plan includes a variety of infrastructure recommendations, including:

– Bicycle boulevards
– Buffered bike lanes
– Multi-use sidepaths
– Off-road multi-use trails
– One-way cycle tracks

- The Bicycle Plan includes a matrix of best practices, including transit-relevant strategies such as:

- Expand bike accommodations on transit, namely augmenting bike rack capacity to facilitate bike boardings and cycling as a means of accessing transit
- Work with CCRTA and other local partners to install public bicycle repair tool kiosks at transit stations or stops with bike boardings or at other visible locations on key cycling routes; post contact information for cycling clubs on shops and kiosks
- Identifies bikeshare programs as extending the reach of transit

2012, 2014, 2016, 2018, 2020, and 2022 Corpus Christi Bond Programs

Since 2012, voters have approved most proposed bonds during midterm and general elections. Bond programs in Corpus Christi have financed a variety of improvements that help expand mobility in the city, with funding provided for street, sidewalk, illumination, and traffic signalization enhancements across the city. Additionally, bond funding has been utilized for ADA projects, including for the implementation of compliant sidewalks -ultimately benefit transit users.

Specific examples of bond-funded projects enhancing transit user's experiences in Corpus Christi include the completed Everhart Road Project in the City's South Side (where route 32 currently provides service) which included street lighting, sidewalk, and ADA ramps enhancements, and the 2018 Bond funding allowing for the reconstruction of Leopard Street (from Nueces Bay to Palm Drive, where route 27 provides services), which includes new bus stop construction, updated traffic signals, and sidewalk improvements.

Bond programs have also provided funding for a variety other projects, including:

- Improvements for parks, libraries
- Funding for public safety and public health initiatives

The current status of bond projects stands as shown below:

- 2020 Bond Programs: 93% in design or construction, 7% complete
- 2018 Bond Programs: 66% in design or construction, 9% complete
- 2016 Bond Programs: 25% in design or construction, 37% complete
- 2014 Bond Programs: 14% in design or construction, 86% complete
- 2012 Bond Programs: 6% in design or construction, 92% complete

Harbor Bridge Plan

This plan will update the Harbor Bridge along US 181, connecting downtown Corpus Christi with North Beach. Once completed, the Harbor Bridge will be the longest cable stay bridge in the nation and the tallest point in South Texas. The bridge is needed in order to maintain a safe and efficient flow of traffic, since it currently has a higher than statewide average accident rate.

- The updated bridge will improve safety and accommodate future demand in the region.
- Updates include accommodations for pedestrians and cyclists through a shared-use path.
- Along with the construction of the bridge, the project also includes reconstruction of sections of the Crosstown Expressway, I-37, and US 181.

The Bridge, which is under construction now, will impact how CCRTA serves the North Beach area.

Downtown Area Development Plan

The Downtown ADP is a strategy to foster the economy and quality of life in Corpus Christi for the next 20 years as part of the Plan CC initiative. The plan identifies the strengths and challenges of the downtown area. Additionally, it provides a vision for the area consisting of five themes and related policy recommendations: encourage market-driven development, create more housing choices, complete a waterfront park and trail network, reconnect neighborhoods, and celebrate this unique place to live, work, learn and play. The Downtown ADP:

- Includes initiatives to improve mobility in Downtown Corpus Christi including organizing parking at a district scale to increase efficiency and actively managing event traffic.
- States that "inviting people to walk or bike instead of drive through safe, convenient sidewalks, transit service and bike routes in Downtown will calm traffic, ease parking demand, and create still safer streets for pedestrians and bicyclists".
- Calls for a circulator connecting the Art Center and the SEA District on Shoreline Boulevard, and for a water ferry between the Marina, SEA District, and North Beach.
- Emphasizes that bus routes through downtown should be simplified and easy to understand. Connections to the Staples Street Station is identified as essential, as is service to North Beach (which "must be integrated with street pattern changes associated with the new Harbor Bridge").

Flour Bluff Area Development Plan

The Flour Bluff ADP is part of the Plan CC initiative. Corpus Christi City Council adopted an updated plan in June 2021. It aims to offer an analysis of Flour Bluff and provide recommendations to guide development in the future. Additionally, it provides a vision for the area consisting of three themes, as well as policies to achieve it. The plan's vision themes are: safe and healthy community, strong local economy, and protect natural resources. The Flour Bluff ADP:

- Calls for coordination with CCRTA to improve mobility options and access to major destinations, and to work with the Corpus Christi MPO to bring the Urban Transportation Plan up-to-date
- Requests the utilization of utility easements for trails to schools, neighborhoods, rec centers, parks, and other public locations.
- Envisions an improved transportation environment that features crosswalks, added transit facilities, an improved sidewalk network, and well-connected bike lanes. Safe routes to school are also a priority.

London Area Development Plan

The London ADP is part of the Plan CC initiative. Corpus Christi City Council adopted an updated plan in March 2020. It analyzes the London Area and provides recommendations to guide development in the future. Additionally, it provides a vision and policy recommendations for the area. The three vision areas are: celebrate our community character, promote sustainable growth, and promote the Oso Creek and Bay as a community amenity. The London ADP:

- Identifies the Oso Creek and Bay as an amenity for the area and calls for improved access
- Calls for coordination with the County to enhance street design that promotes multimodal travel and encourages walkability and sustainable land use patterns
- Highlights trail and park facilities that are compatible with drainage and stormwater facilities

Northwest Area Development Plan

The Northwest Area Development Plan was adopted in 2001, superseding a previous plan adopted in 1988. Corpus Christi City Council adopted the Northwest Boulevard (FM624) Corridor Plan in March 2021. This part of the city is bound by Rand Morgan road to its east, the Nueces River in the north, Corpus Christi's extra-territorial jurisdiction to the west, and

Robstown city limits and Highway 44 to the south. It sets out a roadmap for the Northwest community, tackling zoning, the Capital Improvements Program, and other concerns.

- The plan calls for strategies to address traffic congestion along Northwest Boulevard (FM 624) and busy intersections.
- Envisions a Nueces River Hike and Bike Trail System that connects to schools, the Oso Parkway system, and other facilities in the area, with capital improvements mainly consisting of bike path signage and bikeway.
- Provides a variety of other recommendations to tackle traffic congestion mainly focused on street improvements, including:
  - Recommending Northwest Boulevard as an arterial street with six traffic lanes.
  - County Road 52 as an arterial street and four travel lanes.
  - A loop collector between US 77 and the extension of River East Drive
  - A South Loop Expressway, based on the MPO's South Loop Transportation Study.

Southside Area Development Plan

The Southside ADP is part of the Plan CC initiative. Corpus Christi City Council adopted an updated plan in March 2020. It makes recommendations to guide future development in the Southside neighborhood. Additionally, it provides a vision for the area consisting of four themes: create safe, family-oriented neighborhoods, improve transportation conditions, enhance parks and trails, promote the Oso Creek and Bay as a Community Amenity. The Plan:

- Identifies a good transportation network as essential to meet the future needs of a growing community
- Calls for a transportation network that considers every user and provides easy access to jobs, resources, and the wider regional transportation system
- Explains that the transportation network should accommodate different options for transportation, including public transportation
- Asks to partner and coordinate with the Corpus Christi MPO, TxDOT, and CCRTA on major projects

Westside Area Development Plan

The Westside ADP was adopted in 1989 and amended in February 1995. The City of Corpus Christi is currently working to update the plan. It provides a variety of recommendations for its study area. The plan's key objectives are: To propose redevelopment strategies in established areas of the Westside Plan Area to achieve a harmonious arrangement of land uses, creating a pleasant living and working environment; to identify environmentally

sensitive areas and formulate strategies to protect the environment; to propose appropriate land uses and a corresponding transportation network to serve future needs; and to facilitate infrastructure planning through a reasonable estimate of future land use, enabling infrastructure to be planned accordingly.

- The Plan calls for the development of the Agnes Street and Agnes/Laredo Corridor, including inventorying parking availability, encouraging the concept of shared parking/access, improving pedestrian access to neighborhoods, distinguishing pedestrian crossings, installing lighting, and building pedestrian and vehicle bridges over the Airport stormwater ditch

Padre/Mustang Island Area Development Plan

The Padre/Mustang Island ADP is part of the Plan CC initiative. In June 2021, an update to the plan was adopted by the Corpus Christi City Council. It makes recommendations for the area's future growth and provides the following vision themes: safe, family-friendly community; blended residential community and destination location; and environmental preservation.

- Envisions a well-connected system of safe, walkable streets and trails that encourages walking, cycling, the use of shared electric vehicles
- Aims to enable tourists to move around the island without using personal vehicles
- Includes a call for coordination with the CCRTA or transportation network companies to develop flexible mobility services to meet diverse travel needs and serve points of interest on the Island for residents and visitors
- Calls for funding to implement Safe Routes to School programs and improve east/west connectivity on the island
- Calls for coordination with CCRTA to increase transit service to and from the Island and enhance rider amenities
- Sets goals for a sidewalk and trail network that provides pedestrian connectivity among residential, retail, commercial, and recreational uses

North Beach Development Plan

The North Beach Development Plan is a component of the Comprehensive Plan. It aims to provide a vision for decisions by the City Council regarding funding strategies, capital improvement projects, rezoning, and legislative goals. Additionally, it includes a variety of development goals, including: creating a uniquely attractive atmosphere for small and large scale visitor destination attractions, promoting birding, ecotourism and ADA accessibility, and a City commitment to target the area for redevelopment.

- The plan calls for the City and CCRTA to improve transit infrastructure and service to the North Beach area
- Identifies "enhanced transit services" as consisting of high-quality land and water transit choices and facilities
- The plan identifies the need for ADA sidewalks on public streets on North Beach
- Asks for the City to consider alternative designs for streets in North Beach.

MARKET ANALYSIS

The market analysis is one of the initial core steps in the development of CCRTA's Long-Range Transportation Plan. This comprehensive analysis of Corpus Christi's transit demand provides an overview of where current and potential transit riders live, work, and travel. To understand future transit demand, multiple factors (including future population and employment densities) are analyzed.

The purpose of this effort is to help CCRTA better understand patterns that affect transit demand – in turn creating a guidance for investments to deliver high-quality transit services for the community. Transit demand in Corpus Christi is strongly influenced by these factors:

Figure 17 - Transit Demand Factors



Transit-Supportive Density

A main factor in determining transit demand is density: where people live and work, and how those areas are concentrated. Generally, transit is accessible to people within one-quarter to one-half mile of a bus stop, so a system is typically designed around the number of people who live, work, or visit the immediate surrounding area.

As shown in the figure below, population and employment density may be used to indicate an appropriate transit service level. For example, to support service more frequent than every 30 minutes, there generally must be at least 15 residents per acre or more than 10 jobs per acre, or a combination thereof.

These densities broadly indicate demand across contiguous and nearby areas. Clusters of density throughout an area or along a corridor are strong indicators of demand, while a dense but small block in an isolated area would not produce sufficient demand in and by itself. Demand can also accumulate along corridors: for example, if there are many blocks along a corridor that each have the density to support 30-minute service, the entire corridor may be able to produce enough demand for 15-minute or better service.

Figure 18 - Land Use and Transit

LAND USE			TRANSIT	
Land Use Type	Residents per Acre	Jobs per Acre	Appropriate Types of Transit	Frequency of Service
Downtowns & High Density Corridors	>45	>25	Light Rail, BRT, Rapid Bus, Local Bus	10 mins or better
Urban Mixed-Use	30-45	15-25	BRT, Rapid Bus, Local Bus	10-15 minutes
Neighborhood & Surburban Mixed-Use	15-30	10-15	Local Bus	15-30 minutes
Mixed Neighborhoods	10-15	5-10	Local Bus, Micro-transit	30-60 minutes
Low Density	2-10	2-5	Micro-transit, Rideshare, Volunteer Driver Pgm	60 mins or less or On Demand
Rural	<2	<2	Rideshare, Volunteer Driver Pgm	On Demand

Source: Thresholds based on research by Nelson\Nygaard.

Additionally, the street environment affects people's access to transit. Transit services are most effective when paired with sufficient and well-lit sidewalks and crosswalks that allow people to safely reach bus stops. Even in the places with the highest density, people may not use transit services if stops are not in a walkable environment.

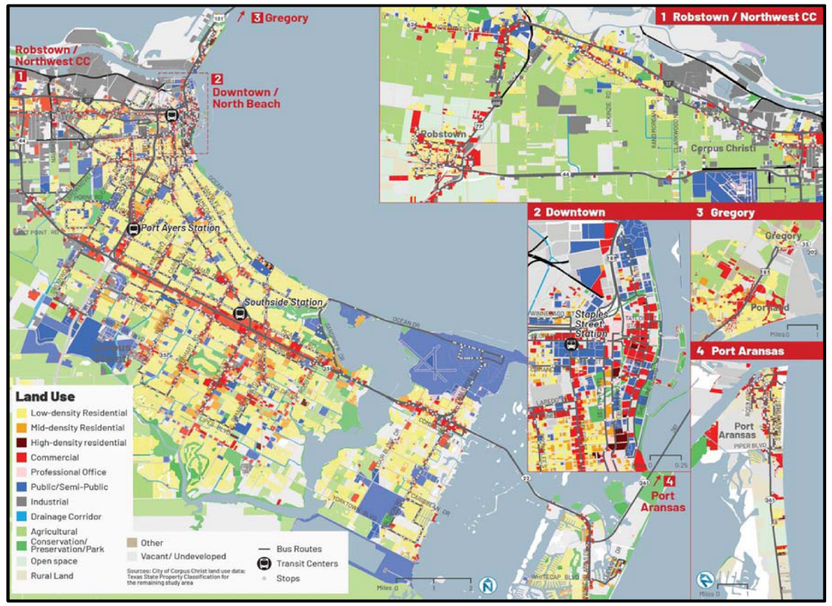
Lastly, it is important to recognize that areas with minimal population and employment density may not provide an environment where fixed-route transit can be successful. In these instances, alternative types of transportation services, such as microtransit, shuttles, and other shared mobility services may be more feasible.

Land Use

Land uses and existing patterns of development tend to be directly related to transit demand. Locations where individuals both work and live usually have higher demand than places with strictly residential or work-related land uses.

A large portion of the Corpus Christi region is low-density housing. Agricultural uses are predominant west of Corpus Christi. Commercial areas are located near major throughfares and in the region's population centers (including outlying Robstown, Portland, Port Aransas).

Figure 19 - Land Use

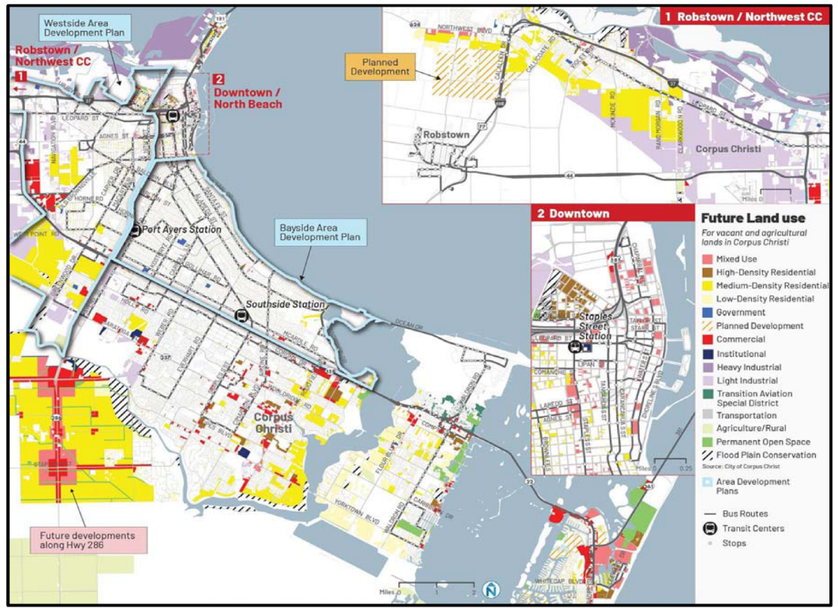


Future Development

Land use in the Corpus Christi region is expected to evolve as previously agricultural areas become residential and industrial. Previously low-density residential areas are also expected to increase densities to medium-density, and new commercial and mixed-use areas are expected to be developed.

Additionally, the map highlights the Westside and the Bayside Area Development Plans; both are currently being worked on by the City of Corpus Christi and will provide guidance for future development in those locations.

Figure 20 - Future Land Use



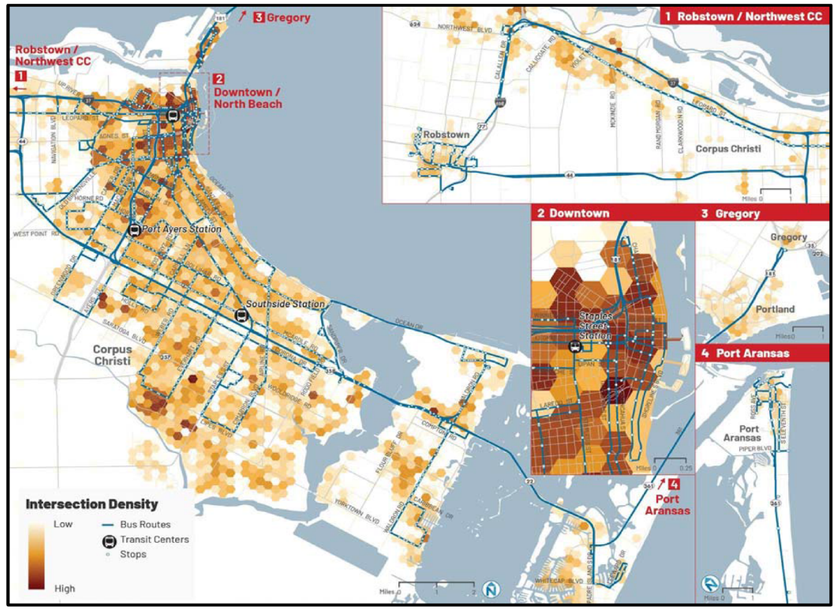
Intersection Density

Intersection density measures the number of intersections in a given area and serves as an important factor in determining walkability. Typically, more intersections within an area means the area is more walkable, as blocks are shorter and walking paths are more direct.

Pending other factors (such as crosswalk availability, signalization, and sidewalk conditions), areas with high intersection densities can make transit access easier and more convenient for riders.

Intersection densities tend to be higher in the region's urban core (Downtown and Central City), and lower in the more industrial and suburban areas.

Figure 21 - Intersection Density

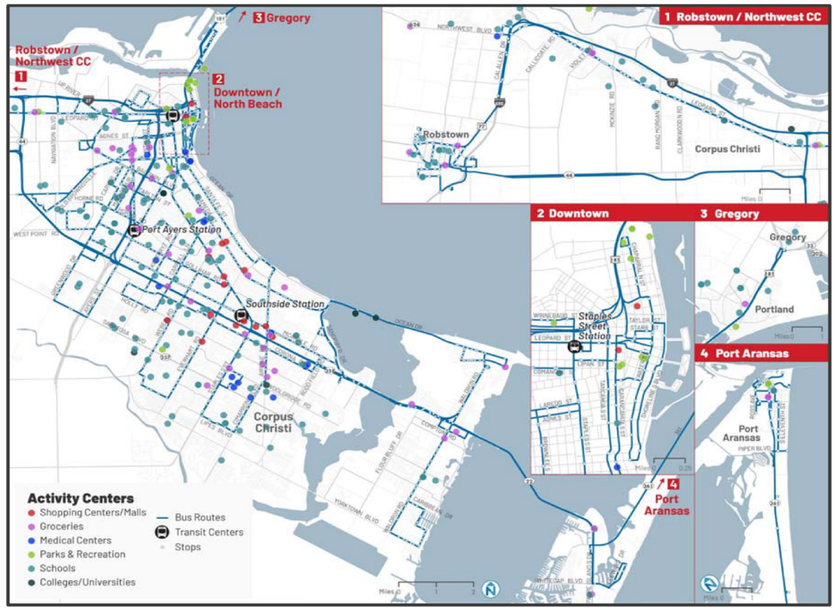


Activity Centers

The majority of activity centers are in or near areas with underlying transit demand (whether high, medium, or low) and along major throughfares in the region.

Activity centers such as shopping centers and grocery destinations tend to have a relatively consistent demand for transit year-round. On the other hand, educational institutions and recreation centers tend to have periods of lower demand through different times of the year.

Figure 22 - Activity Centers



POPULATION AND JOB FORECASTS

Population Density (2016)

Analyzing population density is one of the most important steps in determining underlying demand for transit. In general, areas with higher population densities tend to be more transit supportive.

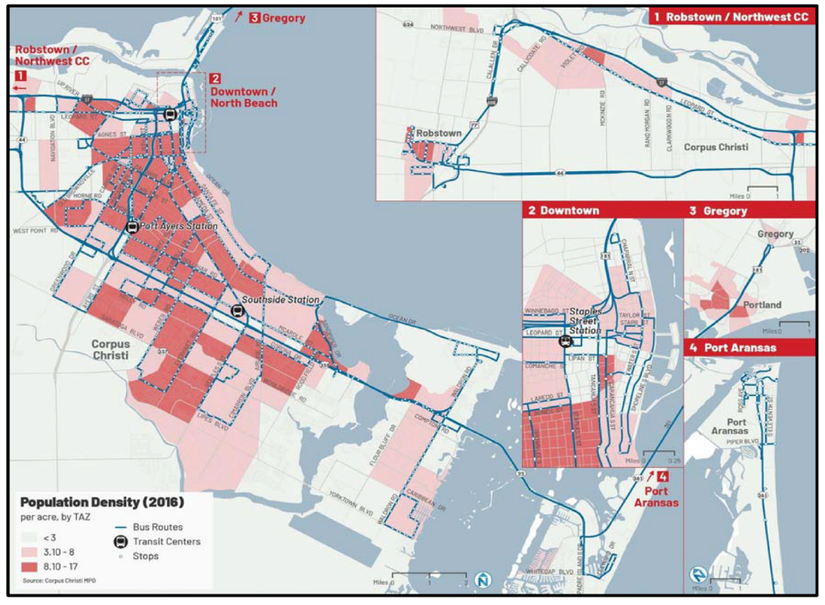
In 2016, the areas in the region that had the highest population densities (i.e., those with more than 8.1 people per acre) included Downtown and the Central City neighborhood, as well as locations in the Southside neighborhood (particularly near Everhart Road and along sections of Holly Road). Some locations within Robstown and Portland also saw high population densities.

2020 population counts[1] in the CCRTA service area are shown below:

- Corpus Christi: 326,332
- Robstown: 11,214
- Port Aransas: 4,203

- Gregory: 2,218
- Bishop: 3,085
- Driscoll: 712
- Aqua Dulce: 611
- Banquete: 520
- San Patricio: 364

Figure 23 - Population Density (2016)



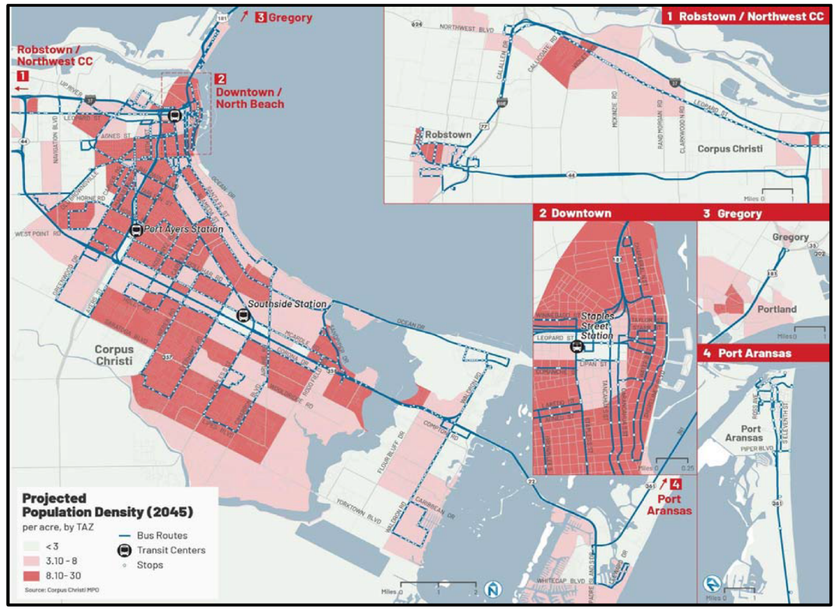
Population Density (2045)

Population densities in 2045 are estimated to be highest in and around:

- Downtown Corpus Christi
- Central and eastern/southeastern sections of Central City
- Central and northern sections of Bay Area
- Southside, particularly near Everhart Rd and along sections of Holly Rd.

By 2045, Corpus Christi is estimated to see an increase in medium-density areas (i.e., those with between 3.1 and 8 people per acre) throughout the region.

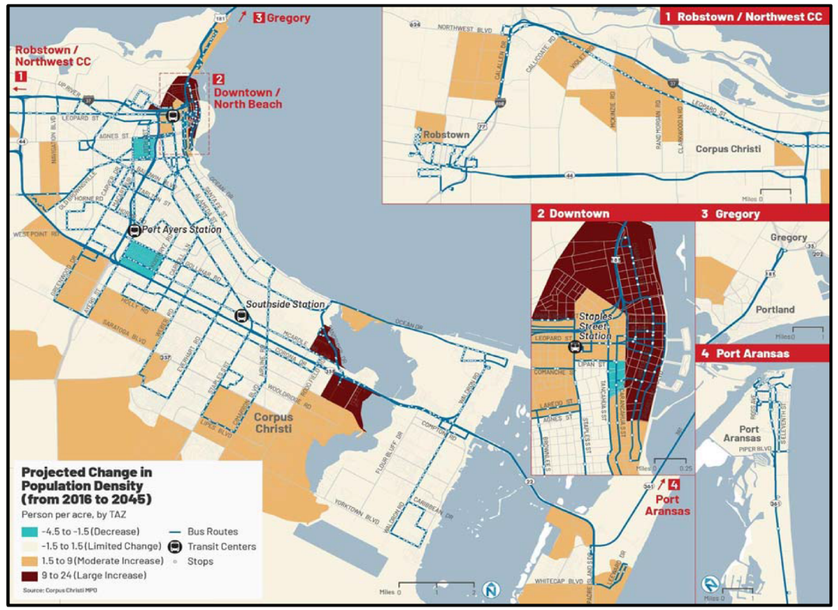
Figure 24 - Population Density (2045)



Population Density Change (2016-2045)

The locations with the most significant increases in population density between 2016 and 2045 include northern sections of Downtown and eastern portions of Bay Area and Southside.

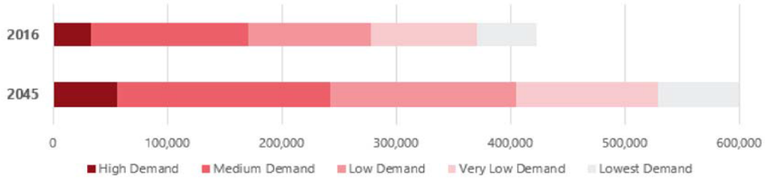
Figure 25 - Change in Population Density (2016 to 2045)



Sections with moderate increases in population density include outlying areas in northwestern and southern sections of the region. Areas with a noted decrease in population density are expected to be concentrated in Central City.

By 2045, nearly half of the study area's population will live in areas that are medium or highly transit supportive. The growth of population on high demand transit supportive land was the highest at about 70% compared with 2016. Growth of population on medium demand transit supportive land was approximately 40%.

Figure 26 - Population in Transit Supportive Areas



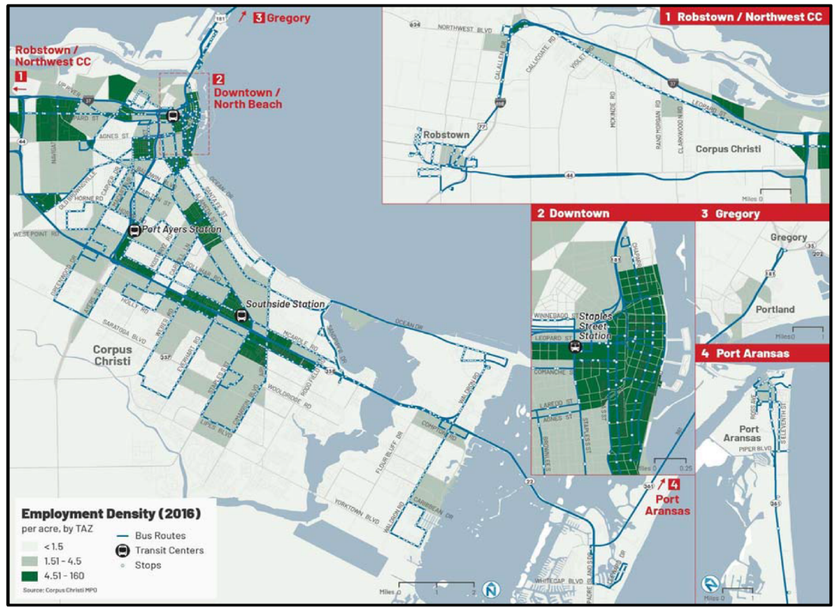
Employment Density (2016)

Employment density, or the number of jobs per acre, can be a strong indicator of transit demand – people typically travel to and from their jobs and to other services that their jobs provide.

In Corpus Christi, jobs are often concentrated in the urban core and along major corridors. The places with the highest employment densities in the region include:

- Downtown Corpus Christi and areas nearby
- Areas along SH 358 (east of SH 286 and west of Rodd Field Rd)
- Locations in west and northwest Central City
- Locations surrounding the Corpus Christi Medical Center and the Driscoll Children's Hospital in Bay Area

Figure 27 - Employment Density (2016)



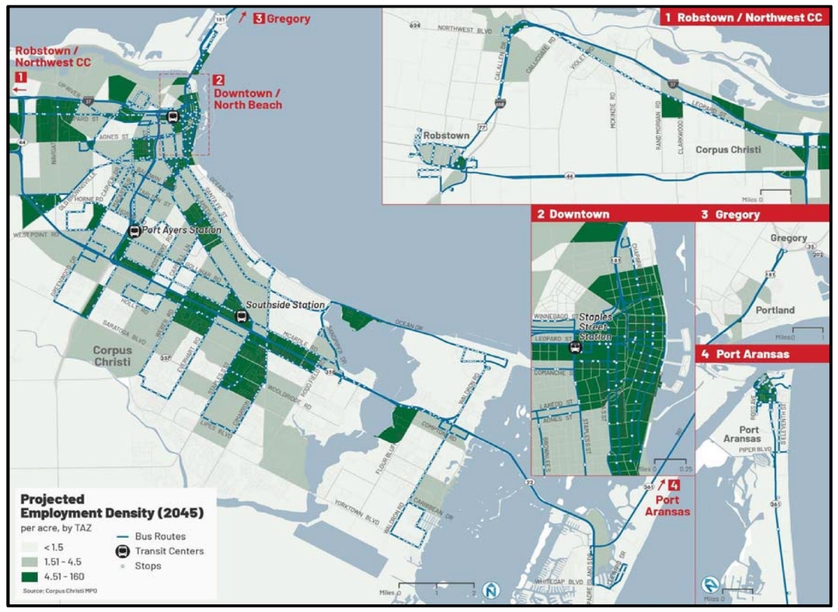
Employment Density (2045)

Employment densities in 2045 are estimated to be highest in and around:

- Downtown Corpus Christi and areas nearby
- Sections along SPID (east of SH 286 and west of Rodd Field Rd)
- Locations in west and northwest Central City
- Eastern sections of Northwest Corpus Christi (along I-37 and Leopard St)
- Locations surrounding the Corpus Christi Medical Center and the Driscoll Children's Hospital in Bay Area
- In and around Texas A&M University – Corpus Christi campus

By 2045, Corpus Christi is estimated to observe an increase in medium-density areas (i.e., those with between 1.5 and 4.5 jobs per acre) throughout the region.

Figure 28 - Employment Density (2045)

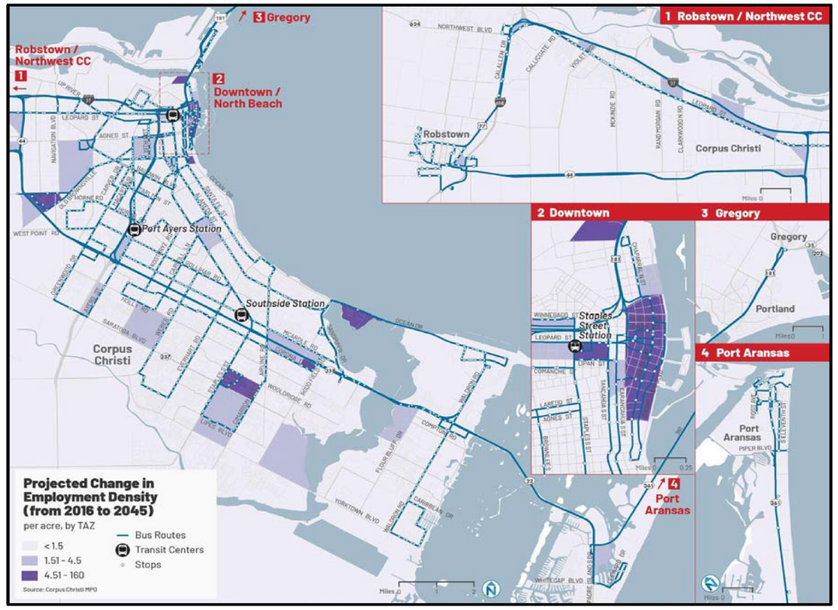


Projected Employment Growth (2016-2045)

The areas with the highest expected employment growth between 2016 and 2045 include:

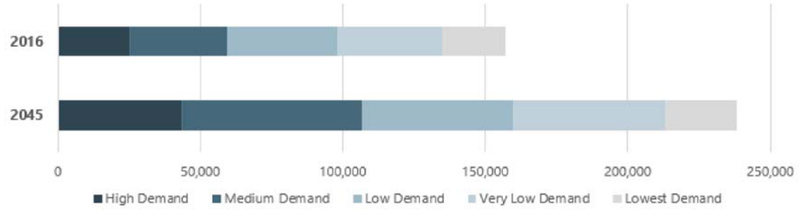
- Downtown Corpus Christi
- Locations in west Central City
- Areas near CHRISTUS Spohn Hospital Corpus Christi (South) and the Corpus Christi Medical Center Bay Area
- Texas A&M University – Corpus Christi

Figure 29 - Change in Employment Density (2016 to 2045)



By 2045, it is expected that the overall number of jobs in Corpus Christi will see an increase of almost 52%, much of which would occur on high and medium demand transit supportive areas.

Figure 30 - Jobs in Transit Supportive Areas



Job Types

The transit demand generated by a job center varies depending on job type. Retail and service jobs tend to attract many customers as visitors, whereas industrial or office jobs have a more static population. Therefore, retail and service jobs tend to generate more trips than industrial or office jobs, due to the higher population moving in and out of the site.

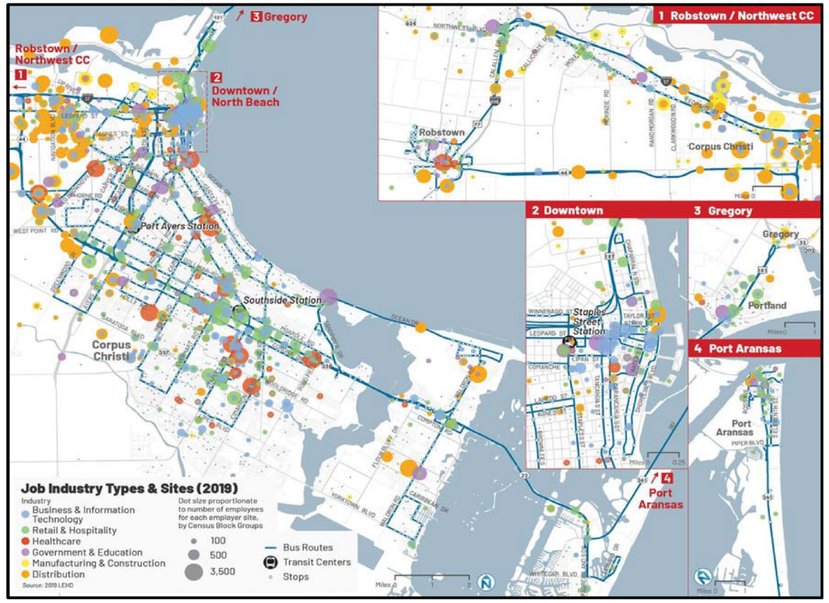
Retail, hospitality, business, and information technology jobs tend to be concentrated along major throughfares in the region, especially in and around Downtown Corpus Christi and South Padre Island Drive.

Distribution, manufacturing, and construction jobs tend to be concentrated in the west and northwest. Healthcare, government, and education jobs are located throughout the region, but generally see higher density in key areas of Southside, Bay Area, Downtown, and Central City.

The largest employers in Corpus Christi include:

- Corpus Christi ISD
- Naval Air Station Corpus Christi
- HEB
- Christus Spohn Health System
- Corpus Christi Army Depot

Figure 31 - Job Industry Types & Sites (2019)



Low-Income Jobs

Lower-paying jobs are widespread across the region but tend to be concentrated along and near major throughfares. Locations with high densities of low-income jobs include areas surrounding the intersection of SPID and Staples Street, eastern sections of Robstown, Downtown Corpus Christi, and districts near Texas A&M University – Corpus Christi, Del Mar College, and the Dr. Hector P. Garcia Clinic.

People with lower incomes tend to be more likely to utilize public transportation since it is more affordable than the costs associated with owning and moving around on personal vehicle.

Figure 32 - Lower-Paying Jobs (2019)



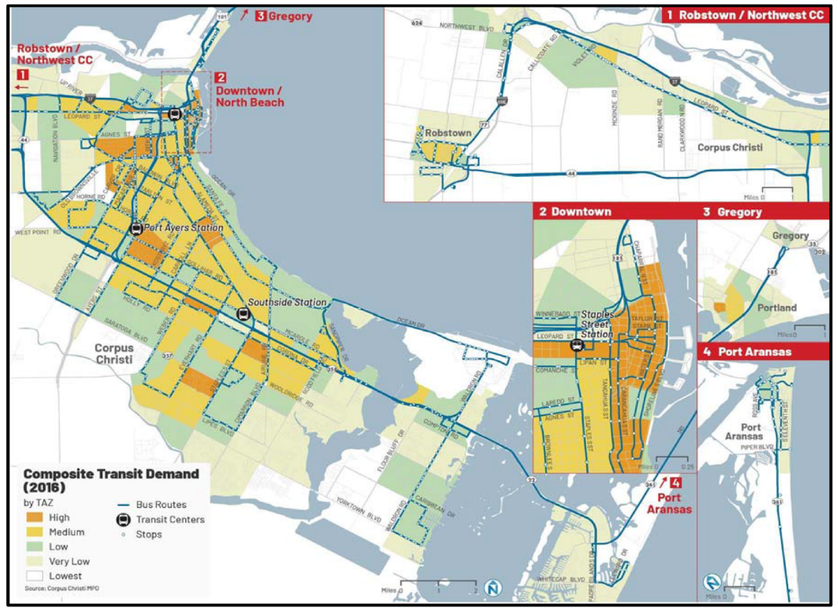
COMMUTE FLOWS TO INSTITUTIONS

Composite Transit Demand (2016)

Combining existing population and employment densities helps paint a picture of composite transit demand. The following areas within Corpus Christi have the highest transit demands:

- Downtown Corpus Christi
- Central and southeast Central City
- Areas in Bay Area near S. Alameda St west of Airline Rd
- Areas of Southside between Holly Rd and SPID (east of Ayers St and west of Rodd Field Rd), and near Everhart Rd and Staples St.

Figure 33 - Composite Transit Demand (2016)

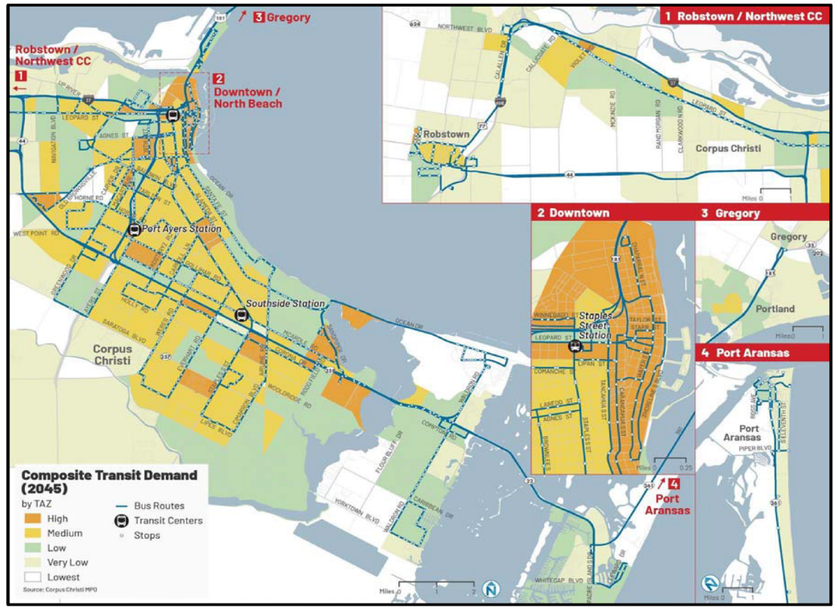


Composite Transit Demand (2045)

The map of composite transit demand in 2045 looks very similar to the pattern of existing composite transit demand in 2016. However, there are locations across the region that are expected to see an increase in their transit demand levels. The following areas within Corpus Christi are estimated to have the highest transit demand in 2045:

- Downtown Corpus Christi
- Central and southeast Central City
- Areas in Bay Area near S. Alameda St west of Airline Rd
- Areas of Southside between Holly Rd and SPID (east of Ayers St and west of Rodd Field Rd), and near Everhart Rd and Staples St.

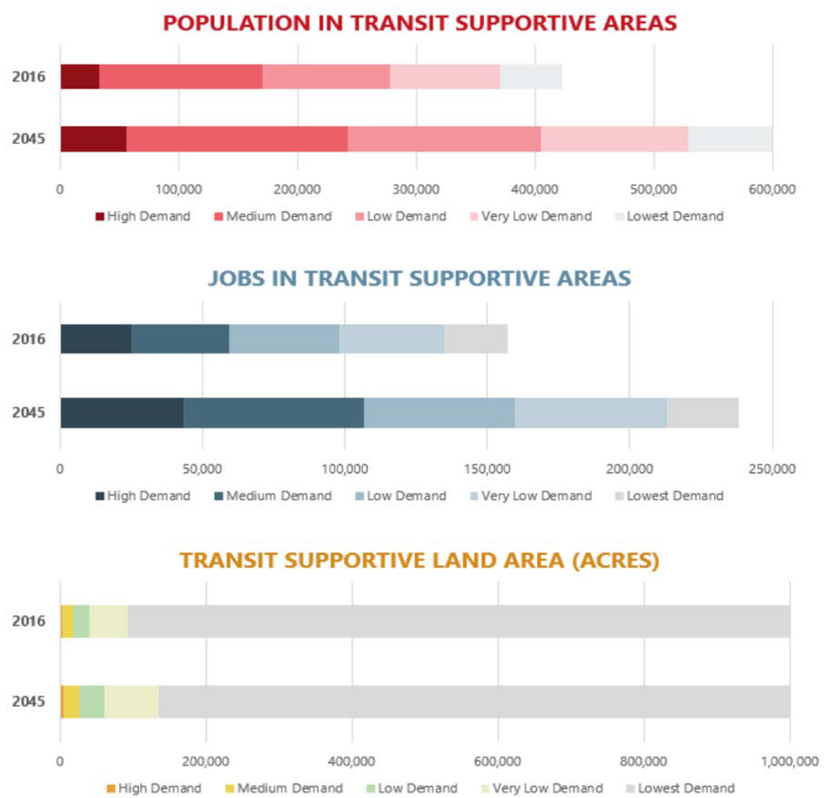
Figure 34 - Composite Transit Demand (2045)



High demand transit supportive land is estimated to have the highest grow by 2045 at around 52%, however it will remain low relative to the medium, low, very low, and lowest demand transit supportive land area. The second highest grow of transit supportive land

corresponds to the very low demand category. The increase in better transit supporting land translates into a decrease in the lowest demand category with about a 5% decrease.

Figure 35 - Transit Supportive Land Area (Acres)



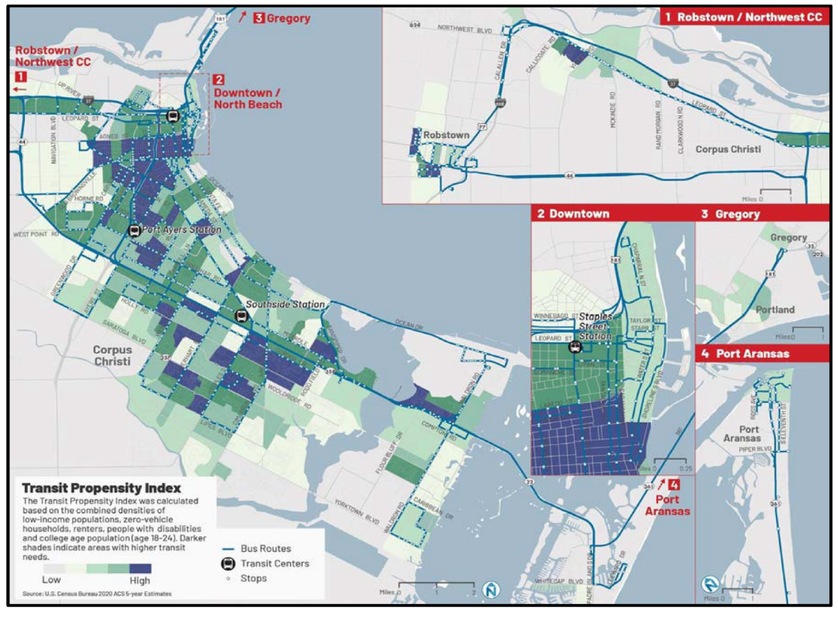
Transit Propensity Index

The Transit Propensity Index (TPI) is a metric that highlights areas with high densities of populations most likely to use transit. The TPI is calculated through the combination of multiple demographic measures, including the densities of low-income populations, zero-vehicle households, renters, people ages 18-24, and people with disabilities.

Areas with high densities of transit-dependent populations include:

- Areas of southern Downtown Corpus Christi
- Areas in Central City near the intersection of SH 286 and Baldwin Blvd, and the intersection of Gollihar Rd and Kostoryz Rd.
- Areas in Southside near Everhart Rd, Staples St, and the intersection of Airline and Holly Roads.

Figure 36 - Transit Propensity Index



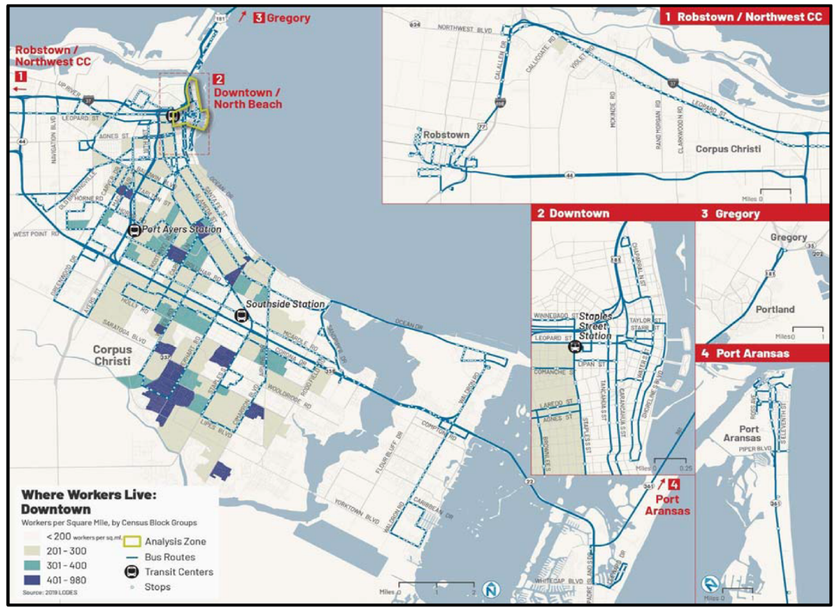
Work Trip Origins to Major Destinations (Downtown)

Origin-destination analyses help provide a deeper understanding of areas where people are traveling to or from. For this analysis, trips to key employment districts across Corpus Christi were reviewed. The destinations were set as the employment district shown on each slide.

Areas with high densities of residents who work in **Downtown Corpus Christi** include:

- Southside, particularly in areas near the intersection of Saratoga Blvd and Everhart Rd
- Central City and Bay Area, particularly near the intersection of Brawner Pkwy and Carrol Ln, and the intersection of S Alameda St and Everhart Rd

Figure 37 - Work Trip Origins to Downtown

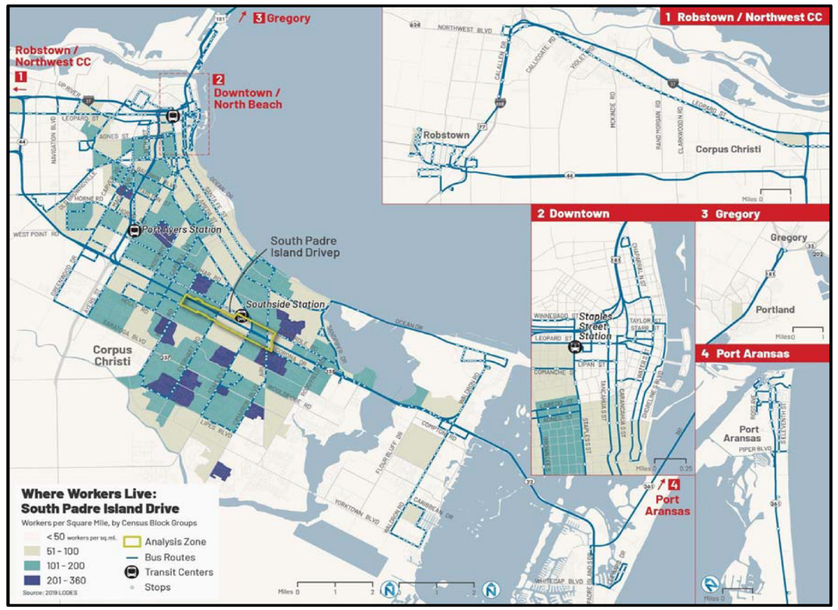


Work Trip Origins (South Padre Island Drive)

Areas with high densities of residents who work at the **South Padre Island Drive** district include:

- Areas of Southside near and between Weber Rd and Cimarron Blvd, and near the intersection of Holly Rd and Airline Rd
- Bay Area, particularly east of Everhart Rd
- Southeast Central City

Figure 38 - Work Trip Origins to SPID

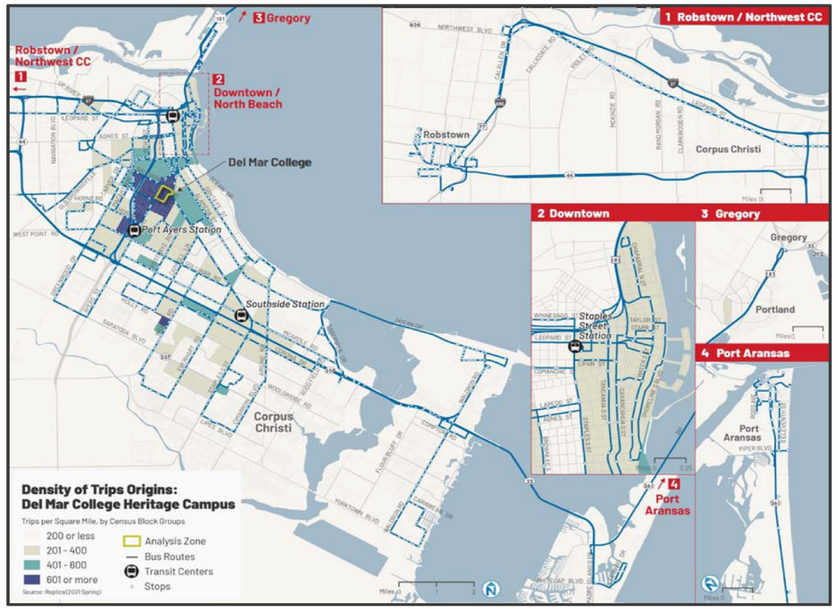


All Trip Origins (Del Mar College Heritage Campus)

Areas with high densities of trip origins to **Del Mar College Heritage Campus** district include:

- Central City (especially locations immediately adjacent to Heritage Campus)
- Bay Area (especially locations to the east of Heritage Campus)
- North central sections of Southside

Figure 39 - Work Trip Origins to Del Mar College Heritage Campus

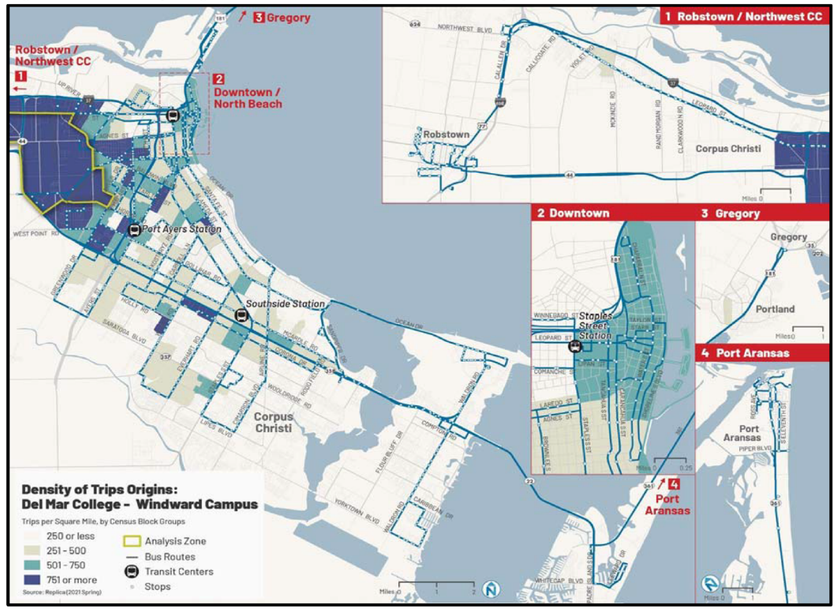


All Trip Origins (Del Mar College Windward Campus)

Areas with high densities of trip origins to **Del Mar College Windward Campus** district include:

- Central City (especially locations immediately adjacent to Windward Campus and to the southeast of the campus)
- Bay Area (especially locations to the east of Del Mar College)
- Western sections of Southside
- Downtown area east of Staples Street Station

Figure 40 - Work Trip Origins to Del Mar College Windward Campus

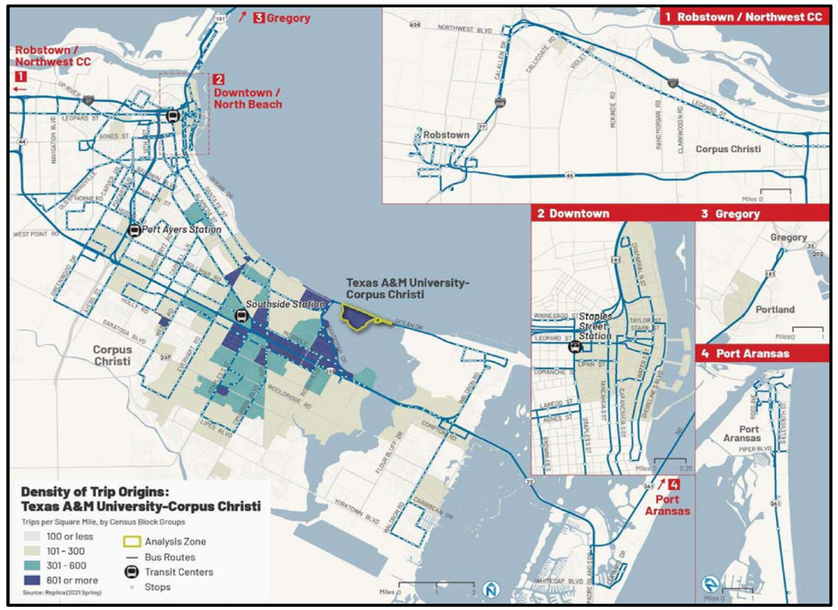


All Trip Origins (Texas A&M University – Corpus Christi)

Areas with high densities of trip origins to **Texas A&M University – Corpus Christi** include:

- Bay Area, particularly to the east southeast of the district
- Eastern sections of Southside, along South Padre Island Drive

Figure 41 - Work Trip Origins to Texas A&M University – Corpus Christi



MARKET ANALYSIS KEY FINDINGS

- Transit need based on socioeconomic characteristics is concentrated in north Corpus Christi, between downtown and Port Ayers Station.
- Downtown Corpus Christi is expected to see the largest growth in both population and jobs by 2045.
- By 2045, nearly half of the study area's population will live in areas that are medium or highly transit-supportive.
- Jobs are concentrated in and to the west of Downtown, along SPID, and in Robstown.
- The geographic distribution of the region's composite transit demand is similar from 2016 to 2045, but with increases in overall demand throughout the study area over time.

3 COMMUNITY FEEDBACK

Community engagement and consensus is vital to the success of any long-range system plan. As a result, Fleet Forward had multiple rounds of outreach to ensure that the plan met local needs, priorities, and values of all segments of the community. The first round of outreach occurred prior to any recommendations being developed, with the goal of understanding investment and service priorities. The second round of outreach occurred after two different alternatives had been developed for future service. Feedback was then sought to highlight the best and most supported path forward. This section provides more detailed information regarding each outreach phase and their outcomes.

Fleet Forward Website

A Fleet Forward project website (https://www.fleetforward2022.com/) was developed, featuring key information about the project, its goals, and highlighting ways in which the community could get involved. Content found on the website included:

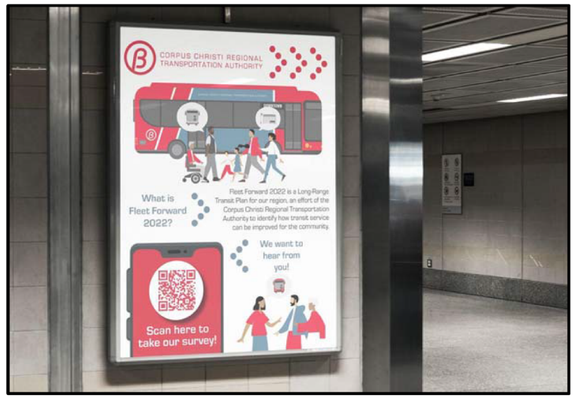
- Project description, factsheets, and schedule
- Information for the public on how to provide feedback
- Links to online surveys
- Links to project deliverables

Throughout the life of the project, as it project evolved, the website was updated with new information to continue building project awareness, sharing draft concepts of the plan, as well as capturing comments through online surveys.

Phase 1 Outreach

Phase 1 outreach began in May 2022 and lasted until September 2022. It featured the development of a project website, an on-line survey, pop-up engagement events, intercept surveys at transit centers, and stakeholder discussions. This phase of outreach happened before the development of the long-range plan's recommendations, with the aim of identifying current needs and informing the development of the plan's priorities.

Figure 42 - Fleet Forward Bulleting Poster



CCRTA Fleet Forward Needs Survey

The on-line needs survey was designed to understand user and non-user travel patterns, attitudes towards transit and suggestions on improvements that would attract non-riders. There was a total of 343 responses.

Most survey respondents are transit dependent and ride almost every day. Respondents who ride CCRTA usually use transit for commuting to work, errands, and recreational purposes. The most common barrier to taking CCRTA was travel time. Other takeaways include the following:

- The top priorities for respondents to use the service more often were more frequency and providing service during more hours of the day.
- Restoring service span back to pre-COVID levels was also a priority
- Respondents would rather improve existing services instead of adding more coverage area.
- The CCRTA website was the most popular resource for information. The next most common response was getting information from bus drivers.

Pop-up Engagement Events

In May 2022 several in-person pop-up engagement events took place at the Staples Street Station and Southside Transfer Station. The main goal for these events was to interact with CCRTA customers to learn more about their priorities for improvement of service. Project staff interacted with approximately 100 people, administering surveys to those interested on-site, raised awareness of the project, and invited people to take the surveys by distributing informational flyers with QR codes for public access, both in English and Spanish.

Figure 43 - QR Code for Rider Survey



Stakeholder Working Group

Through a combination of interviews and group meetings, key stakeholders were invited to join a working group that provided insight to ensure the project reflects the shared needs of all audiences.

First, stakeholders were individually interviewed to identify their relationship with CCRTA and their perspective on existing and future services. Interviews took place from June 2022 to July 2022. The following businesses/organizations were represented in stakeholder interviews:

- Workforce Solutions
- Naval Air Station Corpus Christi
- Coastal Bend Center for Independent Living
- City of Robstown
- Downtown Management District

Following individual interviews, working group discussions were held in September 2022. The working group included 18 vetted stakeholders who discussed the information collected throughout public workshops and surveys over the course of three sessions. Members of the working group represented a combination of public and private sector organizations including CCMPO, CCRTA, Texas A&M – Corpus Christi, Del Mar College, City of Robstown, City of Corpus Christi, CCISD, and others.

Stakeholder Interview Takeaways

Consistent themes that emerged through the interview process included:

- Coordinating transit service with developing employment centers and high growth areas
- Improving service to and around downtown
- Addressing accessibility of bus stops and their amenities
- Building relationships with the community with policies like fare tokens, free rides for voting, and hurricane evacuation assistance
- Ensuring CCRTA is an effective mode of transportation for people with disabilities, seniors, and students

Stakeholder Working Group Takeaways

Stakeholders in the working group provided valuable feedback on issues and opportunities with CCRTA services in a meeting on September 28, 2022. Key takeaways include the following:

- Riders missing transfers is common, and trips should require less transferring.
- Many people want more reliable services more frequently and later in the evening. A key concern is safety measures for night services.
- On-demand services can be a popular alternative to fixed routes.
- Individuals with disabilities are more likely to use fixed routes and seniors are more likely to use services with lower waiting times.
- Priority areas for transit investment include the new workforce megacenter at Staples/Ayers, schools, NAS, hospitals, the port, refineries, and the downtown area, specifically service that connects Downtown to TAMUCC.

Stakeholders also provided feedback on routes and how they can best serve important destinations around Corpus Christi. Key takeaways on routes were:

- Route 27 could best serve high employment areas like STX Beef Co. and nearby oil refineries by providing service later in the evening with increased frequency, transit priority, transit signals, and EMS.
- Route 94 Port Aransas area. Shuttle service area could be better served through an on-demand zone.

Phase 2 Outreach

Phase 2 outreach began in October 2022 and concluded in November 2022. The purpose of this second phase of public outreach is to present preliminary service and capital recommendations and obtain comments and suggestions from the community. This information is then used to draft final recommendations. Phase 2 included a targeted geofencing marketing campaign, a public meeting, and an on-line survey to gather feedback about the proposed alternative scenarios for the future of CCRTA service.

Targeted Geofencing Marketing Campaign

KCS Public Relations, a local outreach firm, led the development and implementation of a targeted campaign utilizing geofencing technology. Through the use of this technology, individuals were shown information about Fleet Forward on their mobile devices on certain key locations, with the option of clicking a link to access project information. Locations included Staples, Robstown, and Southside stations as well as major educational institutions, hospitals, and retail locations across Corpus Christi. Running from early to late November, the campaign generated more than 217,000 impressions.

Public Meeting

A public meeting was held on October 19, 2022, to gather feedback on the alternative scenarios the project team proposed for CCRTA service. Ten members of the public attended the open house-style meeting, where they were able to analyze informational boards and proposed system maps, as well as having the opportunity to share any existing concerns, provide feedback, and ask questions about proposed alternatives. Key concerns and opportunities provided by attendees of the meeting included:

- Exploring fare-free transit
- Improving trips during morning and evening commutes
- Mitigating adverse impact on transit service from construction
- Returning to pre-COVID scheduling, with a note to increase frequency for Routes 5 and 15 specifically
- Providing an Everhart service along a busy corridor to Alameda
- Transit access to Alorica and Repcon

CCRTA Fleet Forward Alternatives Survey

The second survey collected data between October 2022 and December 2022. The survey sought feedback from riders and non-riders on initial service alternatives. As of December 2022, there has been 30 responses. Respondents confirmed earlier priorities of improving frequency, operating later evening service, and operating more direct service.

4 SHORT RANGE RECOMMENDATIONS

The project team used existing conditions data and feedback from the public engagement process to develop two cost-neutral operating alternatives to the existing bus service operated by CCRTA.



One of the alternatives, the **Improved Connections Scenario**, focused primarily on facilitating connections between routes at key transfer facilities (see Appendix A). Making transfers simpler for passengers was a priority as 40% of rides involve at least one transfer, and many involve multiple transfers. Key benefits of the improved connections scenario include:

- Better transfers opportunities and reduced waiting times at all four major transfer points
- Many routes now have destinations or transfer opportunities at both route ends
- More frequent service on key routes will improve connections and convenience



The other alternative, the **Frequent Corridors Scenario**, aimed to increase the frequency of service, or how often buses would run, along three major corridors connecting CCRTA's largest transit centers (see Appendix B). Increasing frequency to 15 minutes for several routes was a priority for this scenario as higher frequencies require less coordination and planning for passengers and reduce wait times.

- Higher frequency of buses provides a more convenient service for riders
- Improving the rider experience helps to rebuild and consolidate ridership faster
- Does not require as much schedule coordination for transfer

In both scenarios, at least one On-Demand Zone (sometimes called Flex Zones) where passengers could schedule curb-to-curb service within the zone were considered as part of the service types that would be necessary to better serve the region.

FINAL SHORT-RANGE RECOMMENDATIONS

Based on feedback from the public, stakeholder input, and CCRTA staff discussions, elements from the two cost-neutral alternatives were combined into one final set of short-range recommendations. The intent was to prioritize elements that had support while minimizing any perceived drawbacks of the alternatives. The Final Short-Range Recommended Network is cost-neutral and forms the baseline for CCRTA to restore COVID-related cuts. Specific benefits of the realigned route structure include:

- A high frequency connection between CCRTA's biggest ridership generators, connecting Staples Street, Southside Station, and TAMU-CC.
- Reduced duplication of service
- Better transfers opportunities at all transfer points
- More frequent service and to Flour Bluff and timed connections within Flour Bluff
- Crosstown service on Saratoga
- More convenient service to Del Mar Oso Creek's campus and South Corpus Christi
- More direct, frequent service to downtown Corpus Christi

The following sections detail the route-by-route recommendations.

Routes with No Change Recommended

Eight routes do not have any routing, frequency, or service span change recommended. Most of these are lower ridership alignments that provide coverage to high need areas, and some, like Routes 21 and 27 are solid performers without the need for any changes. No changes were recommended for routes:

- Route 4
- Route 12
- Route 16
- Route 21
- Route 27
- Route 65
- Route 83
- Route 90

Discontinued Routes

The Final Short-Range Recommended Network assumes multiple routes that currently operate or that were suspended due to the impacts of the pandemic would be deleted or consolidated with other routes.

CCRTA routes are currently suspended due to the operator shortage. Routes 30, 55, 56, and 66 provided mobility to a small set of riders. On most of these routes, ridership was very low. Rather than reinstitute routes that are marginally successful, these resources should be reallocated to address the priorities customers identified, such as later evening service and better frequency.

Five routes would be deleted in the Final Short-Range Recommended Network:

- Route 37 would be replaced by more frequent Route 19 service on Golihar Rd and more frequent Route 29 service between Southside Station and TAMU-CC. North of Port Ayers Station, Route 37 patrons would still have access to Routes 23 and 21.
- Route 60 would be replaced by an extended frequent Route 29, which would operate every 15-minutes six days a week with a larger bus between Momentum Campus and TAMU-CC.
- Route 25 would be replaced by an extension of Route 23.
- Routes 50 and 53 regional express service would be consolidated into a new Route 56, which would continue to connect the Calallen Park-and-Ride, Robstown Station, and the NAS.
- Route 54 would be deleted due to low ridership. There is currently one rider on this route in the morning and one in the afternoon.

All following routes have some recommendations for routing, schedule, span, or frequency. Additionally, some of the recommendations below also include proposal for new routes, as well as discontinuation of others.

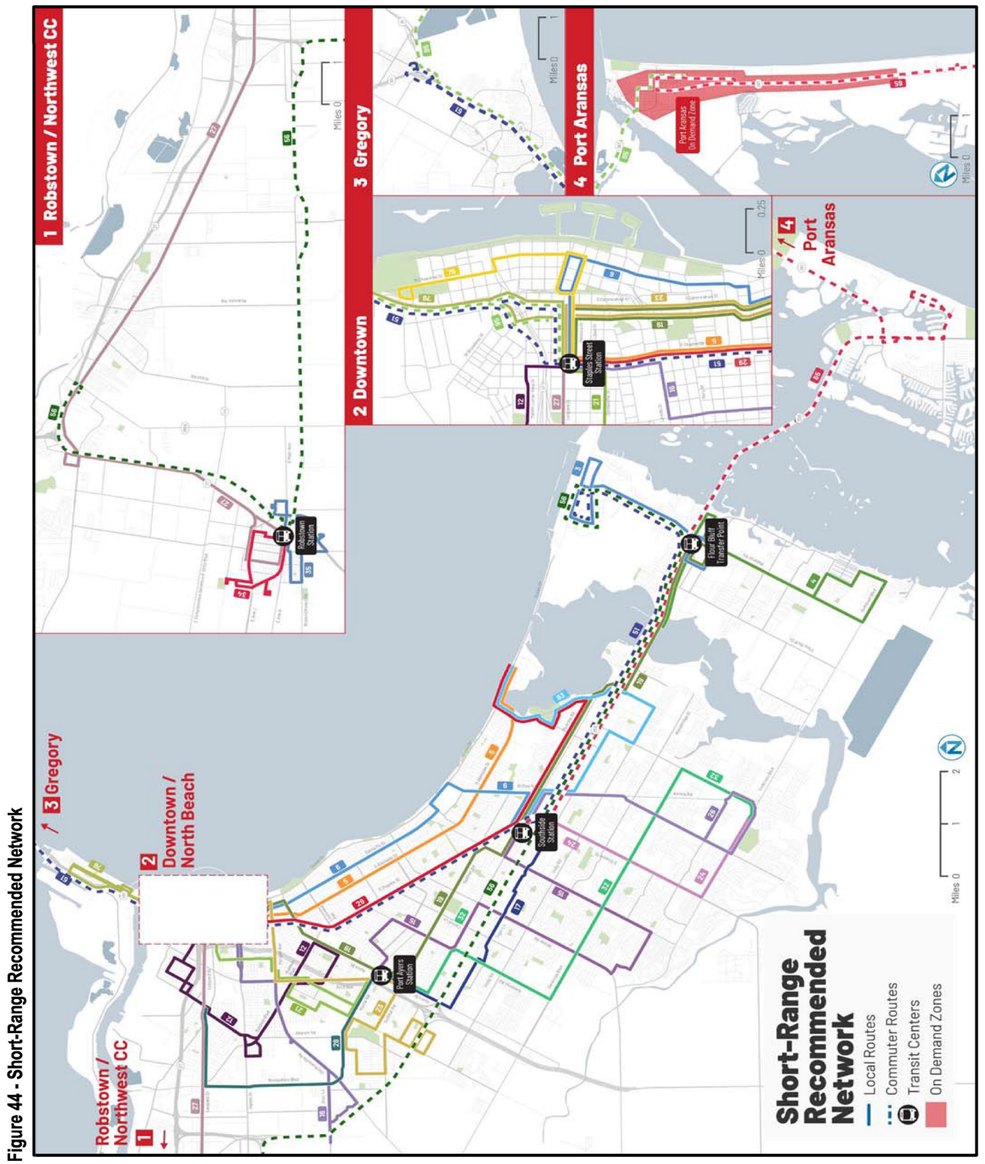
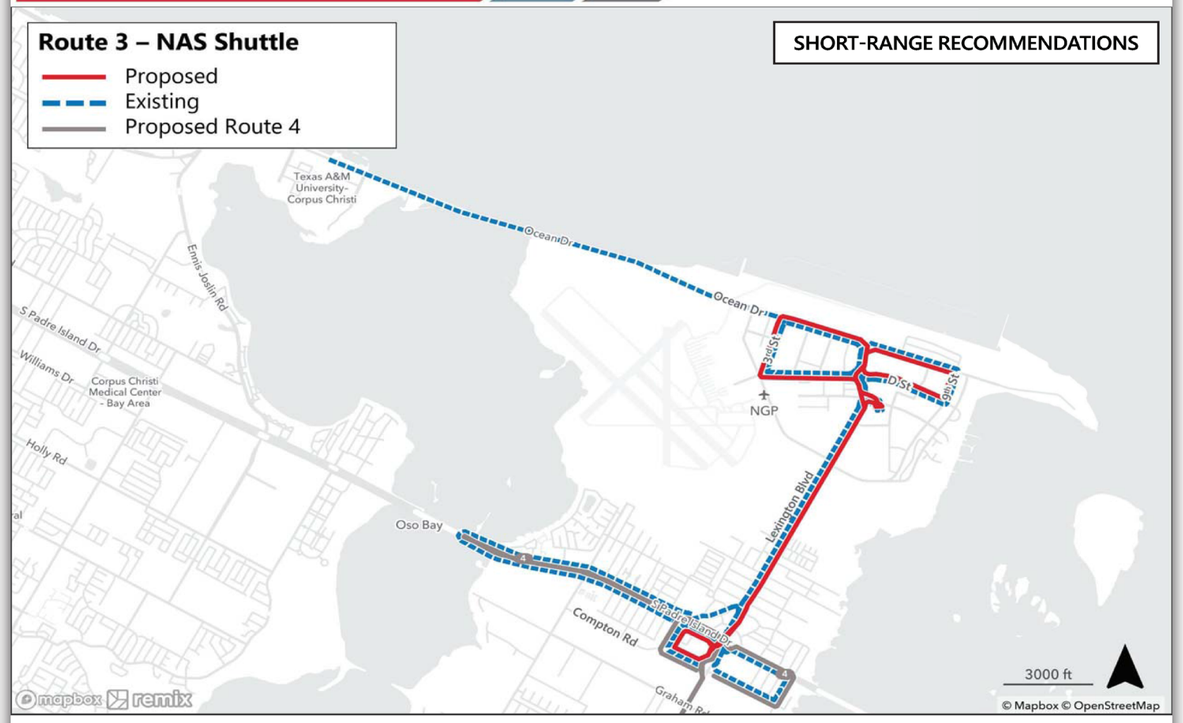


Figure 44 - Short-Range Recommended Network

Route 3
NAS Shuttle

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 3 should be shortened so that it can be operated every 30 minutes between Waldron/Compton and the Naval Air Station. Route 3 would only operate on NAS Dr and Waldron Rd and no longer serve the SPID frontage roads.

Due to low ridership, the Route 3 variant to TAMU-CC would be discontinued. Existing patrons wishing to travel form Corpus Christi to NAS would need to use a revised Route 51.

Hours of Service (When it runs)

No changes during the weekdays. Service on Saturday would be discontinued due to low ridership.

Frequency (How often it runs)

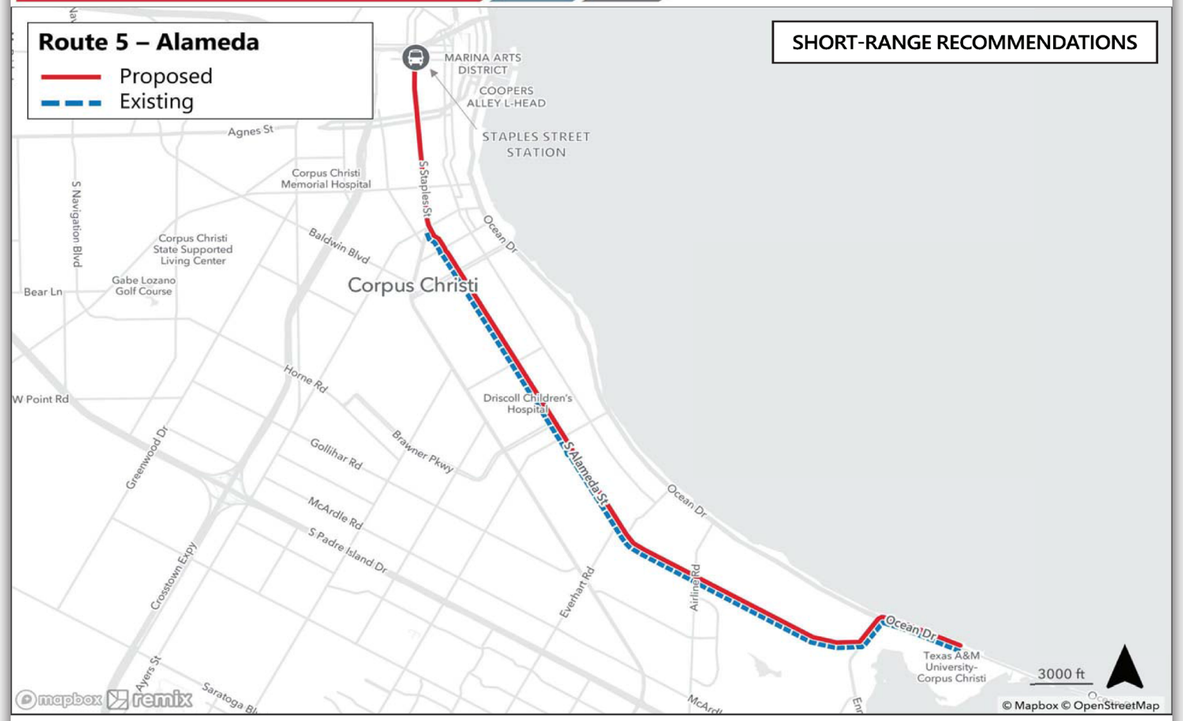
To facilitate connections with Route 4 and service to Corpus Christi, frequency would be improved to operate every 30 minutes. A timed transfer would happen at Waldron/Compton.

Service on Saturday would be discontinued due to low ridership.

	Day	All-day frequency	Hours of Service
Existing	Weekday	45	5:10 AM-5:05 PM
	Saturday	45	5:10 AM-5:05 PM
	Sunday	-	-
Recommended	**Weekday**	**30**	**5:10 AM-5:05 PM**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 5
Alameda

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

To provide service and connections to Downtown, Route 5 would be extended to Staples Street Station via Staples Street. At Staples Street Station, Route 5 would be interlined with Route 76 to provide a one-seat ride between TAMU-CC and Downtown. This addresses a top request heard during stakeholder outreach.

Hours of Service (When it runs)

No changes.

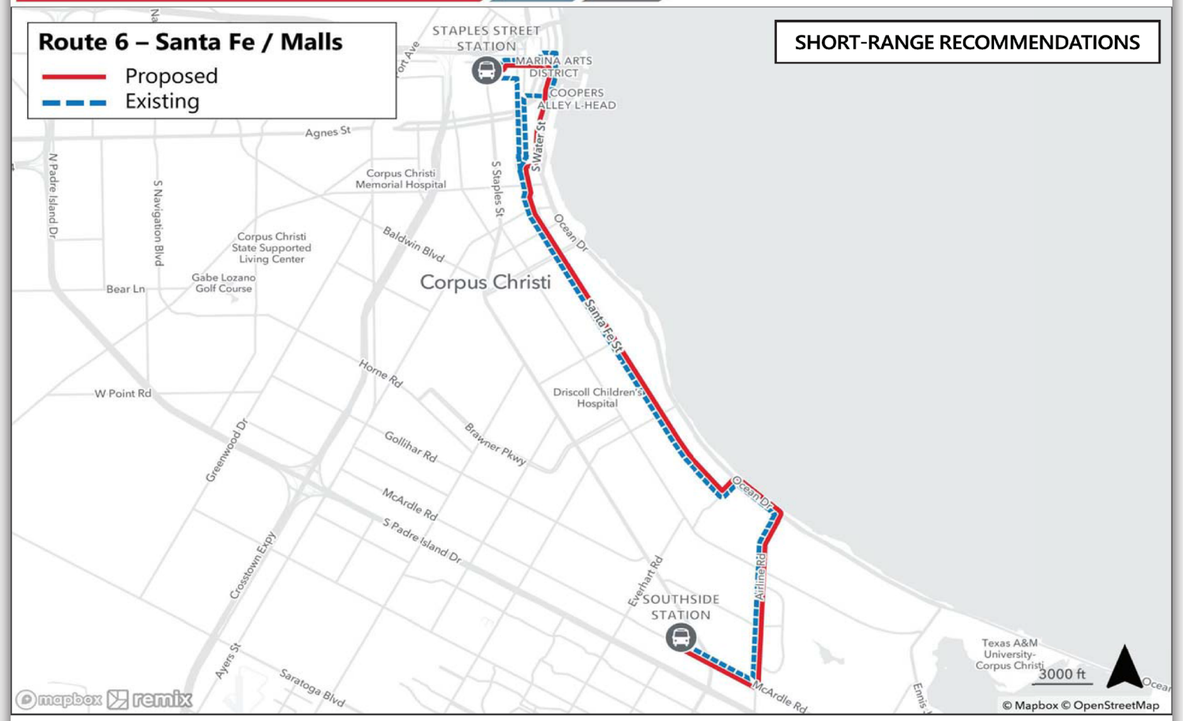
Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	4:50 AM-8:13 PM
	Saturday	60	8:15 AM-8:13 PM
	Sunday	60	8:15 AM-8:13 PM
Recommended	**Weekday**	**60**	**4:50 AM-8:13 PM**
	Saturday	**60**	**8:15 AM-8:13 PM**
	Sunday	**60**	**8:15 AM-8:13 PM**

Route 6
Santa Fe/Malls

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 6 currently only serves downtown Corpus Christi in the northbound direction. Route 6 should be revised to serve Downtown via Water St in both north- and southbound directions. Route 6 should be interlined with Route 78. In addition, the schedules of Route 6 and Route 76 should be coordinated between Water St and Staples Street Station to offset. This would connect downtown Corpus Christi with Staples Street Station every 30-minutes.

Hours of Service (When it runs)

No changes.

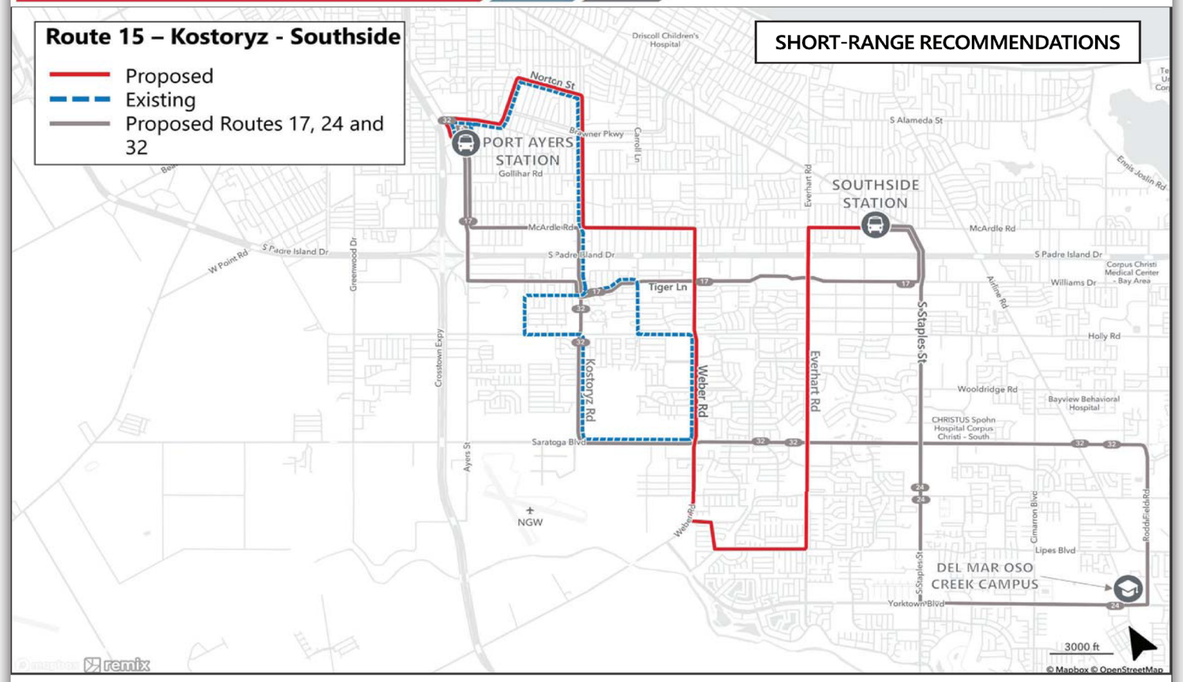
Frequency (How often it runs)

No changes. The Route 6 schedule would be adjusted to ensure it has timed connections at Staples Street Station.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:05 AM-7:45 PM
	Saturday	60	6:05 AM-7:45 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:05 AM-7:45 PM**
	Saturday	**60**	**6:05 AM-7:45 PM**
	Sunday	**60**	**7:00 AM-7:30 PM**

Route 15
Kostoryz/Carroll High School

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

The new Route 15 travels from Port Ayers Station to Southside Station along Kostoryz Road, turning onto McArdle Road then down Weber Road and Everhart Road. The new route reduces overlap with proposed Route 32. Although some sections of Holly Rd and Carrol Ln will lose service, Route 32 will continue serving Kostoryz Rd south of SPID.

Hours of Service (When it runs)

Recommended route would operate seven days a week.

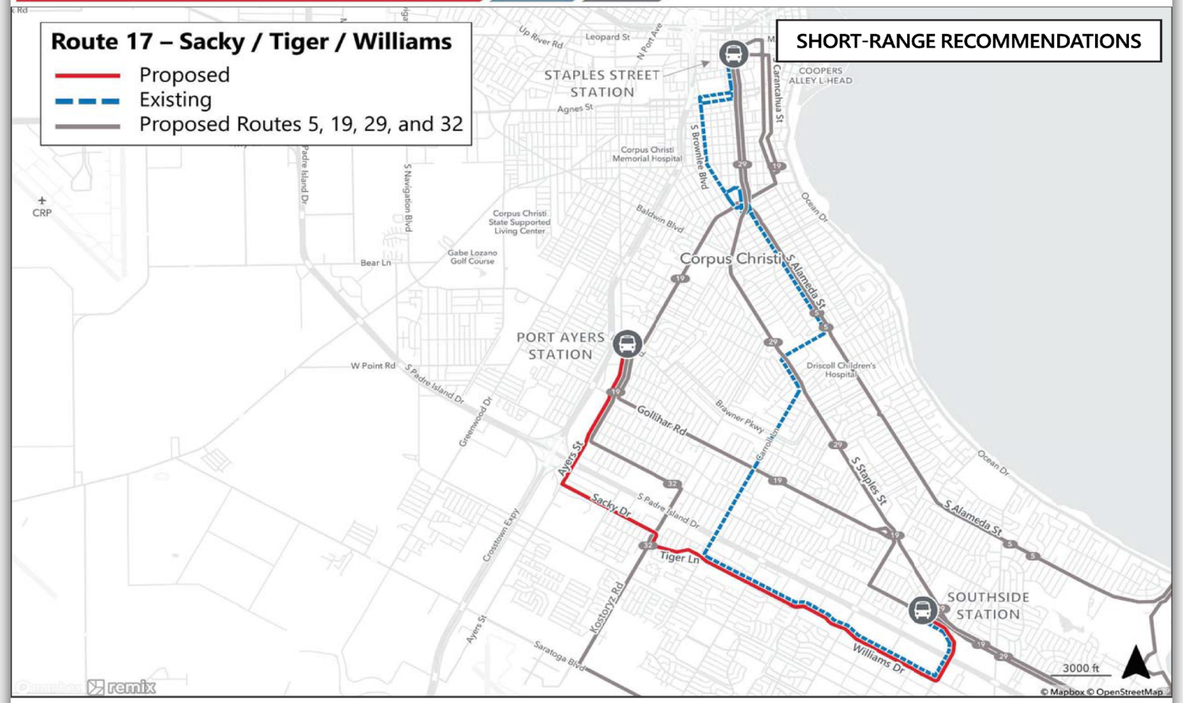
Frequency (How often it runs)

To improve transfer opportunities at both Stations, frequency would be improved to operate every 60 minutes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	45	6:30 AM-7:55 PM
	Saturday	90	8:00 AM-7:10 PM
	Sunday	90	8:00 AM-7:10 PM
Recommended	**Weekday**	**60**	**6:30 AM-7:55 PM**
	Saturday	**60**	**8:00 AM-7:10 PM**
	Sunday	**60**	**8:00 AM-7:10 PM**

Route 17
Carroll / Southside

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 17 is a lower-ridership route that duplicates multiple routes. In order to reduce duplication and better serve the areas south of SPID, Route 17 should be restructured to operate between Port Ayers and Southside Stations. Patrons wishing to travel to Staples Street Station could continue to do so with transfers to Routes 19 or 29. Service along Carroll Ln would be discontinued due to low ridership. Riders on Carroll Ln would need to walk to either McArdle Rd (Route 32), Gollihar Rd (Route 19), or Staples St (Route 29).

Hours of Service (When it runs)

Hours of service will be seven days a week.

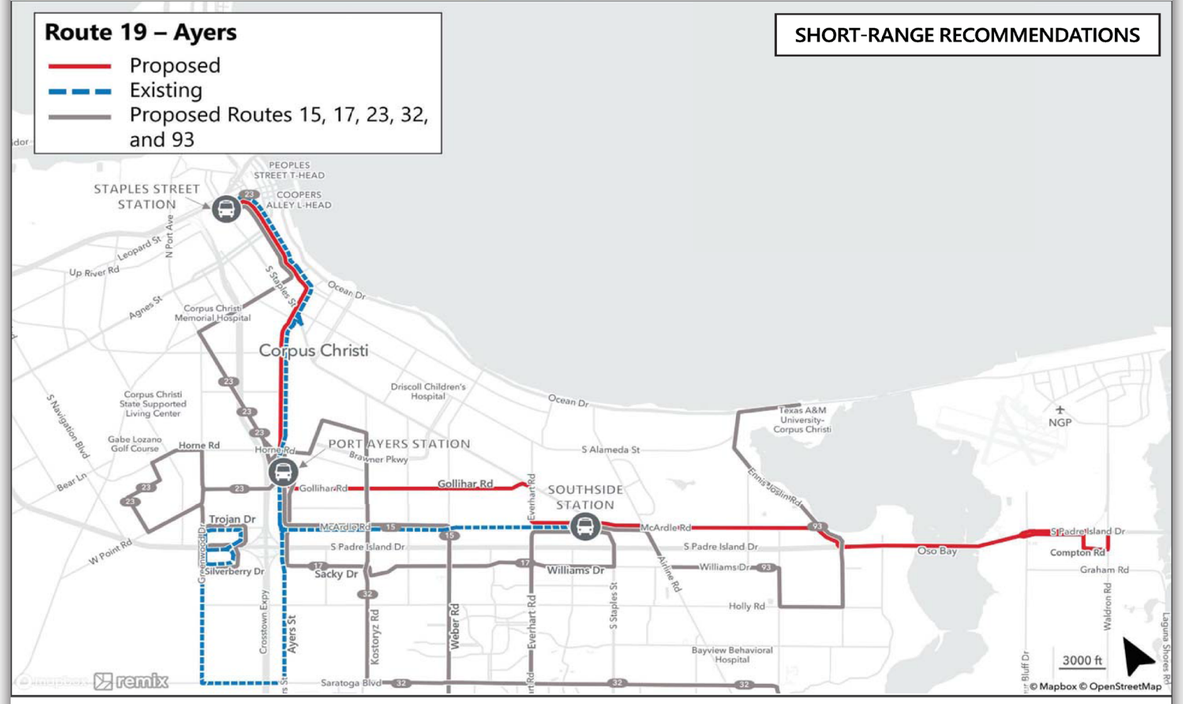
Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	7:00 AM-7:50 PM
	Saturday	60	8:00 AM-7:50 PM
	Sunday	60	8:00 AM-7:50 PM
Recommended	**Weekday**	**60**	**7:00 AM-7:50 PM**
	Saturday	**60**	**8:00 AM-7:50 PM**
	Sunday	**60**	**8:00 AM-7:50 PM**

Route 19
Ayers

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 19 has two different branches that are of differing lengths. Passengers are often confused by branches and on-time performance on the shared segment between Port Ayers and Staples Street Station suffers.

Route 19 should be adjusted to better serve the biggest destinations along the north side of SPID. A revised Route 19 should connect Staples Street Station, Port Ayers Station, Southside Station, and Flour Bluff with consistent all-day 30-minute service.

A consistent 30-minute frequency would facilitate transfers at all Stations, including Flour Bluff, and tie together one of the bigger regional travel markets.

The revised Route 17 would continue to serve most stops on Ayers St, and Route 23 would provide service to the Greenwood Walmart. The proposed Routes 32 and 15 would continue to serve most stops on McArdle Road between Ayers St and Southside Station.

Hours of Service (When it runs)

No changes.

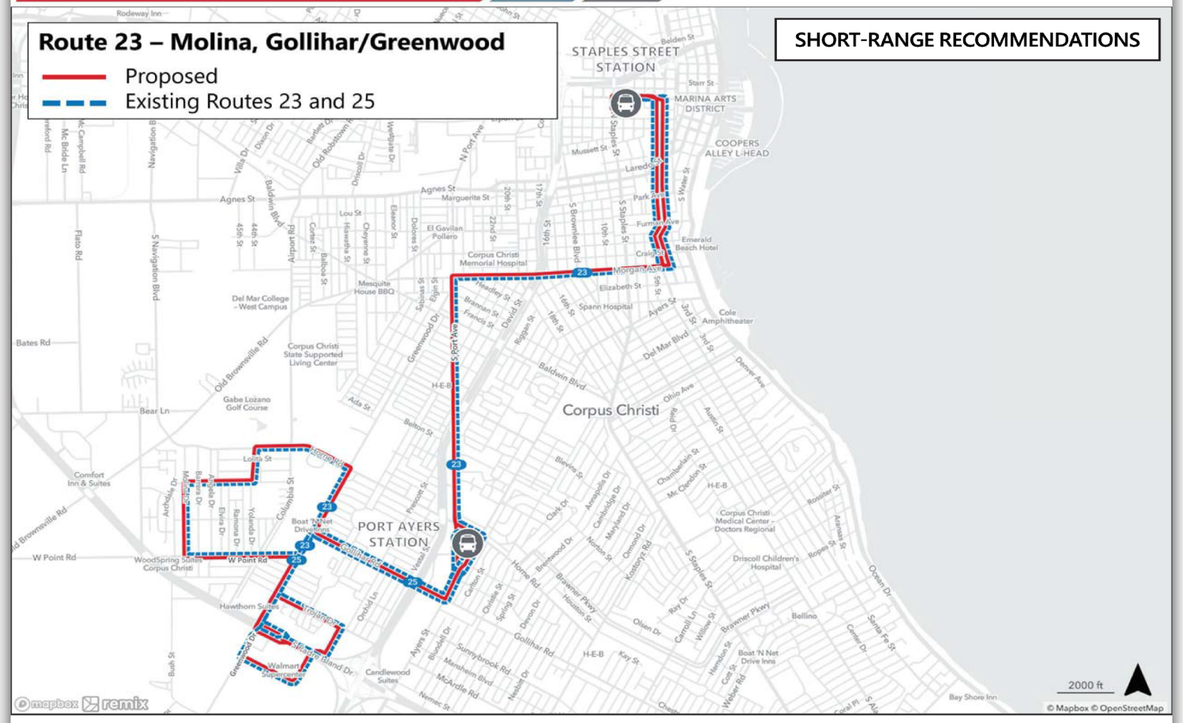
Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	5:50 AM-8:17 PM
	Saturday	30	7:50 AM-8:17 PM
	Sunday	30	7:50 AM-8:17 PM
Recommended	**Weekday**	**30**	**5:50 AM-8:17 PM**
	Saturday	**30**	**7:50 AM-8:17 PM**
	Sunday	**30**	**7:50 AM-8:17 PM**

Route 23
Molina, Gollihar/Greenwood

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 23 is a strong route. Route 23 should be extended to the Greenwood Walmart to provide direct access from higher need areas to this destination. Service in the Molina neighborhood would operate bi-directionally.

The Route 23 extension would replace service currently provided to the Greenwood Walmart by Routes 19 and 25.

Hours of Service (When it runs)

No changes.

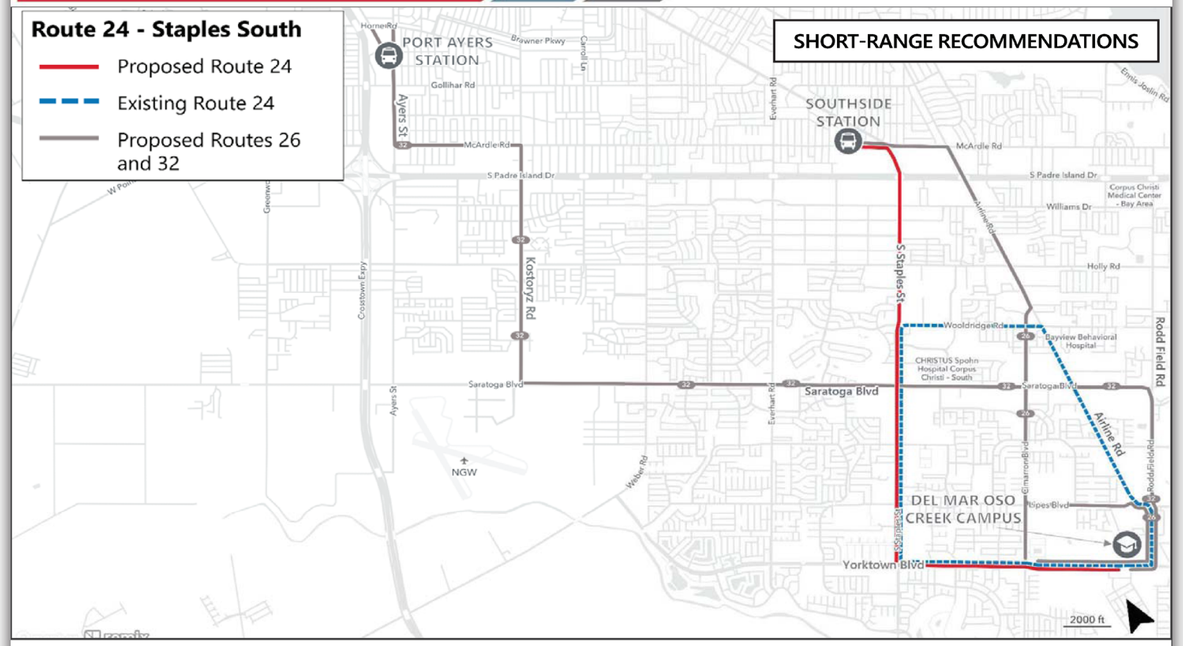
Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	5:30 AM-8:12 PM
	Saturday	30	5:30 AM-8:12 PM
	Sunday	60	7:58 AM-8:03 PM
Recommended	**Weekday**	**30**	**5:30 AM-8:12 PM**
	Saturday	**30**	**5:30 AM-8:12 PM**
	Sunday	**60**	**7:58 AM-8:03 PM**

Route 24
Staples South

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Proposed Route 24 will connect Del Mar Oso Creek Campus to Southside Station along Yorktown Boulevard and S Staples Street. Route 24's direct service between Del Mar Oso Creek Campus and Southside Station will replace existing Route 29 and Route 26 service to Spohn South. Route 24 should be interlined with Route 32 at Del Mar Oso Creek Campus.

Hours of Service (When it runs)

No changes.

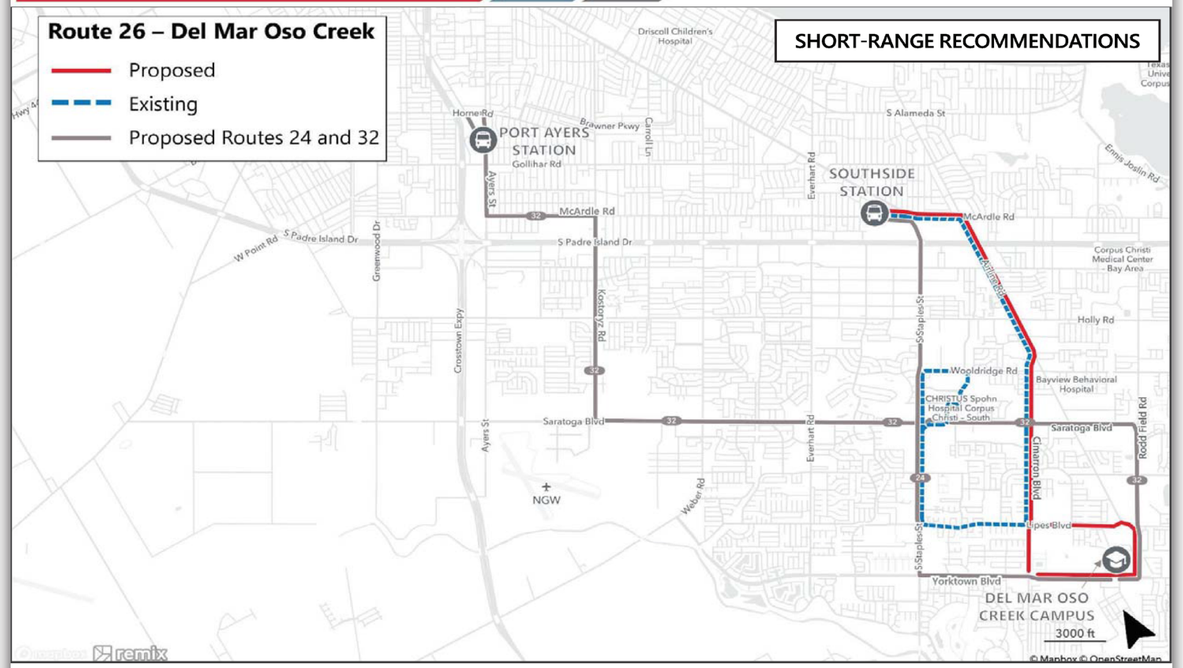
Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	7:00 AM-7:12 PM
	Saturday	30	7:00 AM-7:12 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:00 AM-8:00 AM**
	Saturday	**60**	**8:00 AM-8:00 PM**
	Sunday	**60**	**8:00 AM-8:00 PM**

Route 26
Del Mar Oso Creek

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 26 would be extended to serve Del Mar Oso Creek Campus directly and replace the existing Route 24. With this extension, Route 26 would no longer serve Spohn South, which will continue to be served by a restructured Route 24.

Hours of Service (When it runs)

No changes.

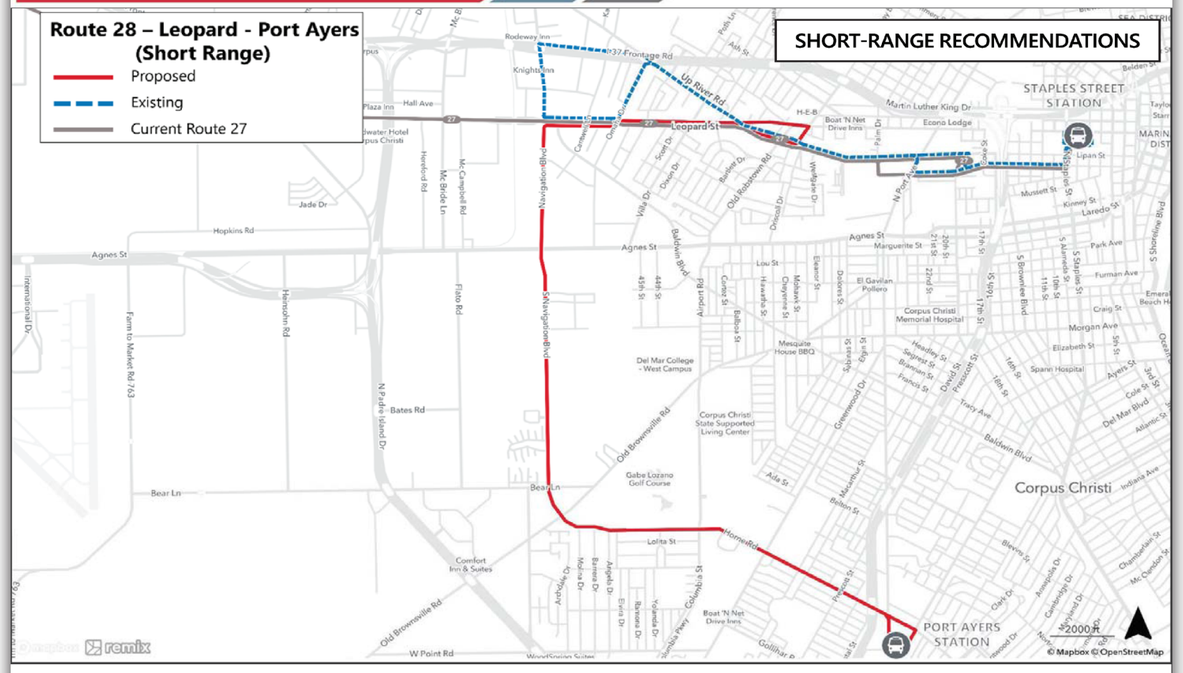
Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:00 AM-8:05 PM
	Saturday	60	8:00 AM-8:05 PM
	Sunday	60	8:00 AM-8:05 PM
Recommended	**Weekday**	**60**	**6:00 AM-8:05 PM**
	Saturday	**60**	**8:00 AM-8:05 PM**
	Sunday	**60**	**8:00 AM-8:05 PM**

Route 28
Leopard - Port Ayers Short Range

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 28 is a low ridership route that has been impacted by the Harbor Bridge Project and the anticipated relocation of the food bank. Due to low ridership and the duplication with Route 27, Route 28 should be restructured to operate between Port Ayers Station and the HEB at Leopard St/Nueces Bay Blvd. This change would connect a soon to be relocated food bank, new low-income housing along Navigation Blvd, and job sites with a grocery store and connections to regional service at Port Ayers Station.

Hours of Service (When it runs)

No changes.

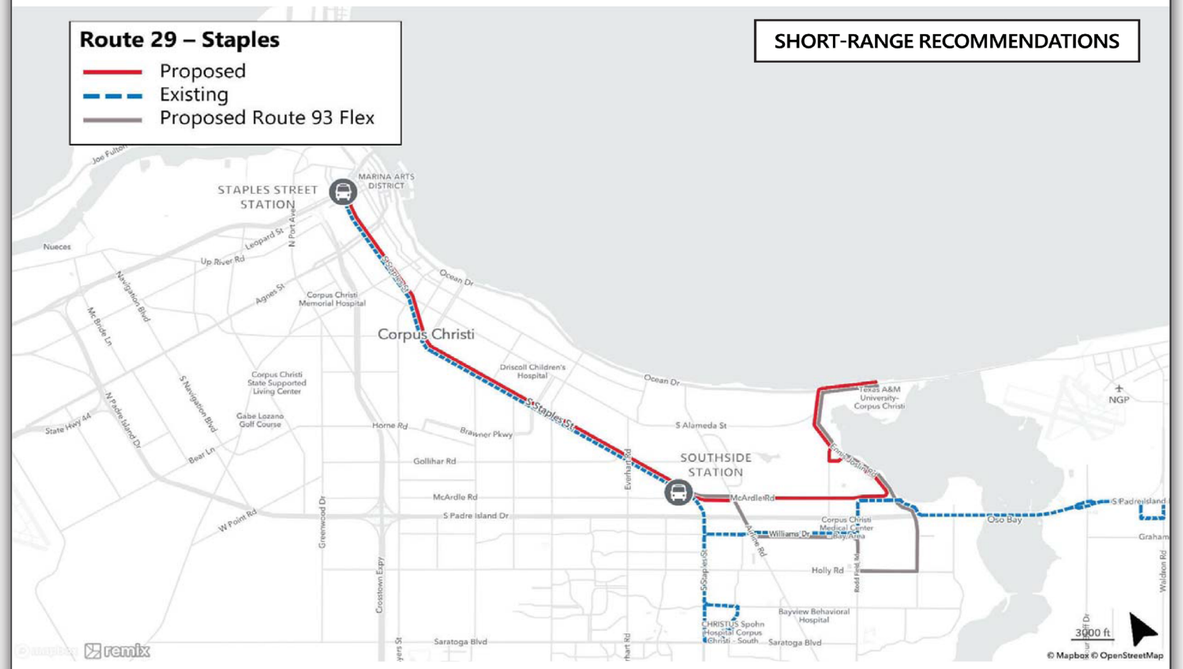
Frequency (How often it runs)

The recommended route would operate every 60 minutes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	45	6:00 AM-6:38 PM
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:00 AM-6:38 PM**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 29
Staples

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 29 between Southside and Staples Street Stations is the highest ridership corridor served by CCRTA. Route 29 resources should be rearranged to serve this corridor more frequently and more reliably. An extension to TAMUCC via McArdle Rd and Ennis Joslin Rd would offer a direct, frequent connection between a high-ridership location and Southside Station and Staples Street Station.

The existing Route 29 Flour Bluff branch would be replaced by an extension of Route 19, which would operate every 30 minutes. Existing riders on Williams Drive would be served by an extended Route 93, which would connect Southside Station and TAMU-CC.

The existing Route 29 Spohn South branch would be replaced by a restructured Route 24, which would continue to serve almost all existing Route 29 stops between Spohn South and Southside Station.

Hours of Service (When it runs)

No changes.

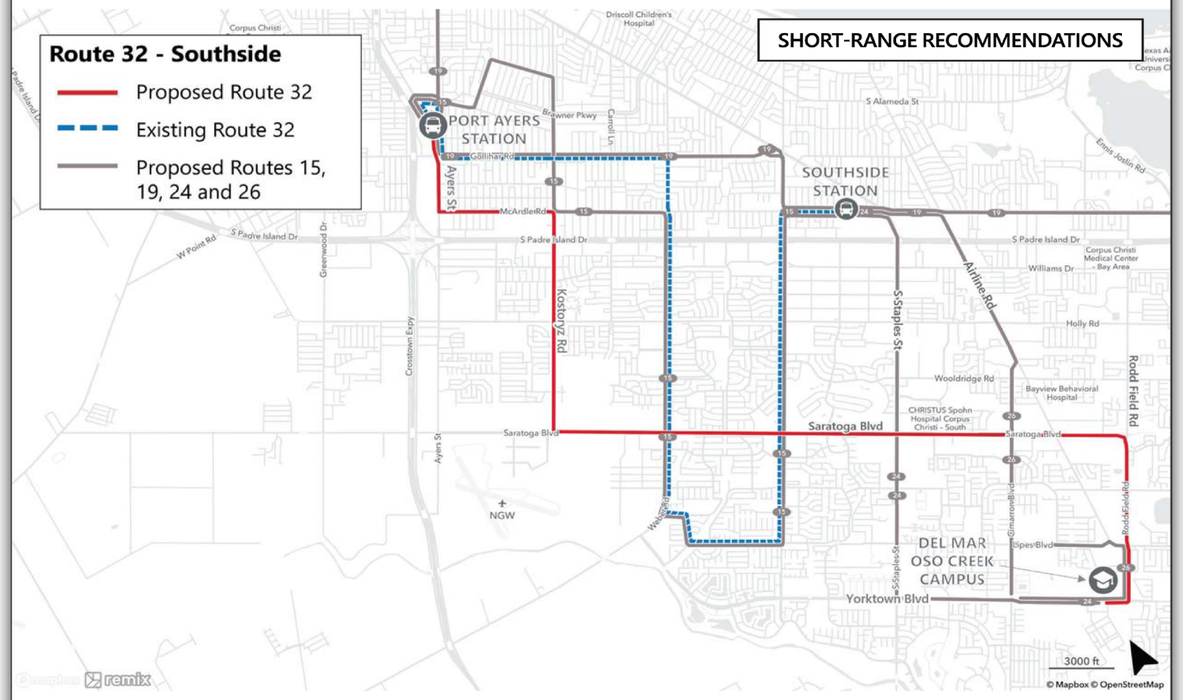
Frequency (How often it runs)

Service would operate every 15 minutes, all-day, throughout entire route.

	Day	All-day frequency	Hours of Service
Existing	Weekday	40	6:00 AM-8:12 PM
	Saturday	40	6:00 AM-8:08 PM
	Sunday	30	8:00 AM-8:20 PM
Recommended	**Weekday**	**15**	**6:00 AM-8:12 PM**
	Saturday	**15**	**6:00 AM-8:08 PM**
	Sunday	**30**	**8:00 AM-8:20 PM**

Route 32
Southside

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 32 would travel between Port Ayers Station and Del Mar Oso Creek Campus, traveling along Ayers St, to McArdle Rd, to Kostoryz Rd, to Saratoga Blvd, then Rodd Field Rd to reach the campus. The revised Route 32 provides service on Saratoga Blvd between Kostoryz and Rodd Field, implementing a long-desired service on this rapidly growing roadway. Route 32 should be interlined with a restructured Route 24 at Del Mar Oso Creek Campus. The restructured Route 15 will cover almost all current stops on Route 32 on Weber and Everhart.

Hours of Service (When it runs)

No change.

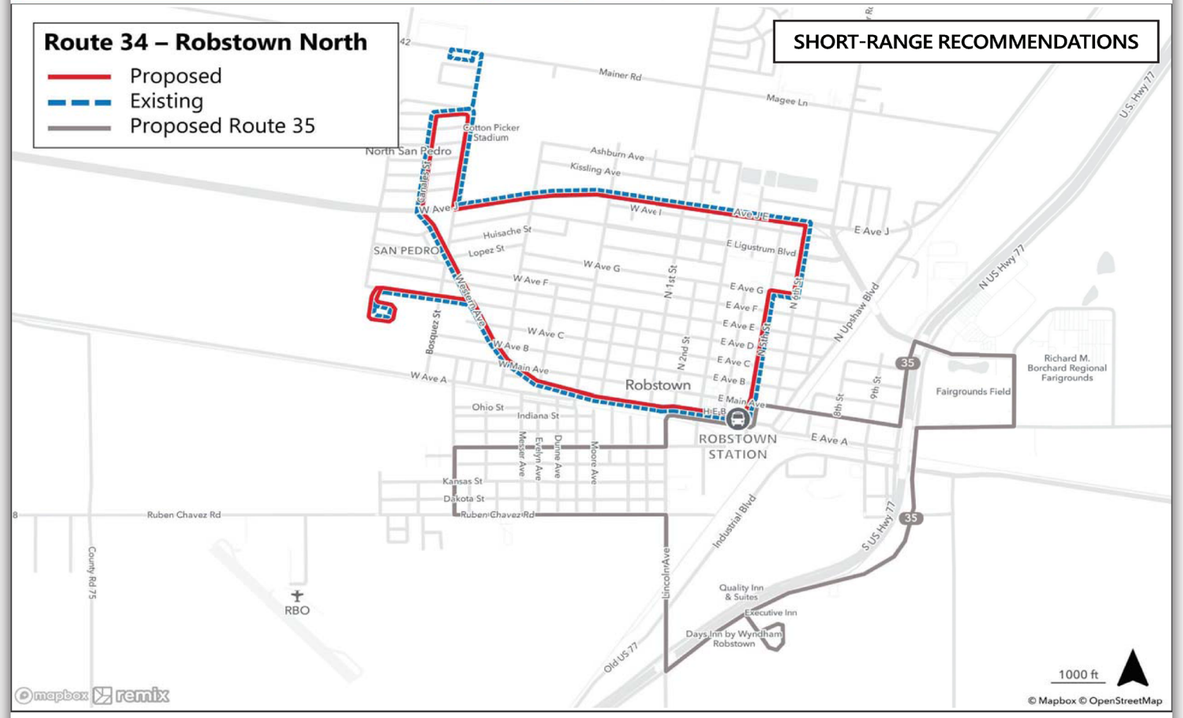
Frequency (How often it runs)

No change.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:15 AM-7:57 PM
	Saturday	60	8:07 AM-7:57 PM
	Sunday	60	8:07 AM-7:57 PM
Recommended	**Weekday**	**60**	**6:15 AM-7:57 PM**
	Saturday	**60**	**8:07 AM-7:57 PM**
	Sunday	**60**	**8:07 AM-7:57 PM**

Route 34
Robstown North

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

On-time performance of Route 34 is poor, particularly on weekday afternoons. In order to improve on-time performance, shortening route to no longer serve GI Forum Village directly. This would save several minutes and cause only several passengers to walk further for service. Alternatively, these stops could be served on a flex-basis, so buses make the deviation only upon passenger request.

Hours of Service (When it runs)

No changes.

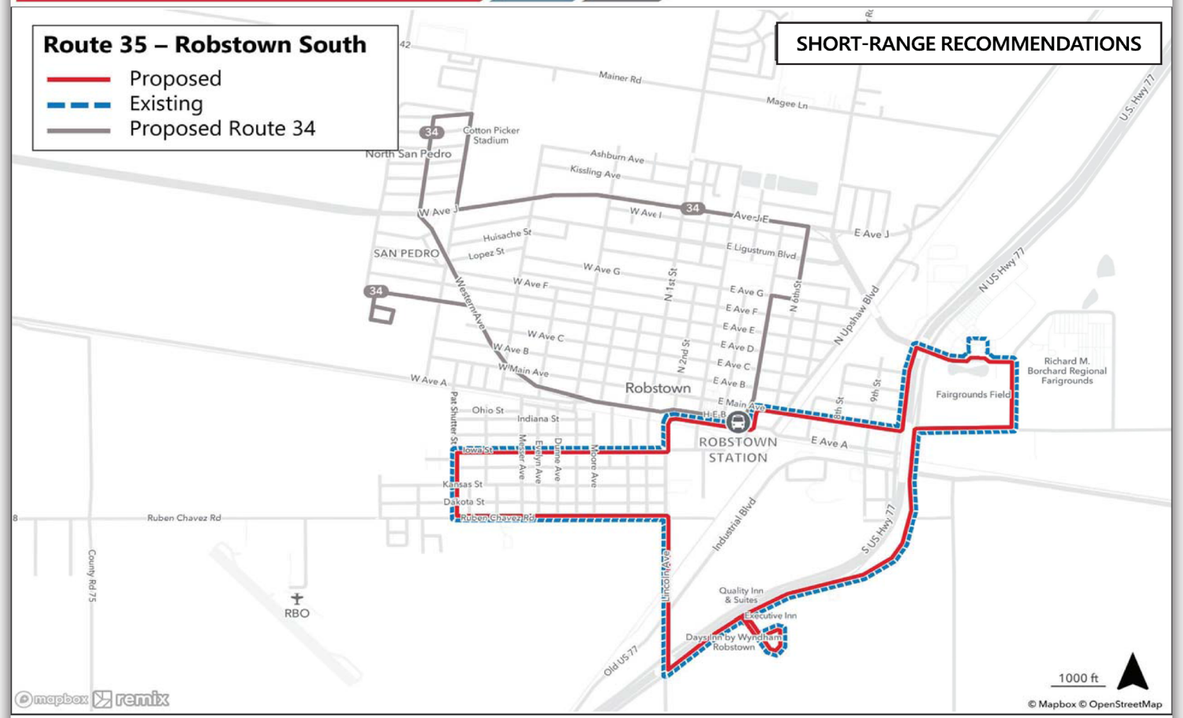
Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:10 AM-7:36 PM
	Saturday	60	6:10 AM-7:36 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:10 AM-7:36 PM**
	Saturday	**60**	**6:10 AM-7:36 PM**
	Sunday	**-**	**-**

Route 35
Robstown South

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

On-time performance of Route 35 is poor, particularly on weekday afternoons. In order to improve on-time performance, the stop at Outlets should be discontinued. The few existing riders at this stop would have to walk several minutes more, but Route 35 could stay on time more often. Alternatively, these stops could be served on a flex-basis, so buses make the deviation only upon passenger request.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	7:40 AM-8:05 PM
	Saturday	60	6:40 AM-8:05 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**7:40 AM-8:05 PM**
	Saturday	**60**	**6:40 AM-8:05 PM**
	Sunday	**-**	**-**

Route 37
Crosstown

FLEET forward 2022
Enhancing the Rider Experience, Together.



Route Changes Overview

Route 37 currently duplicates multiple different routes. Route 37 should be replaced by the more frequent restructured Route 19 and Route 93. Route 23 would continue to serve Port Ave.

Hours of Service (When it runs)

Discontinued.

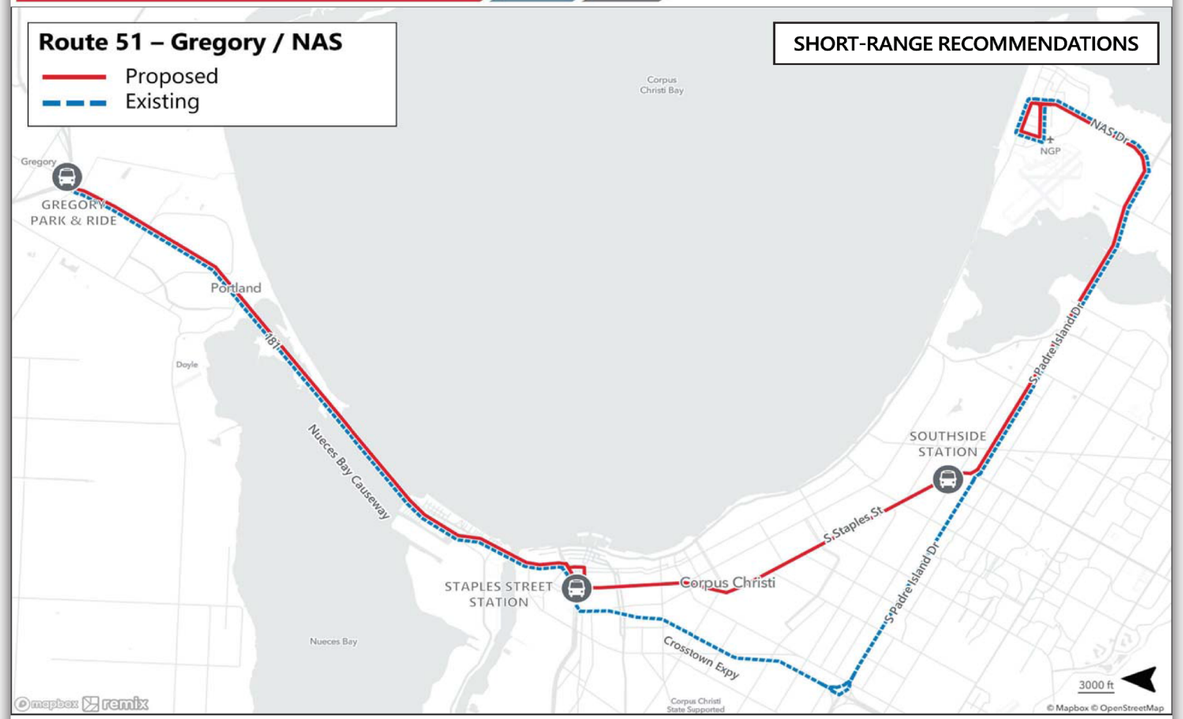
Frequency (How often it runs)

Discontinued.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:10 AM-8:05 PM
	Saturday	60	8:10 AM-8:05 PM
	Sunday	60	8:10 AM-8:05 PM
Recommended	**Weekday**	**-**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 51
Gregory / NAS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 51 has low ridership. In order to improve ridership potential, and replace Route 5 and Route 4 service between Corpus Christi and NAS, Route 51 should stop in downtown Corpus Christi and travel between Downtown and SPID via Staples St – serving limited stops. This adds eight minutes of travel time for existing riders, but continues to provide a one-seat ride between Gregory and NAS.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	1 morning trip 1 afternoon trip	-
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**1 morning trip 1 afternoon trip**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 54
Gregory/Downtown Express

FLEET forward 2022
Enhancing the Rider Experience, Together.



Route Changes Overview

Route 54 averages one rider in the morning and one in the afternoon. Due to low ridership, Route 54 should be discontinued and replaced by a taxi/Uber/Lyft subsidy for trips to Gregory.

Hours of Service (When it runs)

Discontinued.

Frequency (How often it runs)

Discontinued.

	Day	All-day frequency	Hours of Service
Existing	Weekday	50	7:00 AM-6:50 PM
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**-**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 56
Calallen/Robstown/NAS Express

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Routes 50 and 53 both have low ridership – with 6 or less riders on every trip. These routes should be consolidated into one route (Route 56) that serves both the Robstown and Calallen Park-and-Rides. Calallen riders would have a longer ride, but continue to have direct service to/from NAS.

Hours of Service (When it runs)

The morning trip would continue to arrive at NAS at 5:45 a.m. and leave NAS at 2:40 p.m.

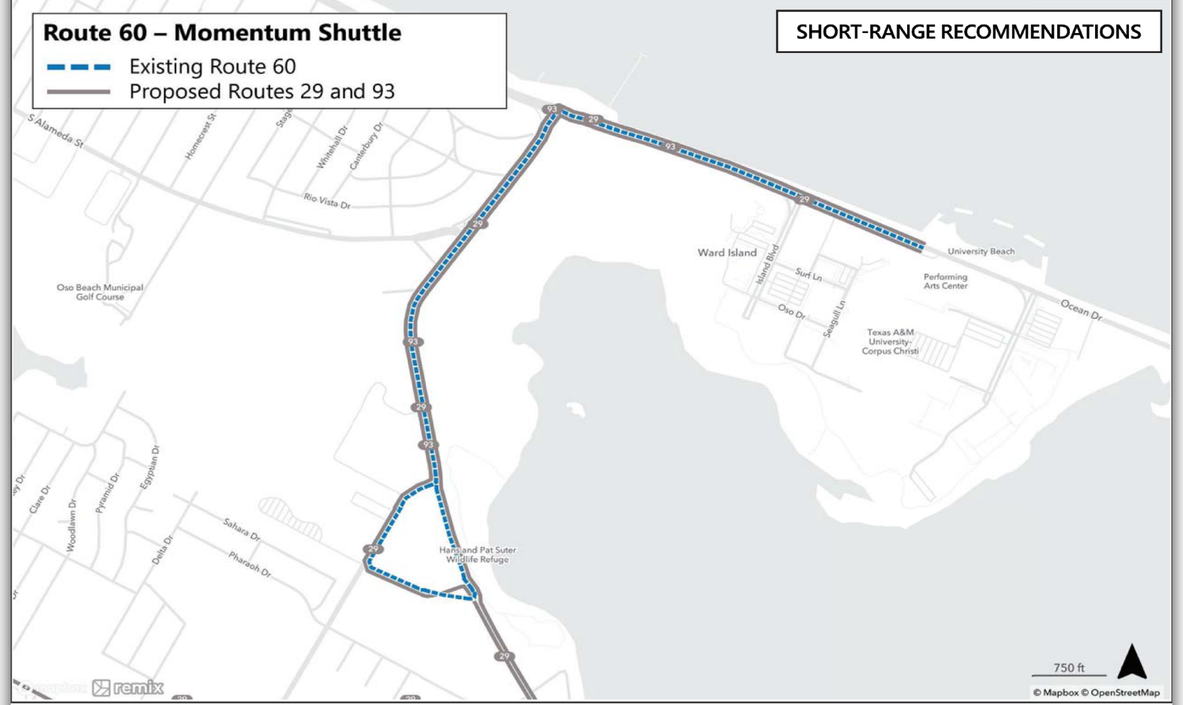
Frequency (How often it runs)

Residents in Calallen and Robstown would continue to have one morning trip to NAS and one afternoon trip from NAS.

	Day	All-day frequency	Hours of Service
Existing	Weekday	1 morning trip 1 afternoon trip	-
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**1 morning trip 1 afternoon trip**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 60
Momentum Shuttle

FLEET forward 2022
Enhancing the Rider Experience, Together.



Route Changes Overview

Route 60 would be discontinued and 15-minute, all-day service would be provided by Route 29.

Hours of Service (When it runs)

Discontinued.

Frequency (How often it runs)

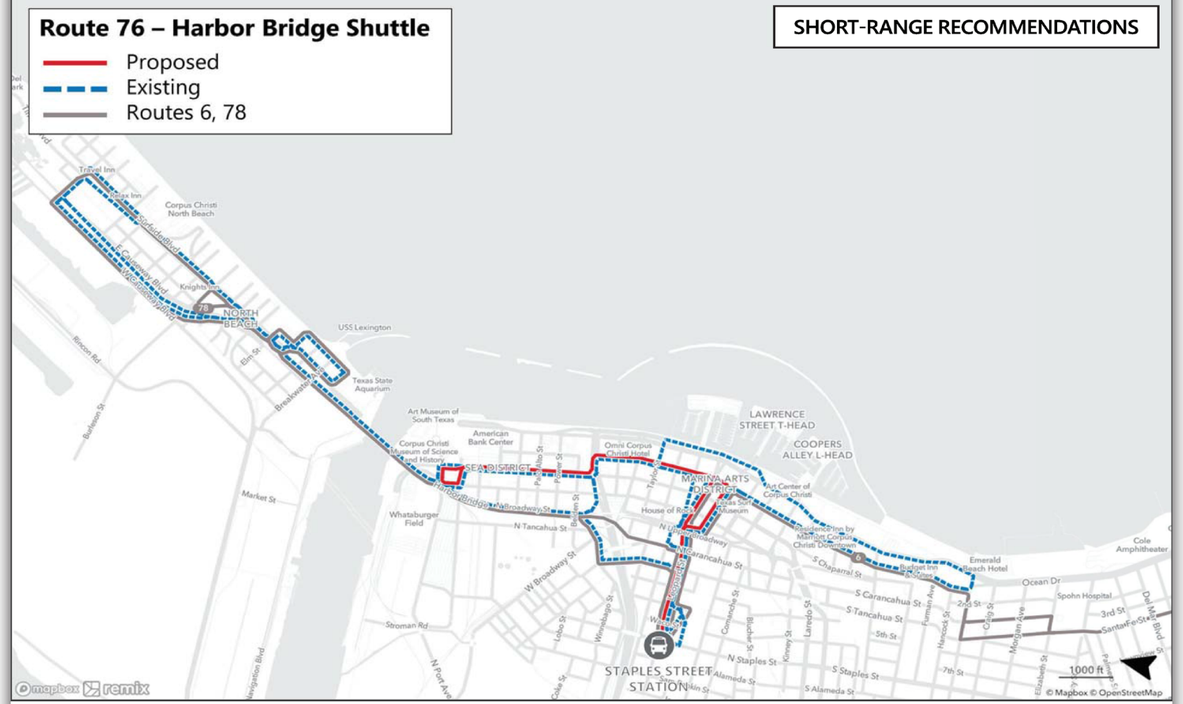
Discontinued.

	Day	All-day frequency	Hours of Service
Existing	Weekday	10	7:30 AM-7:17 PM
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**-**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 76
Downtown Corpus Christi

FLEET forward 2022
Enhancing the Rider Experience, Together.

SHORT-RANGE RECOMMENDATIONS



Coverage (where it goes)

Route 76 should be simplified to serve downtown Corpus Christi only with a direct, easy to understand alignment. Service to North Beach should be provided by Route 78. Route 76 should be interlined with Route 5 at Staples Street Station. Route 76's schedule should be coordinated with Route 6's schedule, so that between Water St and Staples Street Station, there is a bus every 30-minutes, meeting every timed connection.

Hours of Service (When it runs)

The schedules of Route 76 and Route 6 would be offset from Water Street to Staples Street Station to provide an effective 30-minute service corridor.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:20 AM-7:55 PM
	Saturday	60	8:00 AM-6:55 PM
	Sunday	60	8:00 AM-6:20 PM
Recommended	**Weekday**	**60**	**6:20 AM-7:55 PM**
	Saturday	**60**	**8:00 AM-6:55 PM**
	Sunday	**60**	**8:00 AM-6:20 PM**

Route 78
North Beach Shuttle

FLEET forward 2022
Enhancing the Rider Experience, Together.

SHORT-RANGE RECOMMENDATIONS



Coverage (where it goes)

Route 78 is indirect and has low ridership. Route 78 should be restructured to provide a direct, fast connection between North Beach and Staples Street Station, without serving downtown Corpus Christi. Removing the downtown segments also allows Route 78's alignment shift to the new Harbor Bridge access points once they are complete. Route 76 will continue to serve downtown Corpus Christi, as will a restructured Route 6. Route 78 should be interlined with Route 6.

Hours of Service (When it runs)

No changes.

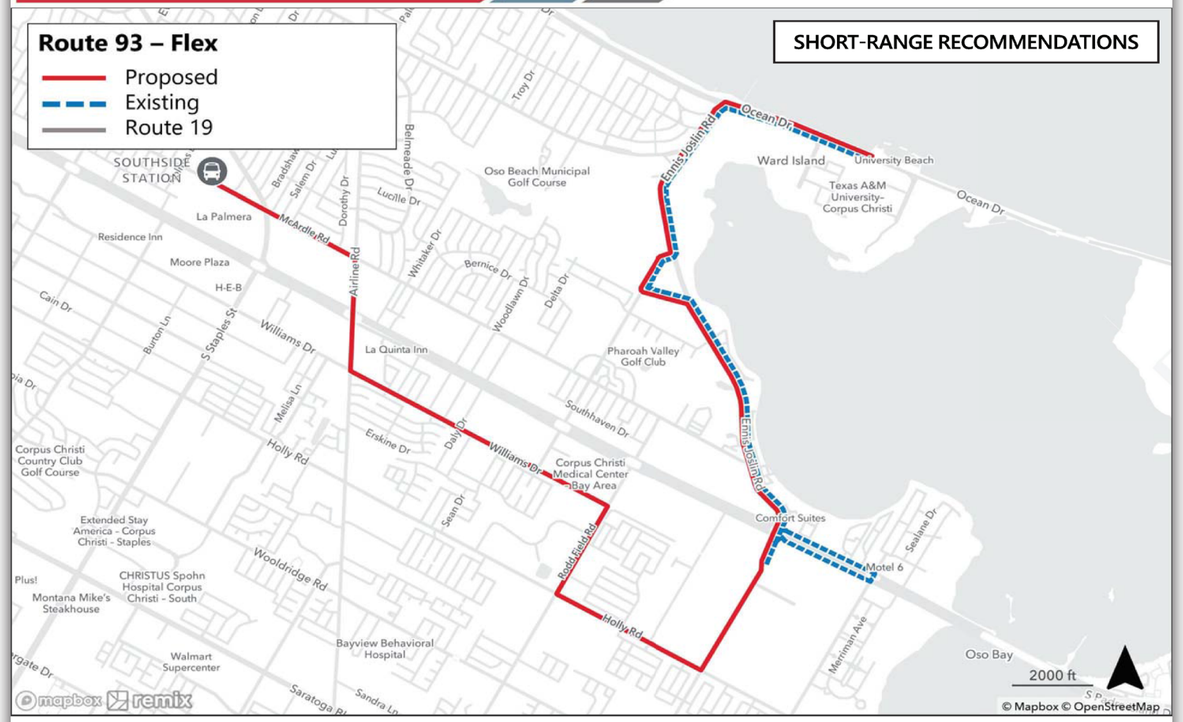
Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:50 AM-7:25 PM
	Saturday	60	6:50 AM-7:25 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**7:00 AM-7:30 PM**
	Saturday	**60**	**7:00 AM-7:30 PM**
	Sunday	**60**	**7:00 AM-7:30 PM**

Route 93
Flex

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 93 provides service between residential areas and TAMU-CC with a small bus. Ridership demand is increasing, and CCRTA needs to upgrade to a larger bus to meet demand. Few people are using the flex function as well. Route 93 should be converted to a regular bus line that connects TAMU-CC, Williams Drive, and Southside Station.

Hours of Service (When it runs)

No changes.

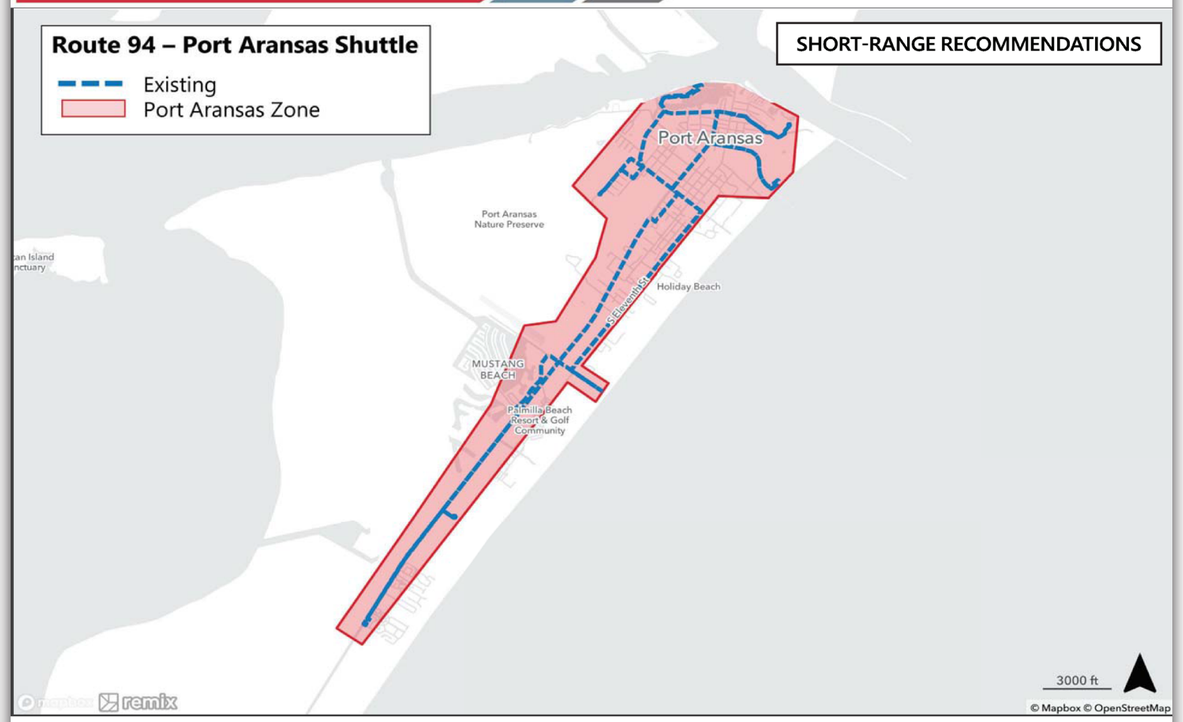
Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	7:35 AM-10:35 PM
	Saturday	30	9:35 AM-8:05 PM
	Sunday	-	-
Recommended	**Weekday**	**30**	**7:35 AM-10:35 PM**
	Saturday	**30**	**9:35 AM-8:05 PM**
	Sunday	**-**	**-**

Route 94
Port Aransas Shuttle

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

The existing route has extremely low ridership and a confusing, indirect alignment. Mobility in Port Aransas would be better served by transitioning this fixed-route service into a general public on-demand service, or flex route, where Route 94 takes patrons directly to their destinations on request.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

Changed to on-demand.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	10:00 AM-5:52 PM
	Saturday	60	10:00 AM-5:52 PM
	Sunday	60	10:00 AM-5:52 PM
Recommended	**Weekday**	**On Demand**	**-**
	Saturday	**On Demand**	**-**
	Sunday	**On Demand**	**-**

Phasing Short-Range Recommendations

Ideally, all short-range recommendations could occur concurrently to minimize impacts on customers. However, due to the on-going operator shortage and the need for approvals for new bus stops, it is likely that some short-term recommendations may be delayed.

One of the key elements of the Short-Range Recommended Network is the establishment of continuous service on Saratoga Blvd between Kostoryz Rd and Rodd Field Rd. This roadway currently has few, if any stops along the entire corridor. Permits for new stops must be obtained and constructed, which may not occur until 2024 or beyond.

CCRTA has several options. The first, being to implement the Short-Range Recommended Network at once, recognizing that stops are unavailable on new segments such as Saratoga Blvd and buses cannot stop on those segments. The second is to delay implementation of recommendations that require new stops until they can realistically be constructed.

If the option is to delay a portion of the recommendations, a two phase process should be followed that accommodates variable bus stop construction timelines.

Short-Range Implementation Phase 1 (2023)

Seventeen route recommendations may be implemented in 2023 without the potential need to construct new bus stops. They do not have any other supporting changes that are necessary. These routes can be the first of the Short-Range Recommended Network to be implemented.

- Route 3 NAS Shuttle – Shorten route and operate every 30 minutes
- Route 5 Alameda – Extend to downtown Corpus Christi
- Route 6 Santa Fe/Malls – Update downtown alignment
- Route 16 Morgan/Port – Shift schedule to hit Staples Street Station timed transfer
- Route 30 Westside/Health Clinic – Discontinue suspended route
- Route 34 Robstown North – Shorten route slightly (or use flexible stops)
- Route 35 Robstown South – Shorten route slightly (or use flexible stops)
- Route 50 Calallen/NAS – Consolidate with Route 53 and rename Route 56
- Route 51 Gregory/NAS – Serve select stops in downtown Corpus Christi and Staples St
- Route 53 Robstown/NAS – Consolidate with Route 50 and rename Route 56
- Route 54 Gregory/Downtown Express – Delete route due to low ridership

- Route 55 Gregory – Discontinue suspended service
- Route 56 Flour Bluff / Downtown Express – Discontinue suspended service
- Route 66 Crosstown Shuttle – Discontinue suspended service
- Route 76 Downtown Corpus Christi – Simplify route and only serve downtown
- Route 78 North Beach Shuttle – Simplify route and serve only North Beach
- Route 93 Flex – Extend to Southside Station

Short-Range Implementation Phase 2 (early 2024)

The Short-Range Recommended Network makes significant changes to Southside Corpus Christi routes by adding more routes, Saratoga Blvd service, and making service more direct. The recommendations in Southside Corpus Christi require multiple routes to be updated concurrently so that coverage is retained and connections are improved.

The second implementation phase can occur after all bus stops on Saratoga Blvd and other areas in Southside Corpus Christi are completed. The following route recommendations should be implemented concurrently.

- Route 15 Kostoryz – Restructure Southside service
- Route 17 Carroll/Southside – Restructure Southside service
- Route 19 Ayers – Simplify, remove branches, and extend all trips to Flour Bluff
- Route 23 Molina – Extend to Greenwood Walmart
- Route 24 Staples South – Extend to Southside Station and simplify alignment
- Route 25 Gollihar/Greenwood – Replace with Route 23 extension
- Route 26 Del Mar Oso Creek – Realign to directly serve Del Mar Oso Creek
- Route 28 Leopard/Port Ayers – New route on Navigation Blvd and Horne Rd
- Route 29 Staples – Extend to TAMU-CC and operate more frequently
- Route 32 Southside – Restructure Southside service
- Route 37 Crosstown/TAMU-CC – Replace with extended Route 19 and Route 29
- Route 60 Momentum Shuttle – Replace route with extended Route 29 service

5 LONG RANGE VISION

As a result of the COVID-19 pandemic, much like many of the transit agencies around the United States, CCRTA was forced to decrease levels of service to address ridership loss and labor shortages. The operator shortage in particular constrains short-term improvements. CCRTA has longer term needs that can guide future mobility. The long range system vision presented in this chapter include the following improvements:

- Operating later into the evening:
  - Until 10 p.m. on Weekdays and Saturdays for all routes
  - Until midnight on select routes on Weekdays and Saturdays
  - Operate Sunday service until 9 p.m.
  - On-demand service to supplement regular bus service in evenings
- More frequent service on weekdays and weekends
  - High frequency service (every 15-minutes seven days a week) and infrastructure to improve speed and reliability for service between Downtown, Southside Station, and TAMU-CC. This could be CCRTA's first Bus Rapid Transit Corridor
  - High frequency service (every 15 minutes, seven days a week) on:
    - Leopard Street between Navigation and Staples Street Station
    - Ayers Street between Port Ayers Station and Staples Street Station initially, with long-term goal of extending this to Flour Bluff
  - New route connecting Flour Bluff, Yorktown, and Southside Stations

However, a phased, prioritized service expansion is necessary to bring CCRTA's ridership back to where it was before the pandemic and to serve new markets. These will require funding service above today's service levels. Long-range recommendations include bringing back service that was cut during the pandemic, addressing the top requests heard from riders and non-riders during the community engagement process, and investing in proven ridership growth strategies, such as Bus Rapid Transit.

The Long Range Vision also includes capital improvements that improve the bus rider experience as well as speed and reliability, such as Transit Signal Priority for buses.

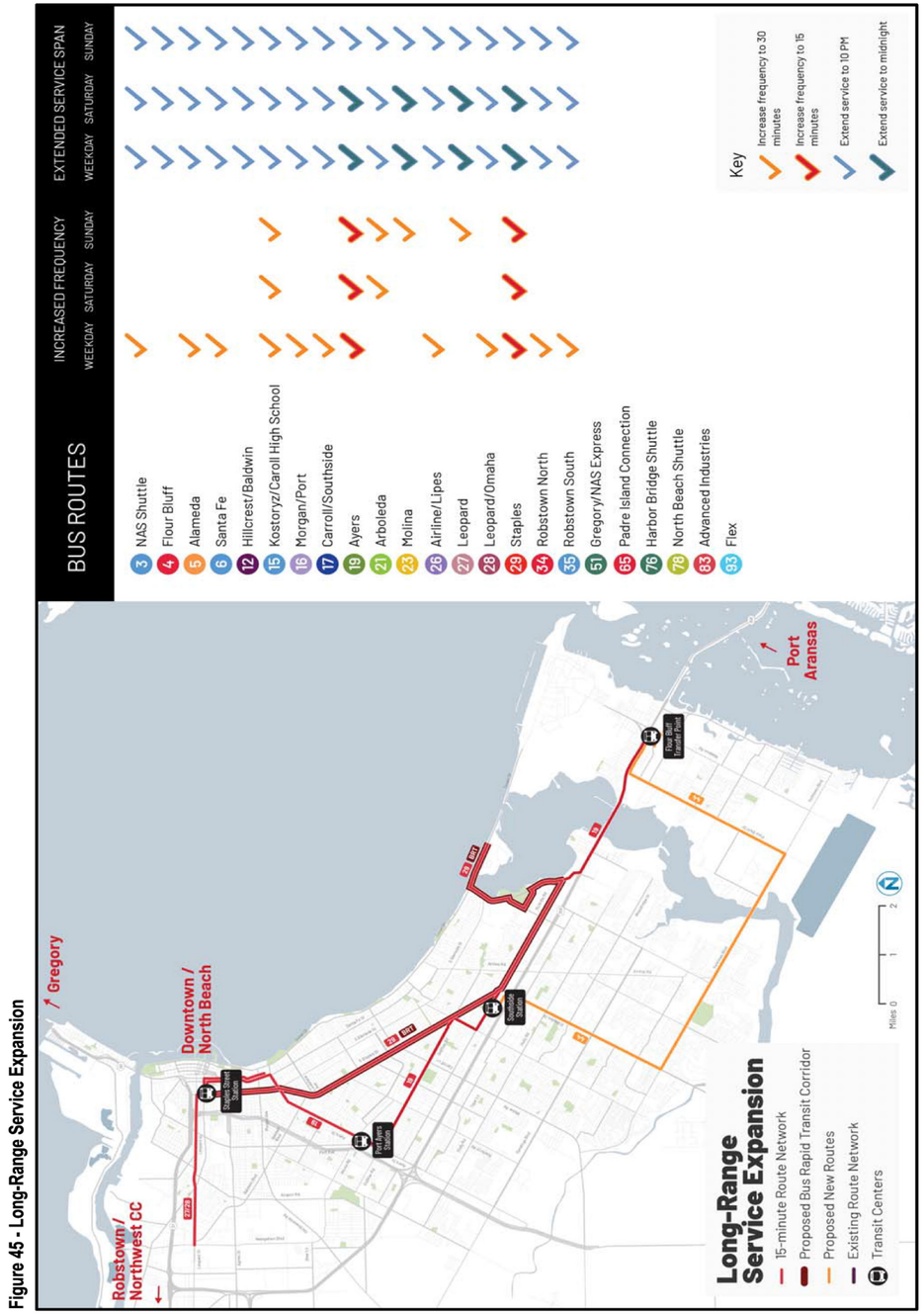


Figure 45 - Long-Range Service Expansion

This chapter provides a menu of long-range service improvements and recommendations for CCRTA's Long-Range Plan. Public sentiment and market trends both suggest that expansion of services in the region can help the region achieve its transportation and livability goals.

IMPROVE SPAN OF SERVICE INTO EVENING

Prior to the COVID-19 pandemic, CCRTA used to operate service until about midnight Mondays-Saturdays. Later evening service is critical for ensuring that service workers have a way to get home from work.

A phased approach is recommended to increasing CCRTA's span of transit service into the evening. By implementing span changes in stages, CCRTA will be able to gauge service interest while gaining experience to make further expansions more successful. Additionally, a phased approach will provide time to the agency as it aims to secure additional funding that would make service span expansion possible. The following implementation phases are recommended for improving span of service:

1. **Operate local routes until 10 p.m. on Weekdays and Saturdays**: This is the top priority, as evening ridership pre-pandemic was higher before 10 p.m. This will expand the number of potential riders, as they will have an opportunity to work later or take later shifts. Implementation is recommended to follow the following schedule:
    a. **Highest ridership routes**: start by increasing the span of service to 10 PM on the highest ridership routes.
    b. **Most remaining routes**: continue by implementing service until 10 PM in all remaining routes.
    c. **Saturday**: Increment span of service until 10 PM should then be implemented on Saturdays.

On-Demand Service Can Also Provide Evening Service

On-demand service may be used to supplement regular bus service in the evenings or replace implementing later fixed-route service. On-demand service can be less expensive and more flexible than big buses running on fixed-routes, and can require fewer operators

With on-demand service, a potential passenger would call for a ride and a small vehicle would come pick them up and take them to their destination. The ride would be shared with other passengers, and the fare would be identical to the existing fare structure.

2. **Operate until midnight on select routes on Weekdays**: Between 10 p.m. and midnight, demand is reduced, but on high-ridership corridors, demand is still present. This recommendation is for the highest ridership routes to operate until midnight. This includes Routes 5, 17, 19, 23, 24, 27, 29, 32, 76.
3. **Operate Sunday service until 9 p.m.**: Job access on Sundays would be enhanced by later evening service. Operating one hour later would allow more service jobs to be able to return home. This is a lower priority than weekday and Saturday service.

Specific span increase recommendations by route are shown in the figure below:

Figure 46 - Increased Span Table

Route	Weekday	Saturday	Sunday
3	6 PM		
4	10 PM	10 PM	
5	Midnight	10 PM	
6	10 PM	10 PM	
12	10 PM	10 PM	
15	10 PM	10 PM	
16	10 PM	10 PM	
17	Midnight	10 PM	
19	Midnight	10 PM	
21	10 PM	10 PM	
23	Midnight	10 PM	
24	Midnight	10 PM	
26	10 PM	10 PM	
27	Midnight	10 PM	
28	10 PM	8 PM	6 PM
29	Midnight	10 PM	
32	Midnight	10 PM	
34	10 PM	10 PM	
35	10 PM	10 PM	
37	10 PM	10 PM	
76	Midnight	10 PM	
78	10 PM	10 PM	

IMPROVE FREQUENCY OF SERVICE

Improving frequency means providing CCRTA service that comes more often. Market research has consistently showed that frequency is a key driver to if and how often potential riders use transit: more frequent service is more convenient, and therefore attracts and retains more riders.

Currently, several CCRTA routes operate with 1-hour frequencies all-day, reducing the attractiveness of the service. Most secondary routes operate hourly at some point, which will not attract many discretionary riders. Frequent service corridors provide service every 15-minutes all day on weekdays but are not as frequent on weekends. Improving frequency will improve service for existing riders and help attract new riders.

In Corpus Christi, with so many trips depending on transfers, frequency is important to keep existing riders, not just attract new riders. CCRTA should phase in improved frequency to improve customer access, and specific recommendations include the following:

- Operate local routes every 30-minutes on weekdays and Saturdays: Service every 30 minutes is a national baseline for service levels that could attract more riders. CCRTA should upgrade the frequency of its 60-minute frequency routes to every 30-minutes. This will improve accessibility and transfers at Port Ayers and Southside Stations. Saturday and Sunday frequency improvements could be implemented beyond the year 2031 because is a lower priority due to limited funding availability.
- Improve frequency to every 15-minutes for high ridership routes: Service every 15-minutes does not require passengers to consult a schedule and has been shown to improve ridership. CCRTA should upgrade three different corridors to 15-minute service, including:
  - Leopard Street between Staples Street Station and Navigation Boulevard
  - Ayers Street between Staples Street Station and Port Ayers Station
  - Staples Street Station - Staples Street - Southside Station – McArdle – Momentum Campus – TAMU-CC

Specific frequency recommendations by route are shown in Figure 47.

Figure 47 - Increased Frequency Table

Route	Weekday
3	30 mins
5	30 mins
15	30 mins
17	30 mins
19	15 mins on portion
24	30 mins
26	30 mins
29	15 mins
32	30 mins

BUS RAPID TRANSIT

Bus Rapid Transit (BRT) refers to enhanced bus service with features that help reduce dwell times at bus stops, bypass traffic congestion, and provide a more comfortable service for passengers. BRT is a popular way to provide service that is faster, more convenient, more comfortable, and more attractive than regular bus service, without the level of investment required by rail. Investments in high-quality bus transit can support economic development and lead to increased ridership. Common BRT features include the following elements:

- Transit signal priority (TSP) gives buses and trains earlier and/or longer green lights, allowing transit to bypass traffic. By changing signals to green early or extending green signals until the bus passes through, TSP can reduce signal delays by 10%.
- Unique BRT branding can bring attention to BRT buses, increasing public awareness of the service and boosting ridership. Strong branding also differentiates BRT vehicles from standard buses.
- Enhanced stops can include real-time arrival information, off-board fare payment, benches and shelters, and other elements that improve rider comfort and experience.
- Real-time arrival information involves outfitting stops with dynamic messaging signs. One study found that access to real-time arrival information decreased perceived wait times for riders.
- Off-board fare collection involves ticket vending machines located at a BRT stop, dispensing proof of purchase for riders to bring onboard. This

reduces dwell time and improves on time performance by minimizing bottlenecks with the onboarding process.

- Specialized vehicles outfitted with branded elements reinforce the unique identity of BRT service. BRT buses commonly have low floor boarding and wide doors, both of which lead to faster boarding and alighting.
- Dedicated running ways involve isolating transit from other traffic by creating bus-only lanes. Bus lanes can be shared with other uses, such as taxis, or curb lanes can be designated as bus lanes during peak hours.

CCRTA should develop a BRT line connecting Staples Street Station, Southside Station, and TAMU-CC, along Route 29 (see Figure 48 for BRT route map). This includes upgrading frequency to at least every 15-minutes throughout the day, seven days a week, upgrading stops along the corridor, and adding bus priority treatments at signals and roadways.

Figure 48 - Proposed BRT Route



SERVICE TO NEW AREAS

As observed on Figure 49, the long-range service plan includes a new route serving high growth areas in South Corpus Christi and Flour Bluff. The proposed Route 44 would connect Southside Station with Flour Bluff via Yorktown Boulevard. Route 44 would connect Flour Bluff to additional medical and commercial opportunities, accommodating future development in a growing part of the city.

Figure 49 - Proposed New Routes

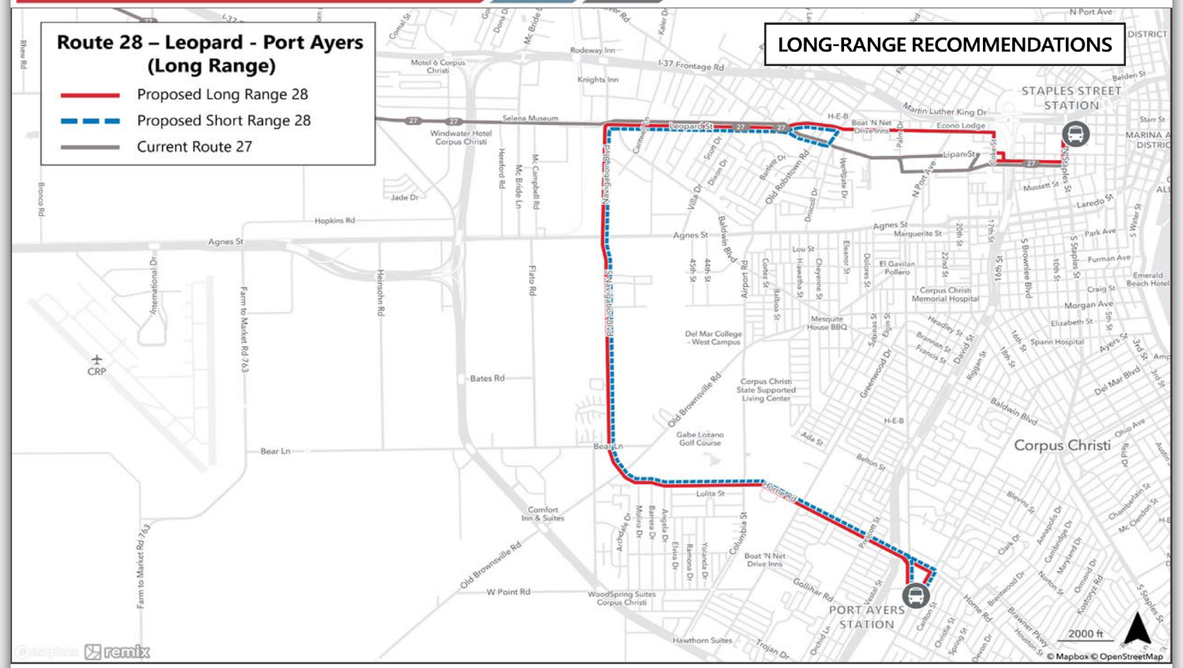


Route 44 would be initially launched with a limited schedule up to 7:00 PM every day, and posteriorly the span of service would be extended to 10:00 PM on weekdays, and 8:00 PM on Saturdays and Sundays.

Additionally, Route 28 would be extended to the Staples Street Station in downtown from its initial planned terminus on Leopard Street and Nueces Bay Blvd. This extension would provide additional service along Leopard Street, which would allow the operation of 15-minute service along the stretch of Leopard Street between Staples and Navigation Blvd. Route 28 service initially operate on Weekdays until 8:00 PM, but would be extended to 10:00 PM on weekdays, 8:00 PM on Saturdays, and 6 PM on Sundays.

Route 28
Leopard – Port Ayers Long Range

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

The long-range proposal for Route 28 would extend the route further down Leopard St to the end point of the existing Route 28 at Staples Street Station. This change would connect a food bank, new low-income housing along Navigation Blvd, and job sites with a grocery store and connections to regional service at Port Ayers and Staples Street Stations.

Hours of Service (When it runs)

Weekday service would be extended to 10:00 PM, while service on Saturday would operate from 6:00 AM to 8:00 PM and on Sunday from 6:00 AM to 6:00 PM.

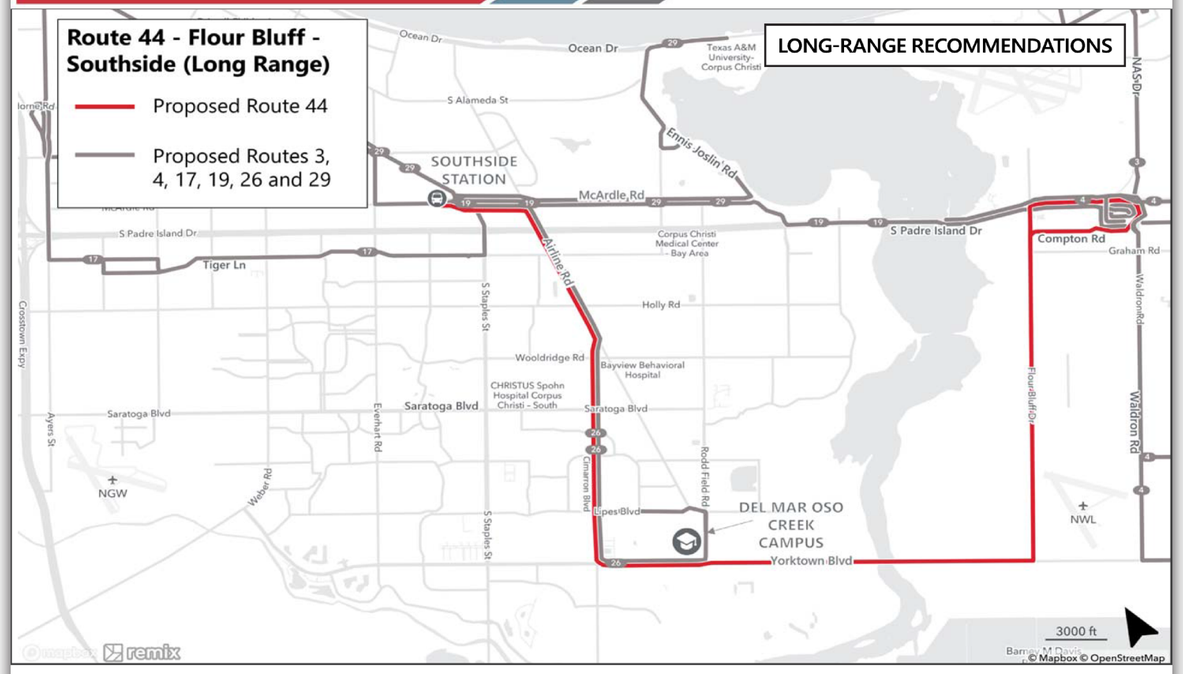
Frequency (How often it runs)

Frequency would be updated to operate every 60 minutes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	45	6:00 AM-6:38 PM
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:00 AM-10:00 PM**
	Saturday	**60**	**6:00 AM-8:00 PM**
	Sunday	**60**	**6:00 AM-6:00 PM**

Route 44
Flour Bluff-Southside

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

The long-range proposal for Route 44 would link Southside Station with Flour Bluff traveling along McArdle Rd to Airline Rd, then along Cimaron Blvd to Yorktown Blvd, Flour Bluff Dr, and finally looping around S Padre Island Dr, Waldron Rd, and Compton Rd in Flour Bluff. This route would connect Flour Bluff to additional medical, educational, and commercial opportunities, accommodating future development in a growing part of the city. The proposed Route 44 would also provide service to CCISD's new Elementary and Middle School.

Hours of Service (When it runs)

Weekday service would take place from 6:00 AM to 10:00 PM, and weekend service would be from 8:00 AM to 8:00 PM.

Frequency (How often it runs)

The route would operate every 60 minutes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	-	-
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:00 AM-10:00 PM**
	Saturday	**60**	**8:00 AM-8:00 PM**
	Sunday	**60**	**8:00 AM-8:00 PM**

INNOVATIVE SERVICE ZONES



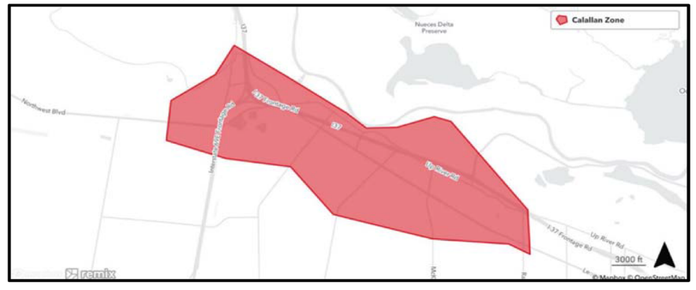
Innovative service zones, sometimes called flex zones, use online platforms to dynamically generate on-demand routes. They can be operated by the transit agency, third party operators, or private companies such as Lyft and Uber. The services can vary, and may include demand-response shuttles, seasonal or special event shuttles, or mobility software. Benefits of these innovative service zones include:

- **Maintain or enhance mobility** in low-density areas where existing residential and commercial population may not be sufficient to support traditional, fixed-route transit
- **Improve transit ridership and reduce drive-alone trips** by increasing mobility options and providing greater access to transit
- **Enhance travel options** during hours when transit service is limited, allowing shift workers and others reliable travel options outside of traditional working hours
- **Provide a first/last mile supplement** offers that can extend the reach of fixed route transit service, reducing overall trip time and complexity
- **Offer a lower per-trip cost than a low ridership fixed route**, while maintaining fare price

Proposed on-demand zones include the following:

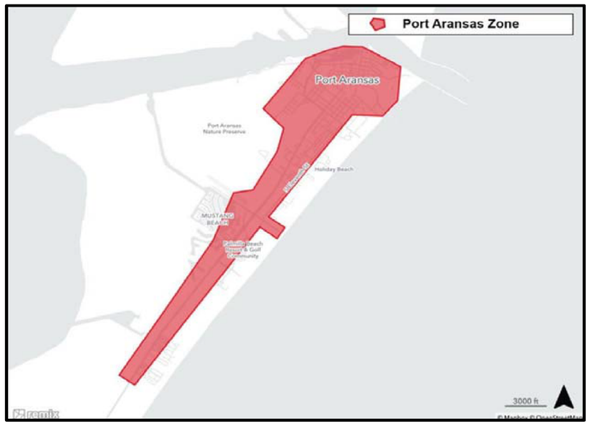
- **Calallen**: This zone will provide service to the northwest of CCRTAs service area.

Figure 50 - Proposed On-Demand Zone, Calallen



- **Port Aransas**: This zone provides circulation within Port Aransas, and it is recommended as a short-term improvement to CCRTA's transit network.

Figure 51 - Proposed On-Demand Zone, Port Aransas



- **Greenwood Dr / Ayers St / VA on West Point Rd**: Currently, both Greenwood Dr and Ayers St south of SPID are served by low-ridership fixed-route service. In addition, the VA has requested service to a new facility on W Point Rd that cannot effectively accommodate bigger buses. An on-demand zone could address some of these mobility challenges. Ridership, however, is likely to be very low.

MOBILE TICKETING



Ease of fare payment can be an important factor in someone choosing to use transit, as well as in a bus's ability to operate efficiently. Improved payment technologies can help speed up boarding, enable faster transfers, reduce dwell time, allow more types of fare structures, and reduce operating costs. Other sectors of the economy have already leveraged easier payment formats and transit needs to stay competitive with customer expectations for seamless, cashless payment. CCRTA has already implemented mobile ticketing.

Adopting a smartcard program would have several advantages for CCRTA and its costumers—these include faster boarding times, and an option for stored-value. Despite these benefits, adoption of a smartcard card presents numerous challenges. One significant challenge is the need for elaborate back-end systems to manage accounts and balances associated with smartcards to ensure a distribution network for loading/reloading. Farebox equipment may require retrofit or replacement to accept smartcard payments.

Technology has the ability to improve ease of payment, and several new technologies are emerging and gaining adoption, allowing transit agencies to move away from cash handling and providing more choices in how to operate fare collection. Mobile ticketing is a first step towards a transit fare collection system upgrade.

Open payment is considered the next stage in the evolution of fare media, as open payment systems allow riders to use a contactless bank card, agency-issued smartcard, prepaid debit cards (as alternatives to cash for unbanked riders), student or employer ID card, or mobile phone to pay for transit fares as well as rides from private mobility service providers. The underlying financial and technology infrastructure changes require major changes to fare collection infrastructure and cooperation between transit agencies and mobility service providers.

FLEET ELECTRIFICATION



The electrification of CCRTA's fleet provides an important opportunity to reduce operating costs, diesel exhaust pollution, as well as greenhouse gas emissions. The use of zero-emission vehicles by transit agencies across the nation has grown sharply in recent years, as new technologies are implemented, and environmental concerns take precedence. Two of the most popular electric buses include battery-electric buses (BEBs) and fuel cell-electric buses (FCEBs). The main difference between an FCEB and a BEB is that FCEBs generate power on board the vehicle using hydrogen and a fuel cell.

However, as with any new technology, there are pros and cons that must be balanced by CCRTA as fleet electrification takes place. Certain electric vehicles can have a lower lifetime cost of ownership than diesel buses as well as reduced emissions and low levels of noise pollution. However, the implementation of electric vehicles often requires additional charging infrastructure, and certain vehicle types currently have a more limited range than diesel vehicles. Further evaluating the costs and benefits of transitioning to an electric fleet is recommended, as well as identifying potential funding for the transition. A detailed analysis of options will clearly inform and provide clear strategies for introducing alternative fuel vehicles in CCRTA's fleet and indicate what routes they would most appropriately serve.

A Zero Emissions Bus (ZEB) Transition Plan will be completed in 2023 by the Center of Transportation and the Environment (CTE). The ZEB Transition Plan determined that following

CCRTA's current procurement baseline timeline, a transition to 100% zero emission buses would be completed by the year 2040.

CAPITAL PLAN



Enhanced passenger capital facilities at bus stops—shelters, benches, lighting etc.—improve the experience for passengers. During the public outreach process, improved stop amenities were mentioned as public priority. Better amenities improve the passenger experience and helps attract and retain riders.

Not all bus stops warrant the same level of investment. It is recommended that CCRTA implements a prioritization system based on hierarchy and ridership levels to continue enhancing bus stops with lighting, shelters, and benches. Priority investment should be given to higher-use stops. CCRTA should also conduct analysis to ensure equitable investments are made throughout the Corpus Christi region.

The 2023-2027 five-year Capital Investment Plan includes budget line items for both American Disabilities Act (ADA) bus stop improvements as well as shelter and amenities improvements. The table below outlines the budget allocation by year.

Figure 52 - ADA and Bus Stop Shelter Amenities Improvements Budget, 2023-2027

	2023	2024	2025	2026	2027
ADA	$500K	$500K	$500K	$500K	$500K
Bus Stop Shelter Amenities	$2.2 M	$1.1 M	$350K	$350K	$350K

As Corpus Christi continues to develop towards its southeast areas, and as improvements to the routes operating along Yorktown Boulevard are implemented, it is expected that a new ridership market would develop. With new routes serving the vicinity of the new Del Mar College Oso Creek Campus in Yorktown Blvd and Rodd Field Rd, CCRTA is constructing a new enhanced bus stop that would function as a transfer station or super stop. The enhanced stop near the new Del Mar Oso Creek would support more reliable operations for proposed routes 24, 26, 32, and 44, while improving the customer experience and solidifying a new customer base.

While most of the recommendations in the Long Range Vision focus on restoring span of service, some of the frequency improvements will require additional vehicles to operate. CCRTA can expect to need up to 13 in-service buses if frequency increases occur. For Route 19, the extra bus needs are only to operate every 15-minutes between Staples Street and Port Ayers Stations. An additional 3 buses would be required to operate 15-minute service to Flour Bluff – which is recommended for the post-2030 timeframe

Figure 53 -Anticipated Additional Bus Needs

Route	2023	2024	2025	2026	2027	2028	2029	2030
15								2
17							1	
19						2		
24/32							3	
26								1
28					2			
44						2		
Total					**2**	**4**	**4**	**3**

FERRY FEASIBILITY STUDY



The purpose of this document is to examine the potential for CCRTA to consider instituting ferry service on Corpus Christi Bay. At one time CCRTA ran a seasonal harbor ferry between the People's T-Head Pier and North Beach with a landing at the Texas State Aquarium. The route had varying levels of success and was last operated in 2015.

Understanding Market Potential

Several sets of existing data were used to help understand the overall travel market between Port Aransas and Corpus Christi.

Cell phone-based origin/destination data originally used for the Long Range System Plan (2022) was used as to understand travel market size. The data suggests that there were no substantial commuter markets (substantial enough to justify investing in a new mode) that could, over water, create a competitive travel market compared to the land-based options and where the market is large enough to sustain a ferry operation. As an editorial comment, ferries are substantially more expensive to operate than conventional land-based modes. A sustainable market must have both the size and a time competitive pathway to be a sustainable choice over the long term.

Ridership from the two current CCRTA routes that connect to communities surrounding Corpus Christi Bay were also examined. These included Route 95 which operates seasonally from Corpus Christi to Port Aransas and Ingleside, using the TXDOT ferry to cross Aransas Pass. This route carries an average of 4 persons per trip on a limited schedule. That low ridership suggests that the market is too small to support a commuter ferry based service.

A second route examined was route 65, operating from the Southside Transfer Station to Padre Island and Port Aransas. This route averages about six boardings per trip. However, the vast majority of route activity occurs in the vicinity of Aquarius Park at the south end of Padre Island. Transit traffic to Port Aransas is very light.

Existing origin-destination data and existing bus ridership both suggest that a ferry designed to capture a daily commuter market was unlikely to capture what might be considered a successful level of ridership.

An unrelated, but third step was to assess the potential of establishing a ferry dock in the vicinity of TAMU-CC to support ferry operations. The accessible shoreline of Ward Island is characterized by shallow water and wave conditions requiring construction of a breakwater and substantial dredging or a very long pier structure (which also must be protected). While these are conditions that are conquerable, they are also very expensive. Much of the passenger demand to and from TAMU-CC does not originate from water adjacent locations, so, at best, the market would be limited. As a long-range development this option might be worth further consideration, but the lack of an easy current location for a ferry landing and the cost to develop such a location makes this a less than ideal spot to further test the market for a ferry on Corpus Christi Bay.

Ferry Route Scenarios

These initial steps left the potential for examining the possibility of operating a ferry that is more designed for casual usage and tourism. In the start-up of a pilot or demonstration ferry service one of the most difficult tasks is to find feasible landing sites. Specifically, sites should be able to accommodate a passenger ferry without major capital investments such as dredging, long new piers, or breakwaters. Three such sites were identified:

- **People's T-Head Pier**. CCRTA has continued to lease space at the pier for the eventuality that a ferry operation might be restarted. This is pretty much a guaranteed location due to the longevity of the relationship with the City of Corpus Christi Marina.
- **Texas State Aquarium**. This was a landing site before and has not experienced substantial change since the days of the Harbor Ferry operation. While the feasibility of re-starting service to this location has not been explored with the Aquarium, it is a reasonable assumption that use of the docking facility could be made available once again.
- **Port Aransas**. There are multiple possible ferry docking locations in Port Aransas. This analysis did not investigate the feasibility of arriving at satisfactory arrangements to utilize any of those possibilities. The analysis only confirmed that there are existing facilities that might be available to support regular ferry operations.

From these three locations three possible operating scenarios were developed. The duration of each operation was assumed to be the same: three weeks during Spring Break then from the Friday of Memorial Day through the Monday of Labor Day. This was done just for the purposes of costing out various route alternatives. Options for the actual duration could be analyzed if CCRTA were to decide, based on the initial look, to go further into ferry operations.

- **Scenario 1 – Harbor Ferry**. Operates from Peoples T-Head Pier to Texas State Aquarium, one vessel, 1.5 nautical miles assume hourly service, 28 trips per day, about 15 minute crossing time.
- **Scenario 2 – Port Aransas**. Operates from Peoples T-Head Pier to Port Aransas, one vessel, 18.2 nautical miles, assume two hour service, 14 one way trips per day, about 50 minute crossing time.
- **Scenario 3 – The Triangle.** Operates between all three locations, evaluated with one vessel. 19.7 nautical miles, assume trips every 2.5 hours. 10 one way trips, about 60 minute crossing time, Corpus Christi to Port Aransas. Operating pattern would be Peoples T-Head Pier to North Beach to Port Aransas, return to North Beach, then to Peoples T-Head pier. This means the minimum wait to return via ferry between downtown and North Beach is 2.5 hours.
- **Scenario 3A – The Triangle, Doubled.** Operates between all three locations, evaluated with two vessels. 19.7 nautical miles, assume trips every hour from downtown to North Beach and every two hours to Port Aransas. A total of 42 trips, about 50 minute crossing time, Corpus Christi to Port Aransas, or 10 minutes Corpus Christi to North Beach. This is essentially operating scenario 1 and scenario 2 simultaneously, but requires two vessels.

Vessels

The assumption is that the vessel size is similar in all three scenarios, only the vessel speed would be different in scenario 1 versus scenarios 2 and 3. The assumed vessel would have a passenger capacity of about 100 people, would be fully accessible, including restrooms that are also accessible, and be capable of withstanding the sea states experienced on Corpus Christi Bay, which is why the vessel is intentionally sized larger than the demand suggests is necessary. Passenger comfort in rough seas is an important market attractiveness factor. Seasick tourists seldom ever write glowing reviews on Trip Advisor.

Due to the nature of this service, a single vessel operation is possible, but that would also mean the potential of suspending service in the case of a vessel malfunction or breakdown. In commuter operations, reliability is an important consideration, but it is less so in an operation where the primary users of the ferry are casual riders and tourists.

Vessel Capital Costs

There may be options available to charter a vessel, rather than build or acquire a vessel. For a service designed to operate only during the peak season, the annualized capital costs are comparable, depending on the suitable vessels being available for charter or acquisition. The upside of ownership is that CCRTA can build or acquire exactly the type of vessel desired and have assurance the vessel will always be ready for service when needed. The downside of direct ownership of the vessel is the non-use in the off-season. This often leads to more rapid deterioration of the vessel. Ownership also carries the risk that if the service is found to be less successful than desired and terminated, the owner, assuming that to be CCRTA, would be left with a decision to keep the vessel and maintain it as an asset or declare it surplus. Again, depending on the market, the salvage value of the vessel may be substantial or may present a significant financial loss to CCRTA in terms of asset value.

Acquisition of a used vessel is also possible and is far faster than building a vessel. However, finding the "right" vessel, already constructed could be challenging.

Vessel leasing or charter presents the potential for a "pay-as-you-go" option for the capital costs without the long-term obligation of storage and maintenance. But that direction will also limit options for the vessel as it is unlikely that a vessel purveyor would build a vessel to CCRTA's specifications. Equally, it is likely a vessel owners would want a longer-term charter that ensures recapture of their initial investment.

Whether build new, acquired used, or chartered, it is important to recognize there are federal statutes and regulations that must be observed. There would be no argument that the service is anything other than a passenger carrying vessel for hire. This creates the need for compliance with United Stated Coast Guard (USCG) regulations for passenger carrying vessels. The specific set of regulations is dependent on the size of the vessel, but the regulations are absolute, and vessel must be certified by the USCG as meeting the requirements then inspected and re-certified on a periodic basis, usually every two years. These regulations also specify the minimum crewing size and the US Merchant Marine documents that must be held by each staff position on the vessel. While staffing beyond the minimum is optional, the vessel may not carry passengers without at least the minimum crew on board the vessel.

The other regulatory issue that can have a significant influence on finding a suitable vessel is the direct influence and control of the Jones Act. This act was passed by Congress in the early

20th century to protect the US shipbuilding industry. It has remained almost unchanged for more than a century. In essence, the act requires that any passengers, or freight, transported on a vessel directly between two ports in US waters must be accomplished on a vessel that was built on US soil and must carry a US flag registry. Waiver of these requirements are very, very rare. This also becomes a limiting factor in looking at the charter or used vessel market as the act applies to any vessel engaged in transporting passengers between two US ports.

With some of those factors better understood, the capital cost of a vessel of roughly 100 passengers will vary based on its intended speed. The costs below are for new construction, but an amortized annual cost will end up being very similar between new construction, charter, or acquisition of an existing vessel.

100 passenger catamaran style – service speed 15 to 20 knots, Cost $5,000,000, annualized $250,000 per year, estimated charter (bareboat), $400,000 per year.

100 passenger catamaran style – service speed 25 to 30 knots, Cost $8,000,000, annualized $400,000 per year, estimated charter (bareboat), $600,000 per year

Operating costs

Assumes three weeks of Spring Break operation and full seasonal operation Memorial Day through Labor Day, a total of 126 days.

Figure 54 - Vessel Operating Costs by Scenario

Scenario	Daily trips	Fuel Cost (annual)	Crew & main. Cost (annual)	Vessel Cost (annual, amortized)	Total Cost (annual)
1. Peoples to North Beach	28	$220,000	$807,000	$250,000	$1,277,000
2. Peoples to Port Aransas	14	$340,000	$807,000	$400,000	$1,547,000
3. Peoples to North Beach to Port Aransas (I vessel)	10	$354,000	$807,000	$400,000	$1,561,000
3A. Peoples to North Beach to Port Aransas (2 vessels)	42	$660,000	$1,452,000	$800,000	$2,252,000

Ridership

Because these services are largely driven by tourism, ridership is difficult to predict. However, it is highly unlikely that revenues significant enough to cover major portions of the cost of operating these services are possible. For example, in Scenario 1, the total cost to operate is $1.277 million per year, with a total of 3,528 trips might be completed, at maximum,. Simple division suggests that each one way trip between the T-head Pier and North Beach would need to generate $362 in revenue to break even, with an assumed capacity of 99 people, that would be a fare of $3.62 per person. Not an unreasonable fare for a tourism-oriented service, but the probability of filling every seat on every trip is very low. More realistically, one might expect an average of 10 boardings per trip or annual ridership of 35,280. Even if the fare averaged $4.00 per one way trip, that generates about $140,000 per year, or about 11% of the cost of operating the vessel. That is probably more in the realm of expectation for fare recovery.

From a regional economy perspective, adding a ferry service, especially one that might make it possible for people to visit Corpus Christi and Port Aransas on a bay cruise might attract a few more people to the area, but it is unlikely to increase local visitation enough to offset the overall cost of the service. It is more likely that a service that easily joins the three waterfronts would spread out where people dine and shop, as opposed to remaining in Port Aransas or Corpus Christi for their entire visit. While this may prove to be beneficial from a regional economy perspective it is more of a re-distribution, as opposed to a net gain.

Recommendations

1. **Focus regionally**. Establishing an attractive ferry service on Corpus Christi Bay is physically feasible. Particularly, a service that connects the downtown waterfront to North Beach and to Port Aransas. Such a service would attract ridership if operated seasonally. The ride is short enough as to not be arduous and enough trips can be made in a day to create convenient connectivity for people wishing to be in one part of the bay or another for varying amounts of time. While the scenario of simply re-establishing the Harbor Ferry (scenario 1) was evaluated, it is not recommended this be the only service. The market is limited, the ride is very short, but the costs to run this service in the long run are relatively high with limited regional benefit.
2. **Ensure financial partnerships.** The longer routes connecting Corpus Christi to Port Aransas are more attractive from a tourism perspective. However, from a financial perspective they present a high cost compared to the regional benefit. An argument might be made that the attraction and connectivity through the bay would be worthwhile. While that is true, those making that argument in the affirmative also need to be challenged to support the concept financially. It is unreasonable to expect CCRTA to shoulder the on-going cost to operate a service as described above without much greater financial contributions from those places that believe it could be an asset to the regional economy. For example, the region's jurisdictions could voluntarily return to CCRTA a portion of the sales tax that is ostensibly a road use fee that is presently transferred from CCRTA to the jurisdictions. This return could be designed to last for a specific duration, with specific agreement on how the funds are to be used and outcome-based expectations for the duration of what would essentially be a pilot service. This could be a two to five year period, depending on the perspectives of the policymakers.
3. **Carefully define the "season."** While the costs above have been calculated to include operations during the "Spring Break" period, it is recommended the focus of a pilot be on the summer season, and possibly even a shorter summer season than what is costed above, for example July 1 through Labor Day. This will help dampen the costs of a pilot service and allow for cautious expansion if the pilot service meets expectations.
4. **Find an operating partner**. CCRTA is not a ferry operator. If a service such as this one were to be piloted, it is recommended CCRTA seek out, through a competitive procurement, a ferry operator to handle the set up and daily operations. The most difficult part of this arrangement would be ensuring the vessel offered for service is sufficient to the task and attractive in terms of passenger accommodations, passenger comfort (ride, HVAC, comfortable seating, etc.), and expedited travel times. For tourism-based operations it is recommended the voyage not be longer than an hour. To connect Corpus Christi with Port Aransas this requires a vessel that can carry a reasonable speed, like 25 knots.
5. **Start with a defined pilot.** If a decision is reached to move ahead and financial partnerships can be established to fund the service, run it as a pilot service for a least three seasons. Ensure funding is available to stretch through full duration. Establish expected outcomes in terms of cost, ridership, local support, rider satisfaction, and overall positive influence on the regional economy. Evaluate at the end of each season, apply lessons learned to the next season. If, after two seasons the service is proven to be successful by meeting the pilot service objectives, begin planning for longer term operations which may include additional capital costs for shoreside facilities and a new vessel(s) that is specifically designed for this service and that will enhance the rider experience.

6 FINANCIAL PLAN

Corpus Christi Regional Transportation Authority is currently funded through a combination of operating revenues, non-transportation revenues, local sources, and federal and state support. In 2022, CCRTA's estimated revenue was $55 million. For 2023, the agency estimated a 2.4% increase bringing its estimated revenue to $56.5 million.

LONG-RANGE FUNDING

As mentioned in Chapter 4, the short-term recommendations provide important benefits to the system and can be implemented with the resources currently available to CCRTA.

However, in order to fund continued service expansion beyond 2023, CCRTA can use a variety of funding strategies to build stable revenue sources for the future. However, an increment of ~5% per year in revenue hours provided has been projected and adopted by the board for CCRTA's 5-Year Financial Plan. For the purposes of this Long Range System Plan, the additional revenue service hours available per year will be the source for funding the long range recommendations.

Figure 55 - Revenue Hour Increment, 2023-2031+

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031+
Increment	4.7%	5%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	2.5%

IMPLEMENTATION SCHEDULE

The implementation schedule shown below is subject to change based upon any changes to the following factors:

- Operator training lead times
- Cash flow
- Planning/Operations staff availability for big service changes
- Bus stop improvements

The following table outlines a potential implementation schedule by year for service improvements in the Expanded Service Scenario.

Figure 56 - Recommended Service Improvement Implementation Schedule

Year	Recommendation
2023	**- Short-range recommendations not dependent on Southside bus stop improvements** (Includes routes: 3, 5, 16, 30, 34, 35, 50, 51, 53, 54, 55, 56, 66, 76, 78, and 93)
2024	**- Short-range recommendations with Southside bus stop improvements** (Includes routes: 15, 17, 19, 23, 24, 25, 26, 28, 29, 32, 37, and 60) **- Expand span on weekdays until 10 PM for highest ridership routes** (Includes routes: 17, 19, 21, 23, 24, 27, 29, 32)
2025	**- Expand span on weekdays until 10 PM for most remaining routes** (Includes routes: 4, 5, 12, 15, 16, 26, 28, 34, 35, 76) **- Expand span on weekdays until midnight and on Saturday until 10 PM** (Includes routes: 19, 27) **- Expand span on weekdays until 8 PM for Route 3**
2026	**- Expand span on weekdays until midnight and on Saturday until 10 PM** (Includes routes: 17, 23, 24, 29, 32) **- Expand span on weekdays until 10 PM** (Includes routes: 6, 78) **- Expand span on Saturday until 10 PM** (Includes routes: 4, 12, 15, 16, 21, 26, 34, 35)
2027	**- Expand span on weekdays until midnight and on Saturday until 10 PM** (Includes routes: 5, 76) **- Expand span on Saturday until 10 PM** (Includes routes: 6, 78) **- Extend Route 28 to Staples Street Station and improve frequency**
2028	**- Improve frequency to 15 minutes on Route 19 between Staples Street and Port Ayers Stations** **- Implement new Route 44 with service every day until 7:00 PM**
2029	**- Improve frequency to 30 minutes on Routes 17, 24, and 32** **- Implement Calallen Zone on weekdays**

Year	Recommendation
2030	- Improve frequency to 30 minutes on Routes 15 and 26 - Expand Route 44 span on weekdays until 10 PM and weekends to 8 PM - Expand span on weekdays & Saturday until 10 PM for the Calallen Zone

SERVICE SCENARIO COSTS DETAIL

The table below details the estimated operating service hours increased required to implement each of the long range recommendations included as part of this plan.

Figure 57 - Estimated Operating Service Hours Increase by Expanded Service Recommendation

Expanded Service Recommendation	Service Hours Increase
Span of Service Improvements	~41,000
Frequency Improvements	~30,000
Innovative Service Zones	~5,000
New Services	~9,000
Extension of Service to New Areas	~4,000

The following table provides a detailed forecast for 2023 through 2030 of the operating hours required for implementing long range improvements according to the implementation schedule shown in the previous section.

Figure 58 - Operating Hour Requirements for Proposed Long-Range Improvements

	Route	2022 (Current)	2023 Proposed	2024 Increase	2024 Proposed	2025 Increase	2025 Proposed	2026 Increase	2026 Proposed	2027 Increase	2027 Proposed	2028 Increase	2028 Proposed	2029 Increase	2029 Proposed	2030 Increase	2030 Proposed
	Service Hours																
3	NAS Shuttle	3,447	3,188	-	3,188	-	3,188	-	3,188	-	3,188	-	3,188	-	3,188	-	3,188
4	Flour Bluff	6,845	6,845	-	6,845	510	7,355	104	7,459	-	7,459	-	7,459	-	7,459	-	7,459
5	Alameda	5,584	7,813	-	7,813	714	8,527	-	8,527	982	9,510	-	9,510	-	9,510	-	9,510
6	Santa Fee/Malls	5,508	6,278	-	6,278	-	6,278	510	6,788	104	6,892	-	6,892	-	6,892	-	6,892
12	Hillcrest/Baldwin	6,489	6,489	-	6,489	510	6,999	104	7,103	-	7,103	-	7,103	-	7,103	-	7,103
15	Kostoryz - Southside	2,529	9,743	-	9,743	1,020	10,763	312	11,075	-	11,075	-	11,075	-	11,075	7,497	18,571
16	Morgan/Port	4,828	4,828	-	4,828	510	5,338	104	5,442	-	5,442	-	5,442	-	5,442	-	5,442
17	Carroll/Southside	9,353	4,871	446	5,318	-	5,318	614	5,932	-	5,932	-	5,932	4,163	10,094	-	10,094
19	Ayers	19,057	24,356	2,231	26,588	3,070	29,658	-	29,658		29,658	6,120	35,778	-	35,778	-	35,778
21	Arboleda	7,437	7,437	510	7,947	-	7,947	104	8,051	-	8,051	-	8,051	-	8,051	-	8,051
23	Molina	13,926	18,690	1,785	20,475	-	20,475	2,456	22,931	-	22,931	-	22,931	-	22,931	-	22,931
24	Staples South	3,794	3,510	223	3,733	-	3,733	482	4,215	-	4,215	-	4,215	1,913	6,128	-	6,128
25	Gollihar/Greenwood	2,096	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	Del Mar Oso Creek	6,020	4,871	-	4,871	510	5,381	104	5,485	-	5,485	-	5,485	-	5,485	4,055	9,541
27	Leopard	22,620	22,620	2,550	25,170	3,070	28,240	-	28,240	-	28,240	-	28,240	-	28,240	-	28,240
28	Leopard/Port Ayers	3,209	3,634	-	3,634	510	4,144	4,298	38,429	9,924	14,068	-	14,068	-	14,068	-	14,068
29	Staples	27,564	32,346	1,785	34,131	-	34,131	1,446	12,645	-	38,429	-	38,429	5,738	38,429	-	38,429
32	Southside	8,167	10,530	669	11,199	-	11,199	307	2,704	-	12,645	-	12,645	-	18,383	-	18,383
34	Robstown North	2,142	2,142	-	2,142	255	2,397	307	2,704	-	2,704	-	2,704	-	2,704	-	2,704
35	Robstown South	2,117	2,117	-	2,117	255	2,372	307	2,679	-	2,679	-	2,679	-	2,679	-	2,679
37	Crosstown	9,305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	Flour Bluff-Southside	-	-	-	-	-	-	-	-	-	-	9,050	9,050	-	9,050	1,750	10,800
50	Calallen/NAS Express	423	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	Gregory/NAS Express	423	508	-	508	-	508	-	508	-	508	-	508	-	508	-	508

	Route	2022 (Current)	2023 Proposed	2024 Increase	2024 Proposed	2025 Increase	2025 Proposed	2026 Increase	2026 Proposed	2027 Increase	2027 Proposed	2028 Increase	2028 Proposed	2029 Increase	2029 Proposed	2030 Increase	2030 Proposed
		Service Hours															
53	Robstown/NAS Express	529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	Gregory/Downtown Express	804	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	Calallen/Robstown/NAS Express	-	533	-	533	-	533	-	533	-	533	-	533	-	533	-	533
60	Momentum Campus	2,435	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	Padre Island Connection	3,718	3,718	-	3,718	-	3,718	-	3,718	-	3,718	-	3,718	-	3,718	-	3,718
76	Downtown Corpus Christi	4,018	2,604	-	2,604	179	2,783	-	2,783	246	3,028	-	3,028	-	3,028	-	3,028
78	North Beach Shuttle	3,249	2,093	-	2,093	-	2,093	510	2,603	104	2,707	-	2,707	-	2,707	-	2,707
83	Advance Industries	275	275	-	275	-	275	-	275	-	275	-	275	-	275	-	275
93	FLEX	4,356	7,931	-	7,931	-	7,931	-	7,931	-	7,931	-	7,931	-	7,931	-	7,931
94	Port Aransas Shuttle	2,856	2,856	-	2,856	-	2,856	-	2,856	-	2,856	-	2,856	-	2,856	-	2,856
CZ	Calallen On-Demand Zone	-	-	-	-	-	-	-	-	-	-	-	-	3,570	3,570	1,876	5,446
	Additional Service Hours			10,200		11,113		11,414		11,360		15,170		15,383		14,958	
	Total	195,121	202,825		213,025		224,138		235,551		246,912		262,082		277,464		292,462

7 APPENDICES

APPENDIX A – TIMED TRANSFER SCENARIO

The Timed Transfer Scenario was designed to improve the ease of transferring and reduce wait times for transfers between routes. Transfers are common on CCRTA's system, with over 40% of rides involving one transfer and nearly one-third of all riders involving two or more transfers. While timed transfers are mostly available at Staples Street Station, transfers can be inconvenient at Port Ayers Station, Southside Station, and in Flour Bluff as transfers at these locations are generally not timed. When service operates hourly, riders are often subject to long wait times between rides. Difficult transfers and long wait times do not only pose challenges for existing riders; they may also discourage potential riders from using the system.

The Timed Transfer Scenario was designed to be able to be implemented within CCRTA's existing budget.

This Scenario would improve connections at all four major transfer points: Staples Street Station, Port Ayers Station, Southside Station, and Flour Bluff. Where possible, anchor destinations or transfer points were added at route termini to provide additional transfer opportunities and improve ridership.

Another key proposal was to increase frequencies along routes that currently have 45- or 40-minute headways: consistently running routes with "clock-faced" headways, or those that run every hour or half hour, improve the ease of transfers, and reduce overall wait times.

Key Benefits of Improved Connections Scenario:

- Improve connections and reduce waiting at all four major transfer points
  - ◊ Staples Street Station
  - ◊ Port Ayers Station
  - ◊ Southside Station
  - ◊ Flour Bluff

- Many routes now have destinations or transfer opportunities at both route ends, which should improve ridership
- More frequent service on key routes will improve connections and convenience

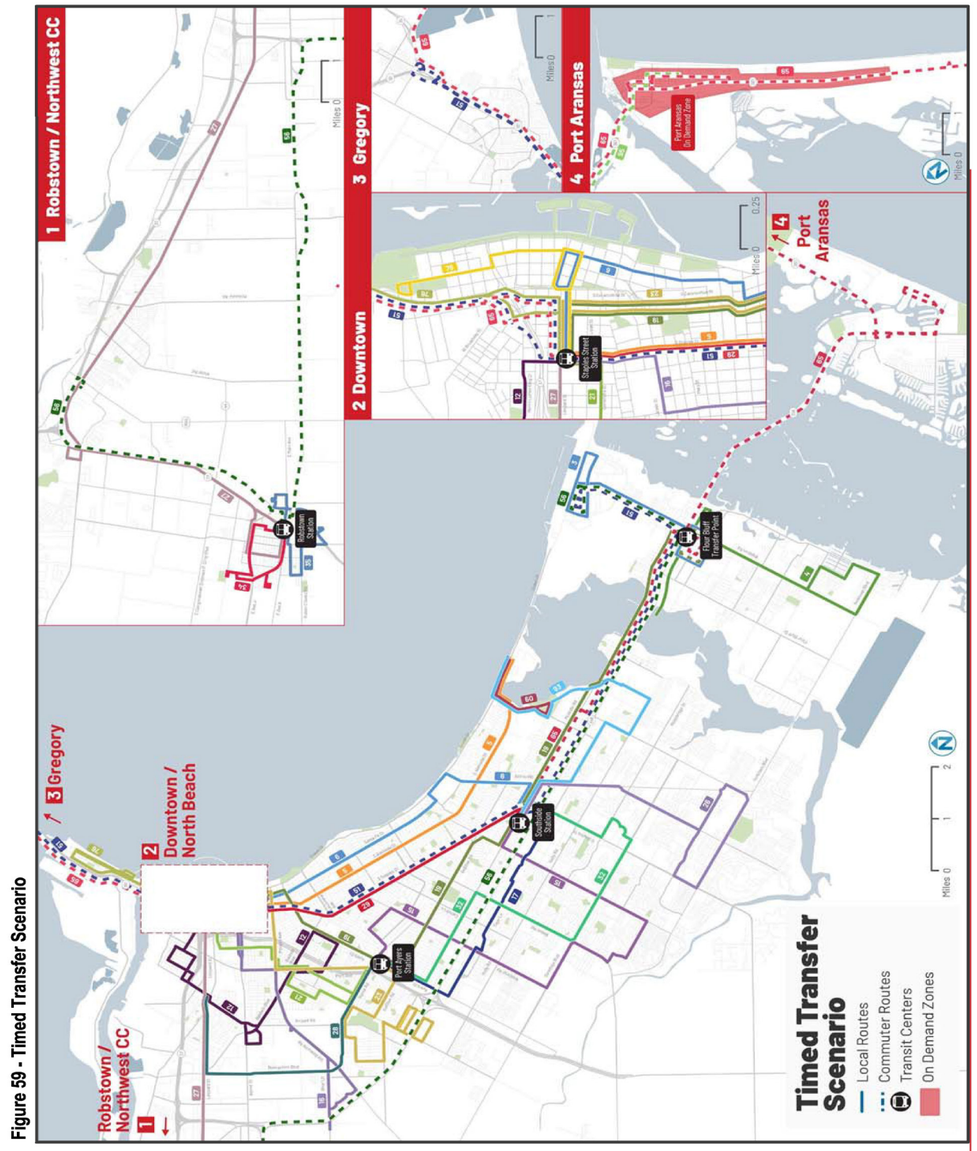
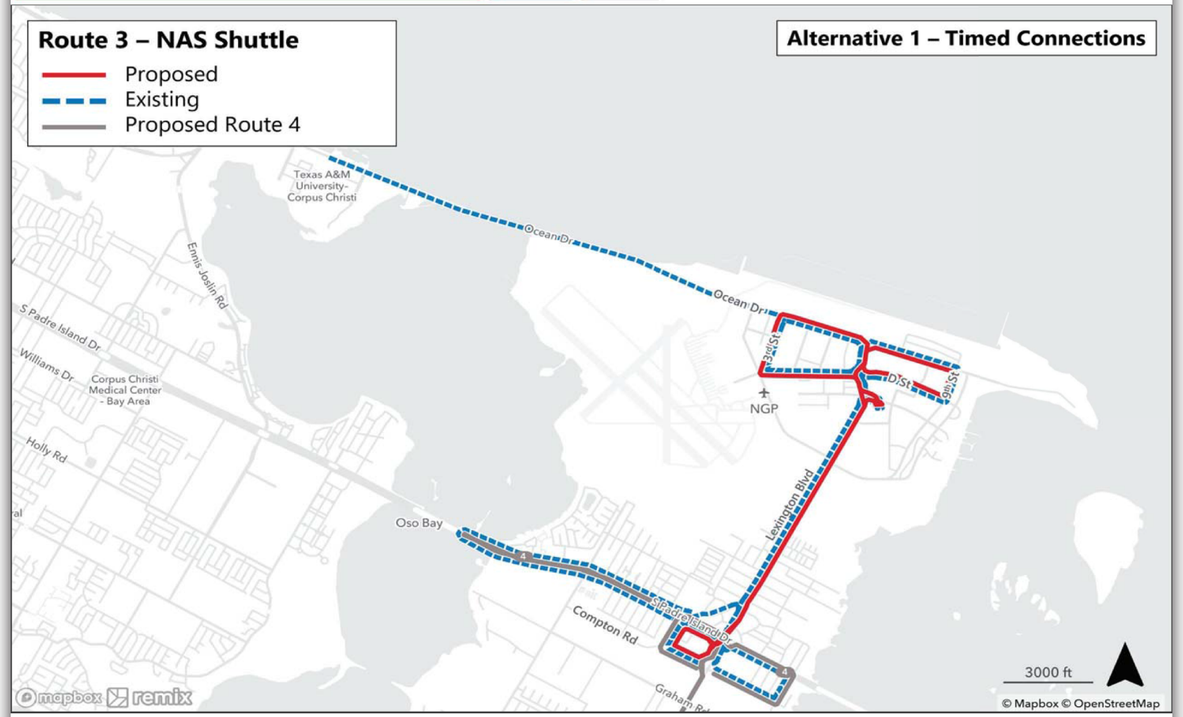


Figure 59 - Timed Transfer Scenario

Route 3
NAS Shuttle

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 3 should be shortened so that it can be operated every 30 minutes between Waldron/Compton and the Naval Air Station. Route 3 would only operate on NAS Dr and Waldron Rd and no longer serve the SPID frontage roads.

Due to low ridership, the Route 3 variant to TAMU-CC would be discontinued. Existing patrons wishing to travel form Corpus Christi to NAS would need to use a revised Route 51.

Hours of Service (When it runs)

No changes during the weekdays. Service on Saturday would be discontinued due to low ridership.

Frequency (How often it runs)

To facilitate connections with Route 4 and service to Corpus Christi, frequency would be improved to operate every 30 minutes. A timed transfer would happen at Waldron/Compton.

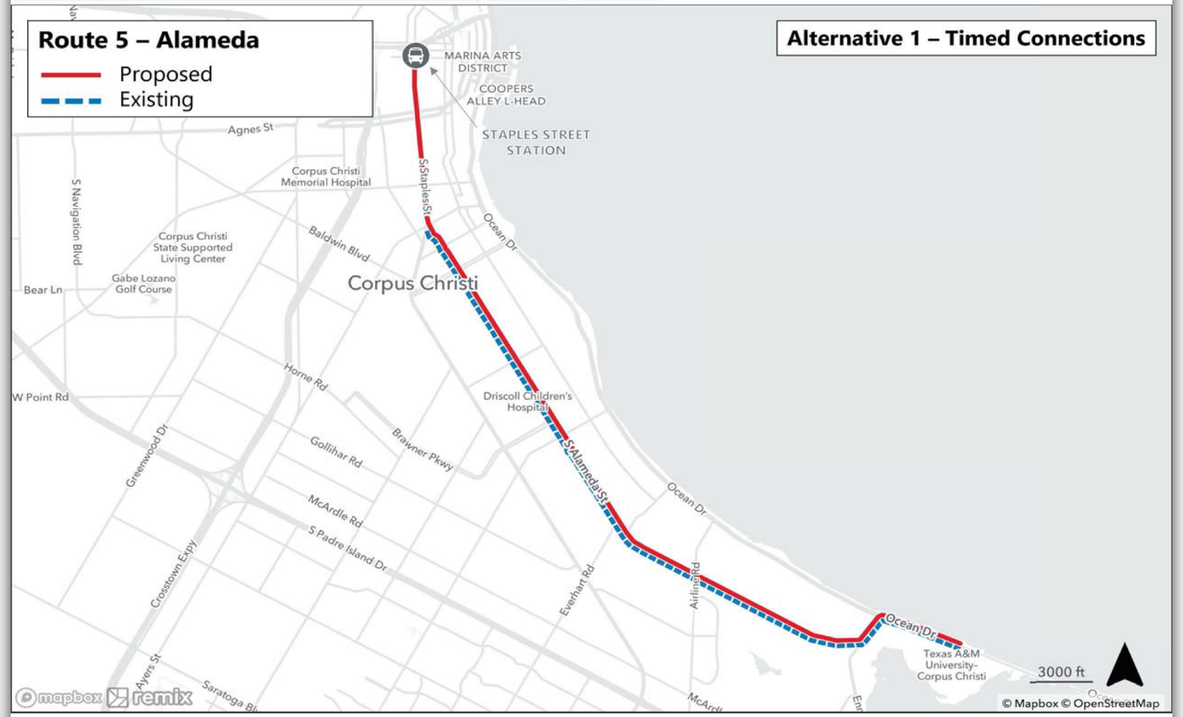
Service on Saturday would be discontinued due to low ridership.

	Day	All-day frequency	Hours of Service
Existing	Weekday	45	5:10 AM-5:05 PM
	Saturday	45	5:10 AM-5:05 PM
	Sunday	-	-
Recommended	**Weekday**	**30**	**5:10 AM-5:05 PM**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 5
Alameda

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

To provide service and connections to Downtown, Route 5 would be extended to Staples Street Station via Staples Street. At Staples Street Station, Route 5 would be interlined with Route 76 to provide a one-seat ride between TAMU-CC and Downtown. This addresses a top request heard during stakeholder outreach.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

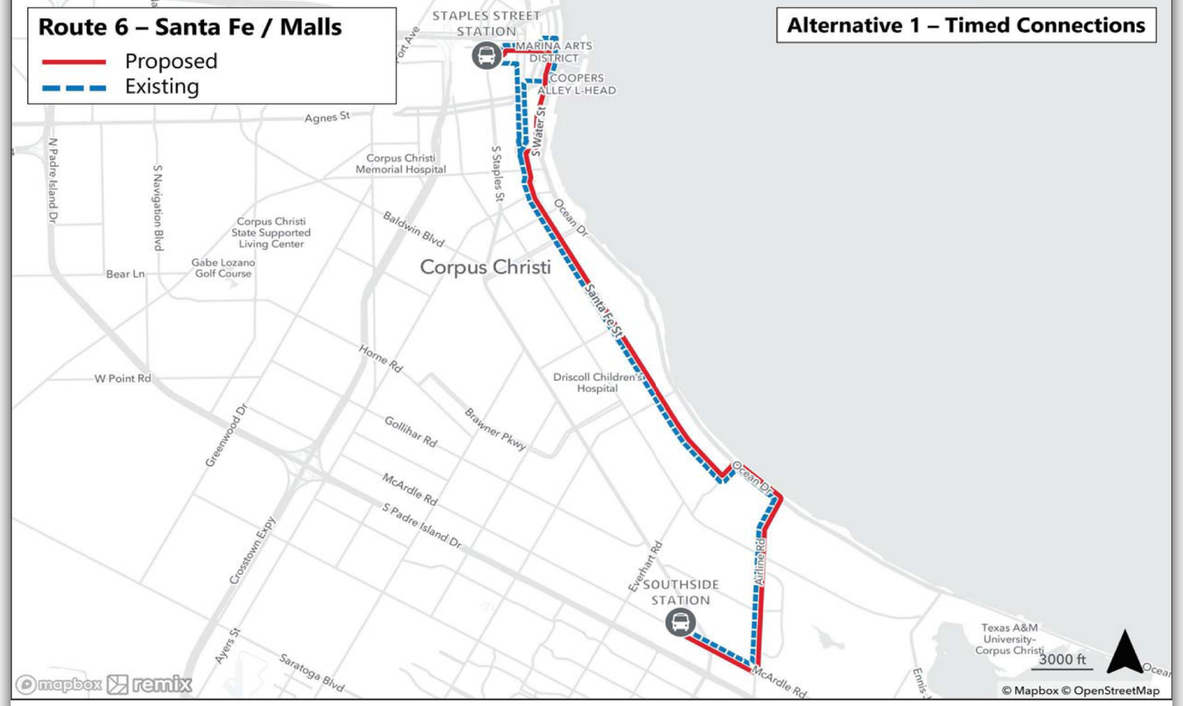
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	4:50 AM-8:13 PM
	Saturday	60	8:15 AM-8:13 PM
	Sunday	60	8:15 AM-8:13 PM
Recommended	**Weekday**	**60**	**4:50 AM-8:13 PM**
	Saturday	**60**	**8:15 AM-8:13 PM**
	Sunday	**60**	**8:15 AM-8:13 PM**

Route 6
Santa Fe/Malls

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 6 currently only serves downtown Corpus Christi in the northbound direction. Route 6 should be revised to serve Downtown via Water St in both north- and southbound directions.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

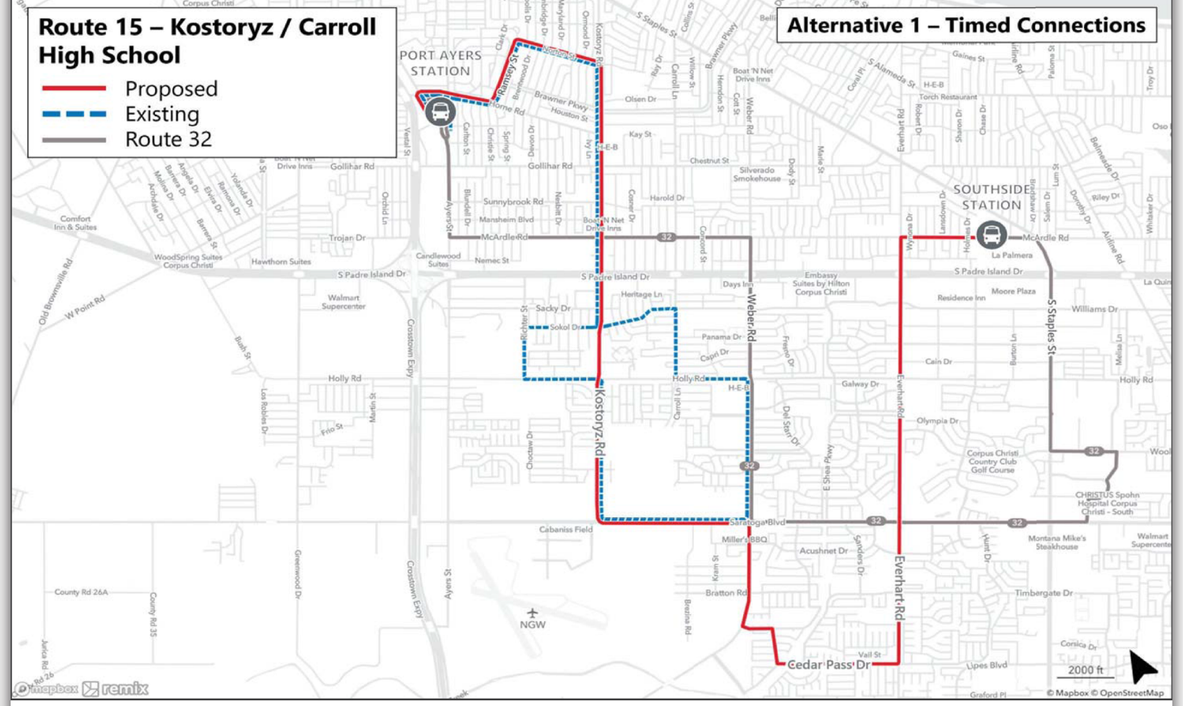
No changes. The Route 6 schedule would be adjusted to ensure it has timed connections at Staples Street Station.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:05 AM-7:45 PM
	Saturday	60	6:05 AM-7:45 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:05 AM-7:45 PM**
	Saturday	**60**	**6:05 AM-7:45 PM**
	Sunday	**-**	**-**

Route 15
Kostoryz/Carroll High School

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Proposed Route 15 will combine elements of existing Route 15 (Kostoryz Rd) and existing Route 32 (Everhart Rd) to connect Southside Station with Port Ayers Station. The proposed route will serve the highest ridership areas and improve coverage with bi-directional service. A section of Weber Rd would no longer be served by Route 15, which would now be covered by the Proposed Route 32.

Hours of Service (When it runs)

Recommended route would operate seven days a week.

Frequency (How often it runs)

To improve transfer opportunities at both Stations, frequency would be improved to operate every 60 minutes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	90	6:30 AM-7:55 PM
	Saturday	90	8:00 AM-7:10 PM
	Sunday	90	8:00 AM-7:10 PM
Recommended	**Weekday**	**60**	**6:30 AM-7:55 PM**
	Saturday	**60**	**8:00 AM-7:10 PM**
	Sunday	**60**	**8:00 AM-7:10 PM**

Route 16
Morgan/Port

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.

Route Changes Overview

No changes.

Hours of Service (When it runs)

The schedule would adjust to start/end at Staples Street Station on the hour (i.e., 9:00, 10:00, 11:00, etc.) to improve transfers.

Frequency (How often it runs)

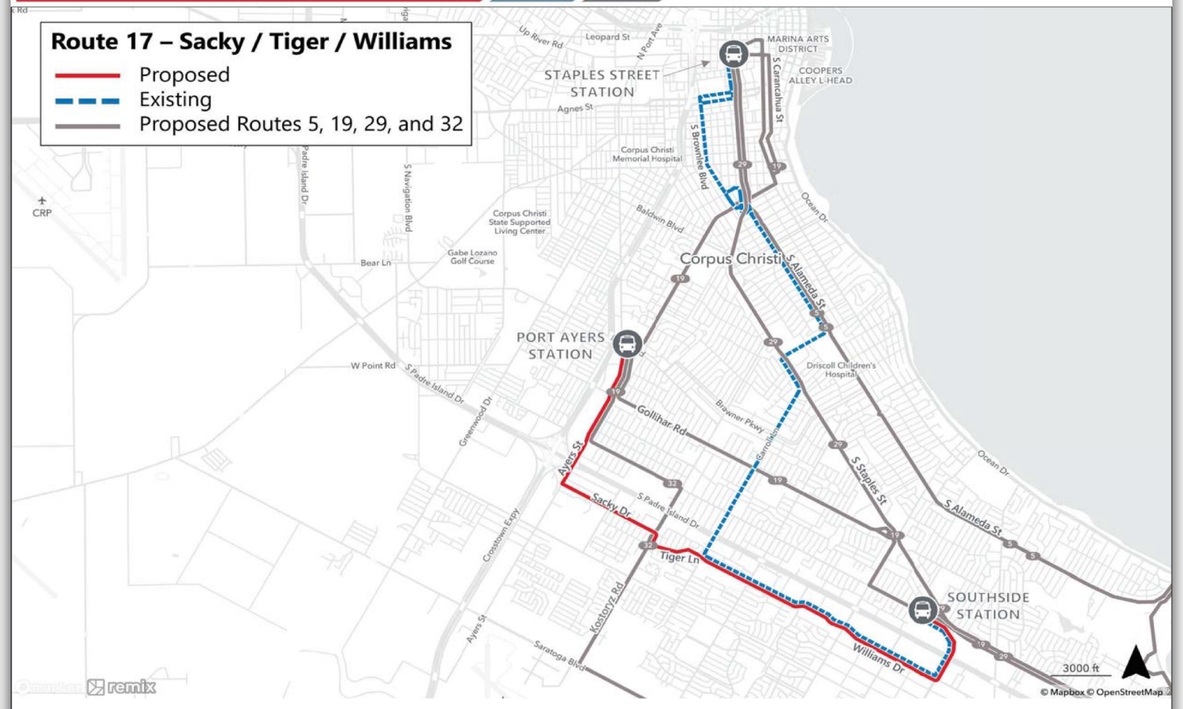
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	6:15 AM-8:10 PM
	Saturday	60	7:45 AM-7:37 PM
	Sunday	60	7:45 AM-7:37 PM
Recommended	**Weekday**	**30**	**6:00 AM-7:55 PM**
	Saturday	**60**	**8:00 AM-7:52 PM**
	Sunday	**60**	**8:00 AM-7:52 PM**

Route 17
Carroll / Southside

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 17 is a lower-ridership route that duplicates multiple routes. In order to reduce duplication and better serve the areas south of SPID, Route 17 should be restructured to operate between Port Ayers and Southside Stations. Patrons wishing to travel to Staples Street Station could continue to do so with transfers to Routes 19 or 29. Service along Carroll Ln would be discontinued due to low ridership. Riders on Carroll Ln would need to walk to either McArdle Rd (Route 32), Gollihar Rd (Route 19), or Staples St (Route 29).

Hours of Service (When it runs)

Hours of service will be seven days a week.

Frequency (How often it runs)

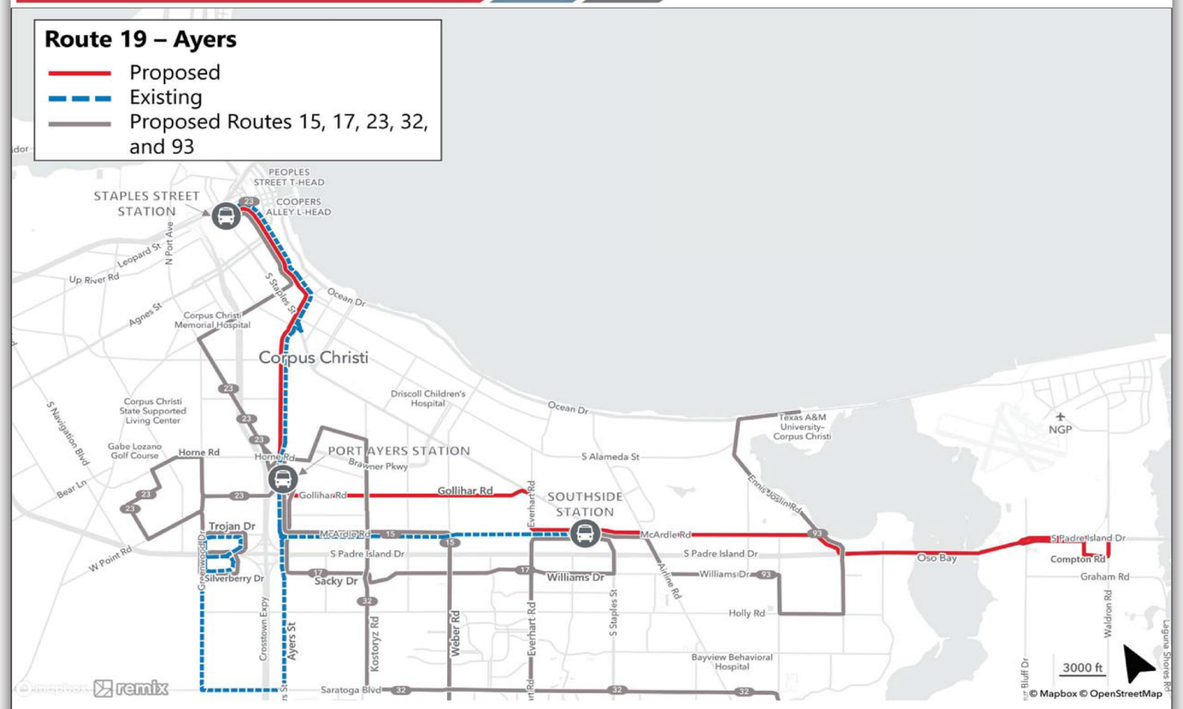
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	7:00 AM-7:50 PM
	Saturday	60	8:00 AM-7:50 PM
	Sunday	60	8:00 AM-7:50 PM
Recommended	**Weekday**	**60**	**7:00 AM-7:50 PM**
	Saturday	**60**	**8:00 AM-7:50 PM**
	Sunday	**60**	**8:00 AM-7:50 PM**

Route 19
Ayers

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 19 has two different branches that are of differing lengths. Passengers are often confused by branches and on-time performance on the shared segment between Port Ayers and Staples Street Station suffers.

Route 19 should be adjusted to better serve the biggest destinations along the north side of SPID. A revised Route 19 should connect Staples Street Station, Port Ayers Station, Southside Station, and Flour Bluff with consistent all-day 30-minute service.

A consistent 30-minute frequency would facilitate transfers at all Stations, including Flour Bluff, and tie together one of the bigger regional travel markets.

The revised Route 17 would continue to serve most stops on Ayers St, and Route 23 would provide service to the Greenwood Walmart. The proposed Route 32 would continue to serve most stops on McArdle Road between Ayers St and Southside Station.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	5:50 AM-8:17 PM
	Saturday	30	7:50 AM-8:17 PM
	Sunday	30	7:50 AM-8:17 PM
Recommended	**Weekday**	**30**	**5:50 AM-8:17 PM**
	Saturday	**30**	**7:50 AM-8:17 PM**
	Sunday	**30**	**7:50 AM-8:17 PM**

Route 23/25
Molina, Gollihar/Greenwood

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 23 is a strong route. Route 23 should be extended to the Greenwood Walmart to provide direct access from higher need areas to this destination. Service in the Molina neighborhood would operate bi-directionally.

The Route 23 extension would replace service currently provided to the Greenwood Walmart by Routes 19 and 25.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	5:30 AM-8:12 PM
	Saturday	30	5:30 AM-8:12 PM
	Sunday	60	7:58 AM-8:03 PM
Recommended	**Weekday**	**30**	**5:30 AM-8:12 PM**
	Saturday	**30**	**5:30 AM-8:12 PM**
	Sunday	**60**	**7:58 AM-8:03 PM**

Route 25
Gollihar / Greenwood

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.

Route Changes Overview

Route 25 is infrequent and has low ridership. Route 25 should be discontinued and replaced by a Route 23 extension to the Greenwood Walmart. Route 23 would provide a more frequent connection between Port Ayers Station, Moody High School and the Greenwood Walmart.

Hours of Service (When it runs)

Discontinued.

Frequency (How often it runs)

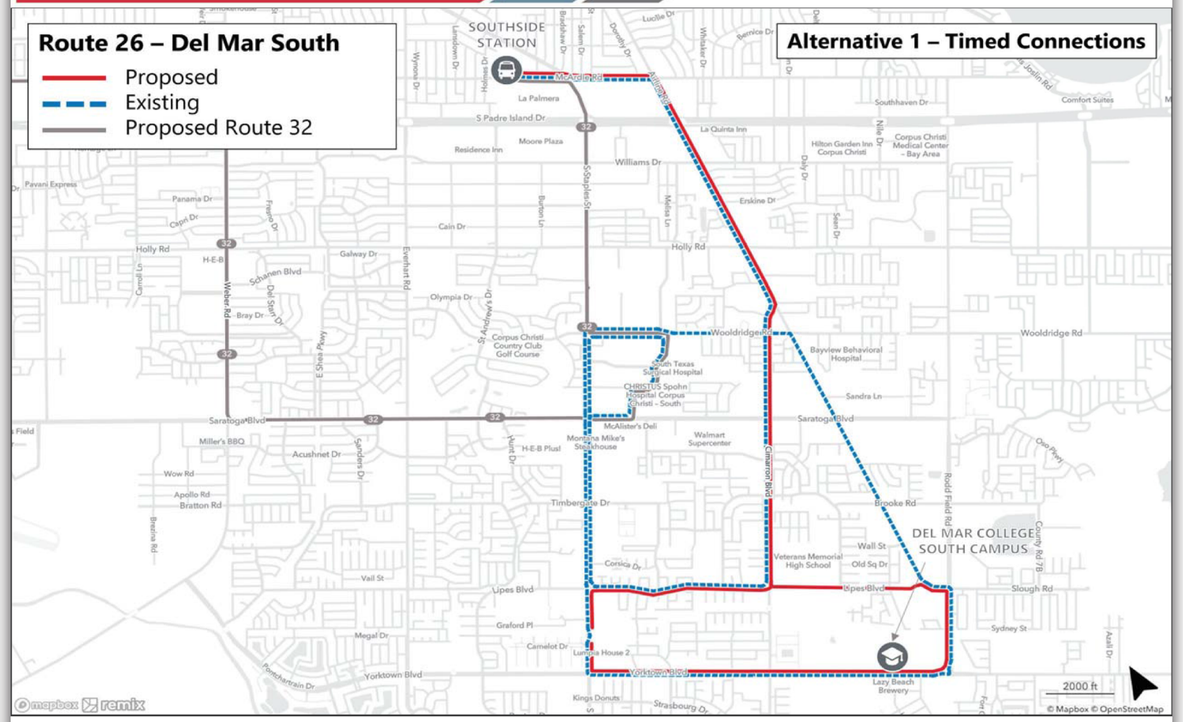
Discontinued.

	Day	All-day frequency	Hours of Service
Existing	Weekday	90	7:15 AM-6:20 PM
	Saturday	90	8:45 AM-6:20 PM
	Sunday	90	8:45 AM-6:20 PM
Recommended	**Weekday**	-	-
	Saturday	-	-
	Sunday	-	-

Route 26
Del Mar South

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 26 would be extended to serve Del Mar College South campus directly and replace the existing Route 24. With this extension, Route 26 would no longer serve Spohn South, which will continue to be served by Route 29. Riders along south Staples St would have to walk to Lipes Blvd for Route 26 service, or to Saratoga Blvd for Route 32.

Route 26 would operate hourly and be scheduled so that it could have timed connections at Southside Station in both directions.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

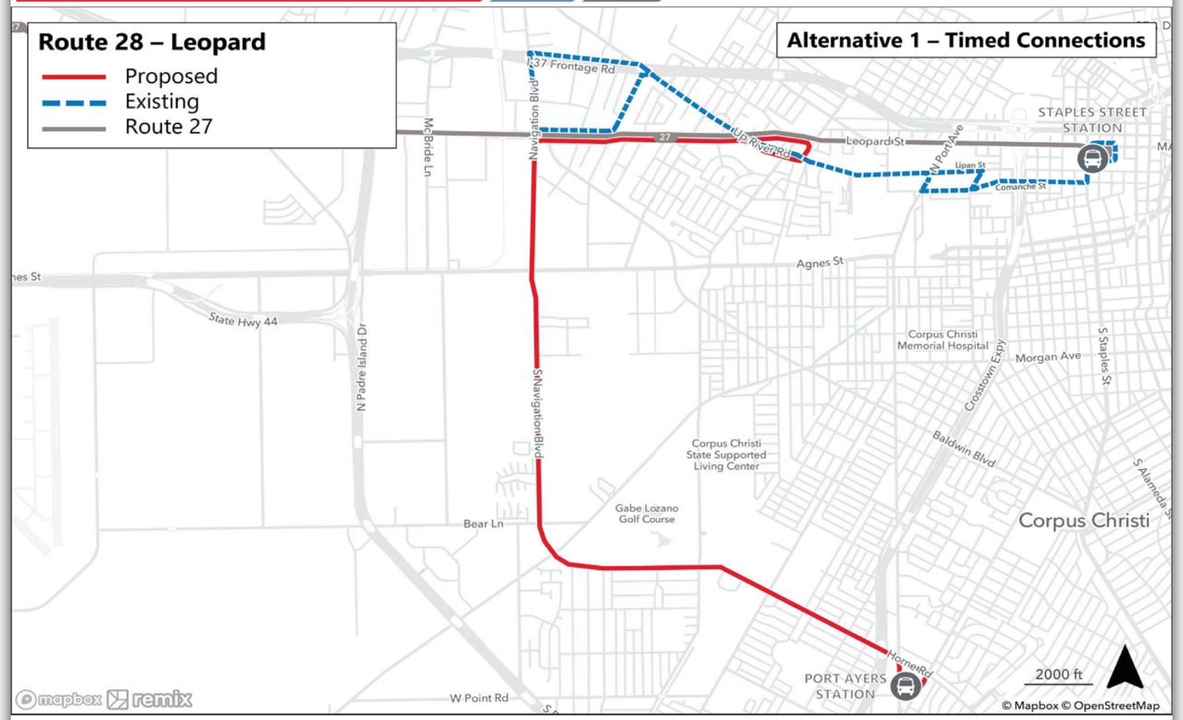
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:00 AM-8:05 PM
	Saturday	60	8:00 AM-8:05 PM
	Sunday	60	8:00 AM-8:05 PM
Recommended	**Weekday**	**60**	**6:00 AM-8:05 PM**
	Saturday	**60**	**8:00 AM-8:05 PM**
	Sunday	**60**	**8:00 AM-8:05 PM**

Route 28
Leopard

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 28 is a low ridership route that has been impacted by the Harbor Bridge Project and the relocation of the food bank. Due to low ridership and the duplication with the Route 27, Route 28 should be restructured to operate between Port Ayers Station and the HEB at Leopard St/ Nueces Bay Blvd. This change would connect new low-income housing, a food bank, and job sites with a grocery store and connections to regional service at Port Ayers Station.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

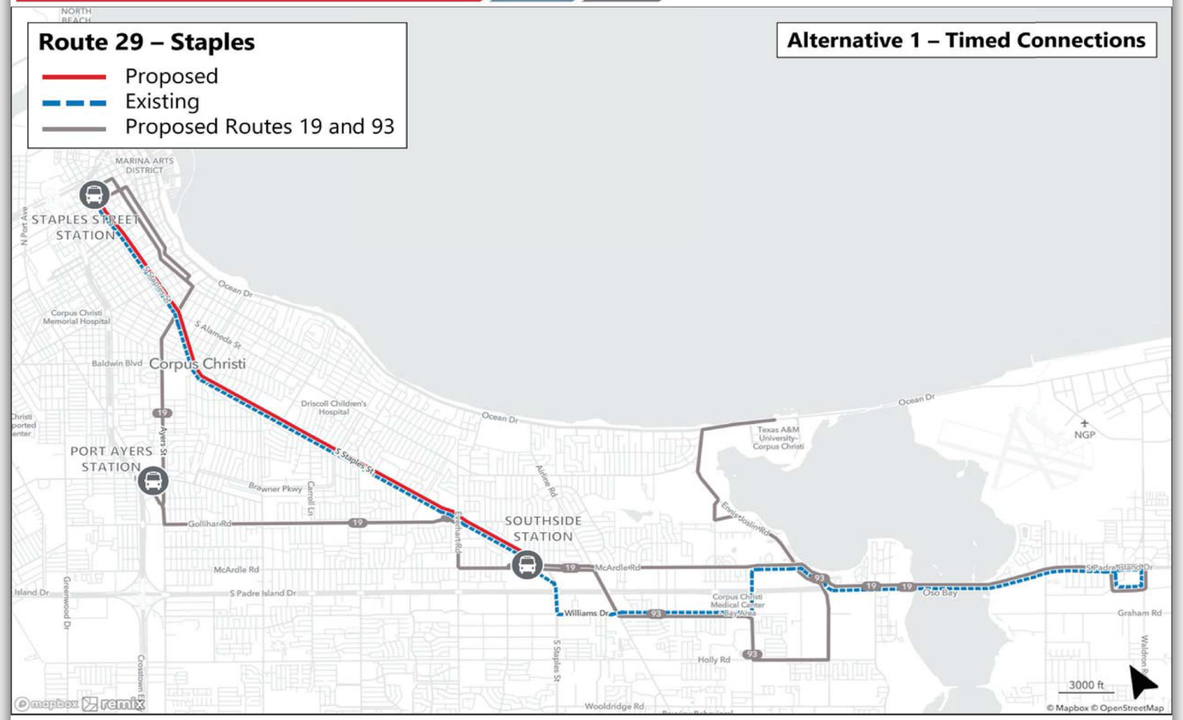
The recommended route would operate every 60-minutes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	45	6:00 AM-6:38 PM
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:00 AM-7:00 PM**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 29
Staples

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 29 between Southside and Staples Street Stations is the highest ridership corridor served by CCRTA. Route 29 should be shortened to serve this corridor more frequently and more reliably.

The existing Route 29 Flour Bluff branch would be replaced by an extension of Route 19 from Southside Station to Flour Bluff. Service between Southside Station and Flour Bluff would be every 30-minutes, more frequent than Route 29. Existing riders on Williams Dr. would still have access to service on a revised Route 93.

The existing Route 29 Spohn South branch would be replaced by a restructured Route 32, which would continue to serve almost all existing Route 29 stops between Spohn South and Southside Station.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

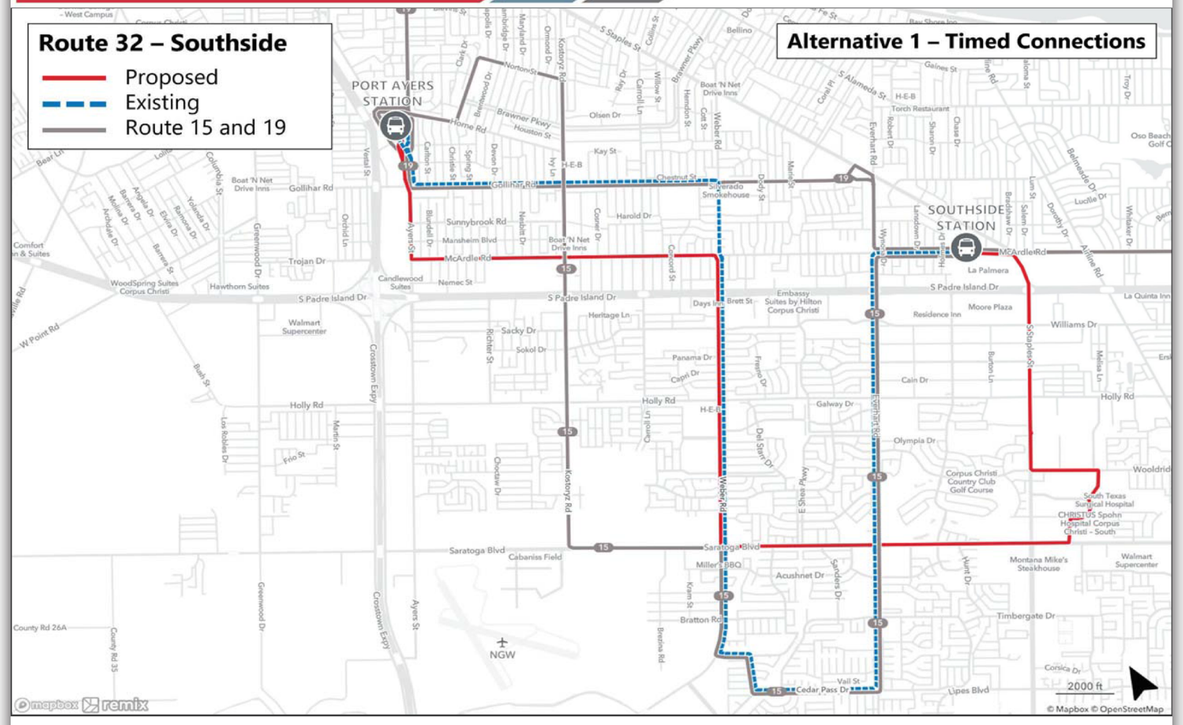
To facilitate transfers, the service would change to 15-minute service on Staples.

	Day	All-day frequency	Hours of Service
Existing	Weekday	20-40	6:00 AM-8:12 PM
	Saturday	20-40	6:00 AM-8:08 PM
	Sunday	30	8:00 AM-8:20 PM
Recommended	**Weekday**	**15**	**6:00 AM-8:12 PM**
	Saturday	**15**	**6:00 AM-8:08 PM**
	Sunday	**15**	**8:00 AM-8:20 PM**

Route 32
Staples

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 32 provides coverage to Southside Corpus Christi. To reduce duplication with other proposed route changes, Route 32 should shift service from Gollihar Rd to McArdle Rd. It should also shift from Everhart Rd to Staples St and replace Route 29 between Southside Station and Spohn Hospital. Almost all existing riders would continue to have service on restructured Routes 15 and 19.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

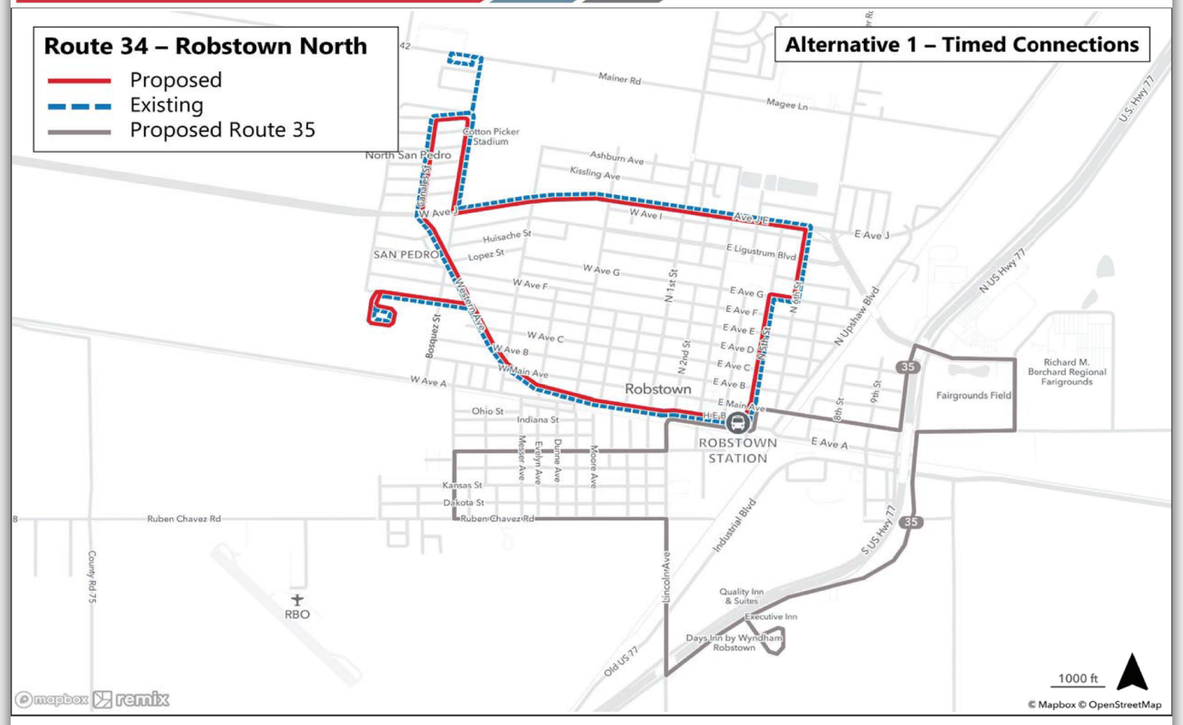
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:15 AM-7:57 PM
	Saturday	60	8:07 AM-7:57 PM
	Sunday	60	8:07 AM-7:57 PM
Recommended	**Weekday**	**60**	**6:15 AM-7:57 PM**
	Saturday	**60**	**8:07 AM-7:57 PM**
	Sunday	**60**	**8:07 AM-7:57 PM**

Route 34
Robstown North

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

On-time performance of Route 34 is poor, particularly on weekday afternoons. In order to improve on-time performance, shortening route to no longer serve GI Forum Village directly. This would save several minutes and cause only several passengers to walk further for service.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

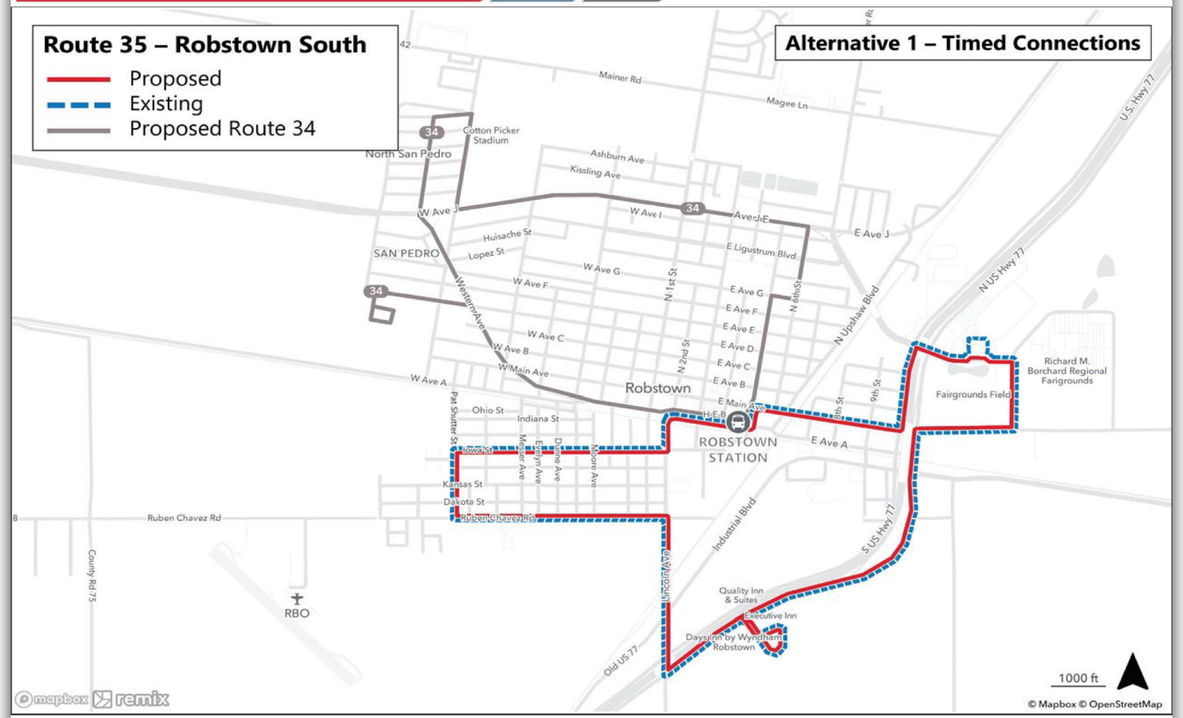
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:10 AM-7:36 PM
	Saturday	60	6:10 AM-7:36 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:10 AM-7:36 PM**
	Saturday	**60**	**6:10 AM-7:36 PM**
	Sunday	**-**	**-**

Route 35
Robstown South

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

On-time performance of Route 35 is poor, particularly on weekday afternoons. In order to improve on-time performance, the stop at Outlets should be discontinued. The few existing riders at this stop would have to walk several minutes more, but Route 35 could stay on time more often.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

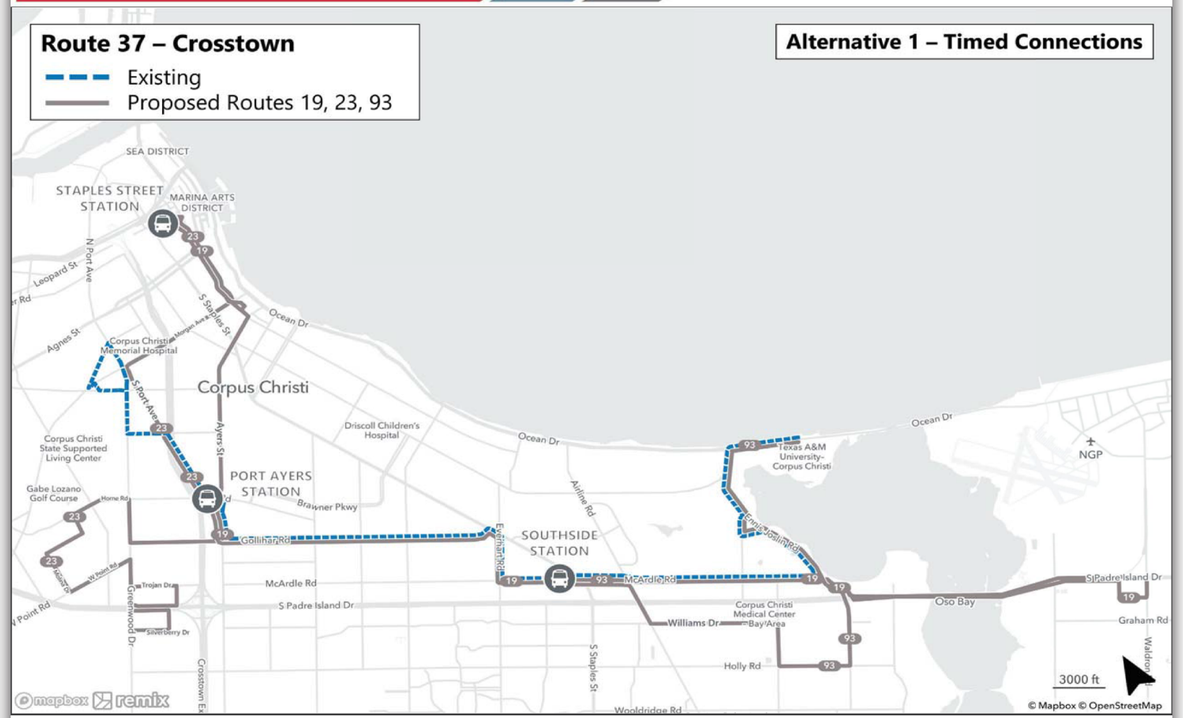
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	7:40 AM-8:05 PM
	Saturday	60	6:40 AM-8:05 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**7:40 AM-8:05 PM**
	Saturday	**60**	**6:40 AM-8:05 PM**
	Sunday	**-**	**-**

Route 37
Crosstown

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Route Changes Overview

Route 37 currently duplicates multiple different routes. Route 37 should be replaced by the more frequent restructured Route 19 and Route 93. Route 23 would continue to serve Port Ave.

Hours of Service (When it runs)

Discontinued.

Frequency (How often it runs)

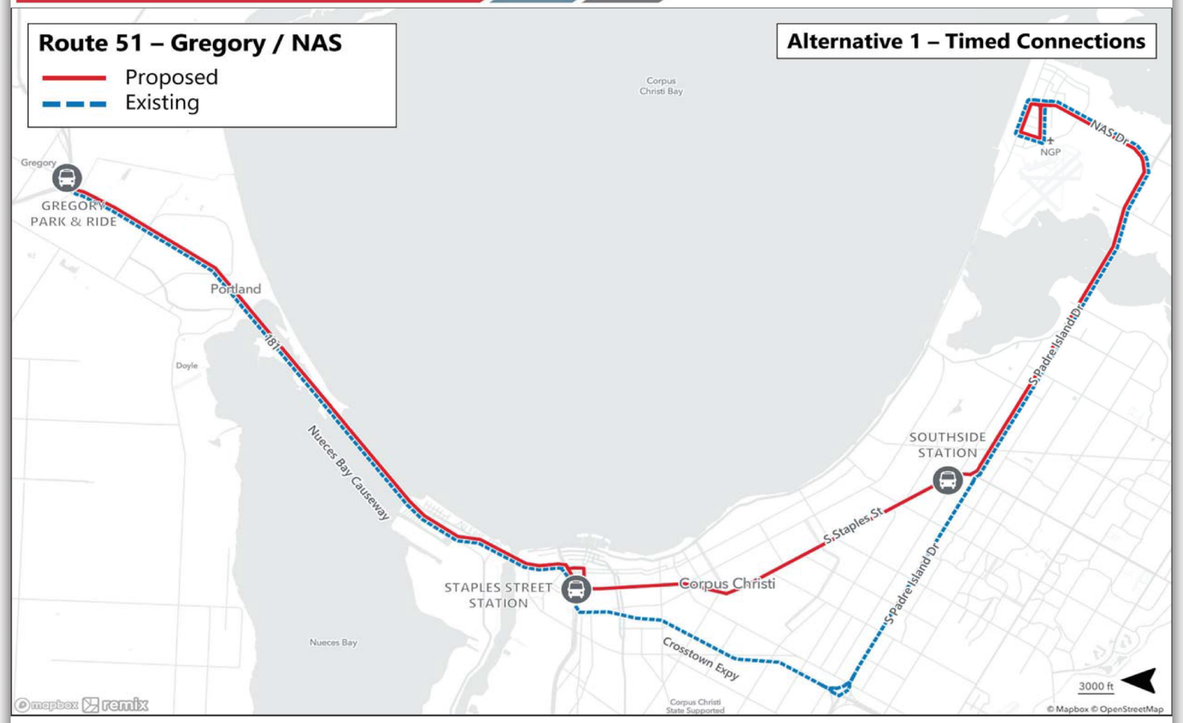
Discontinued.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:10 AM-8:05 PM
	Saturday	60	8:10 AM-8:05 PM
	Sunday	60	8:10 AM-8:05 PM
Recommended	**Weekday**	**-**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 51
Gregory / NAS

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 51 has low ridership. In order to improve ridership potential, and replace Route 5 and Route 4 service between Corpus Christi and NAS, Route 51 should stop in downtown Corpus Christi and travel between Downtown and SPID via Staples St – serving all stops. This adds eight minutes of travel time for existing riders, but continues to provide a one-seat ride between Gregory and NAS.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	1 morning trip 1 afternoon trip	-
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**1 morning trip 1 afternoon trip**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 54
Gregory/Downtown Express

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.

Route Changes Overview

Route 54 averages one rider in the morning and one in the afternoon. Due to low ridership, Route 54 should be deleted or be replaced by a taxi/Uber/Lyft subsidy for trips to Gregory.

Hours of Service (When it runs)

Discontinued.

Frequency (How often it runs)

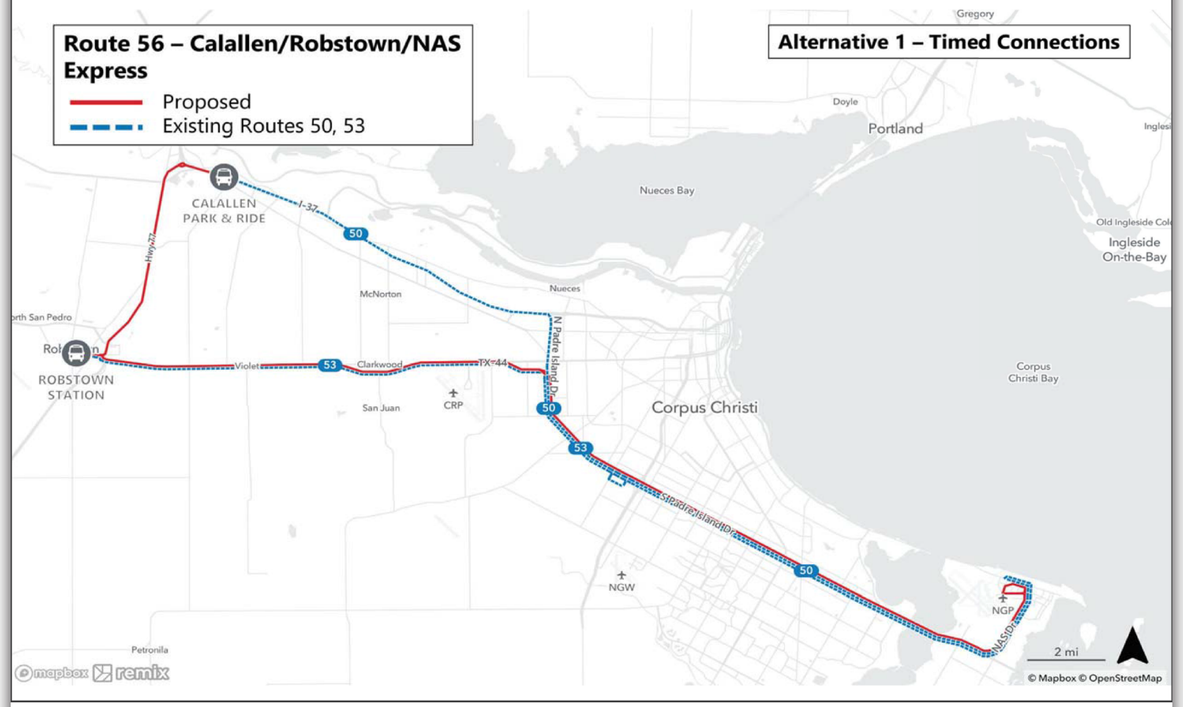
Discontinued.

	Day	All-day frequency	Hours of Service
Existing	Weekday	50	7:00 AM-6:50 PM
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**-**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 56
Calallen/Robstown/NAS Express

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Routes 50 and 53 both have low ridership – with 6 or less riders on every trip. These routes should be consolidated into one route (Route 56) that serves both the Robstown and Calallen Park-and-Rides. Calallen riders would have a longer ride, but continue to have direct service to/from NAS.

Hours of Service (When it runs)

The morning trip would continue to arrive at NAS at 5:45 a.m. and leave NAS at 2:40 p.m.

Frequency (How often it runs)

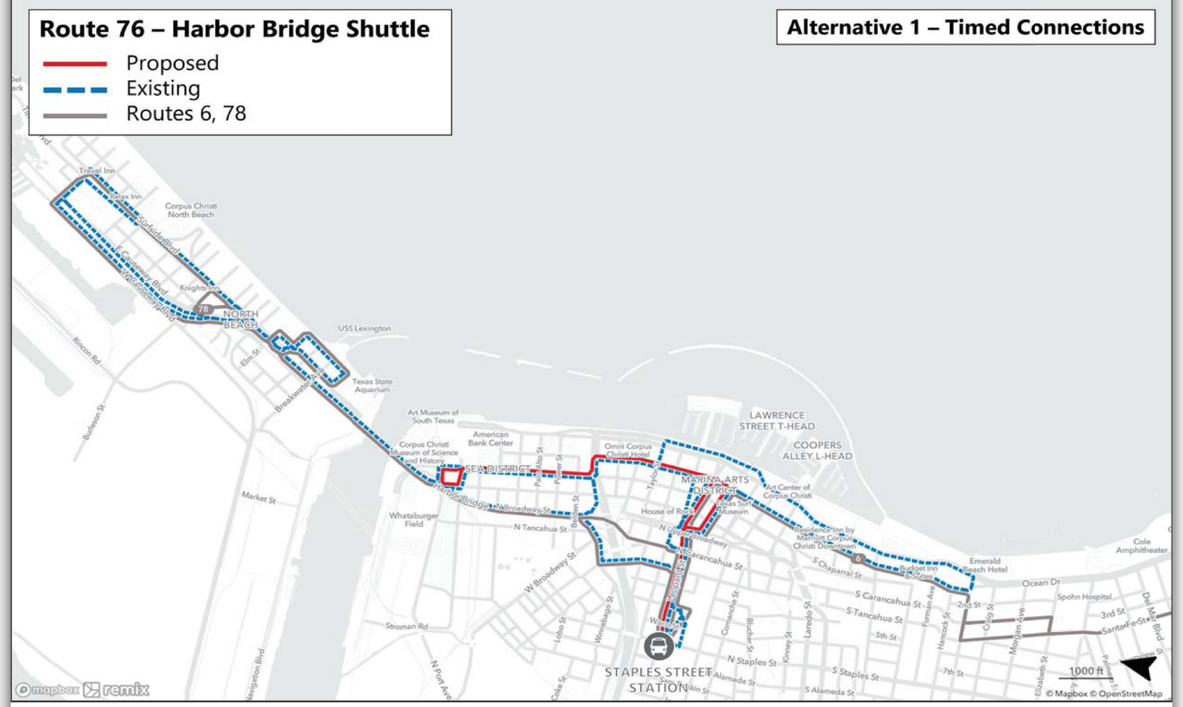
Residents in Calallen and Robstown would continue to have one morning trip to NAS and one afternoon trip from NAS.

	Day	All-day frequency	Hours of Service
Existing	Weekday	1 morning trip 1 afternoon trip	-
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**1 morning trip 1 afternoon trip**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 76
Harbor Bridge Shuttle

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 76 should be simplified to serve downtown Corpus Christi only with a direct, easy to understand alignment. Service to North Beach should be provided by Route 78. Route 76 should be interlined with Route 5 at Staples Street Station. Route 76's schedule should be coordinated with Route 6's schedule, so that between Water St and Staples Street Station, there is a bus every 30-minutes, meeting every timed connection.

Hours of Service (When it runs)

The schedules of Route 76 and Route 6 would be offset from Water Street to Staples Street Station to provide an effective 30-minute service corridor.

Frequency (How often it runs)

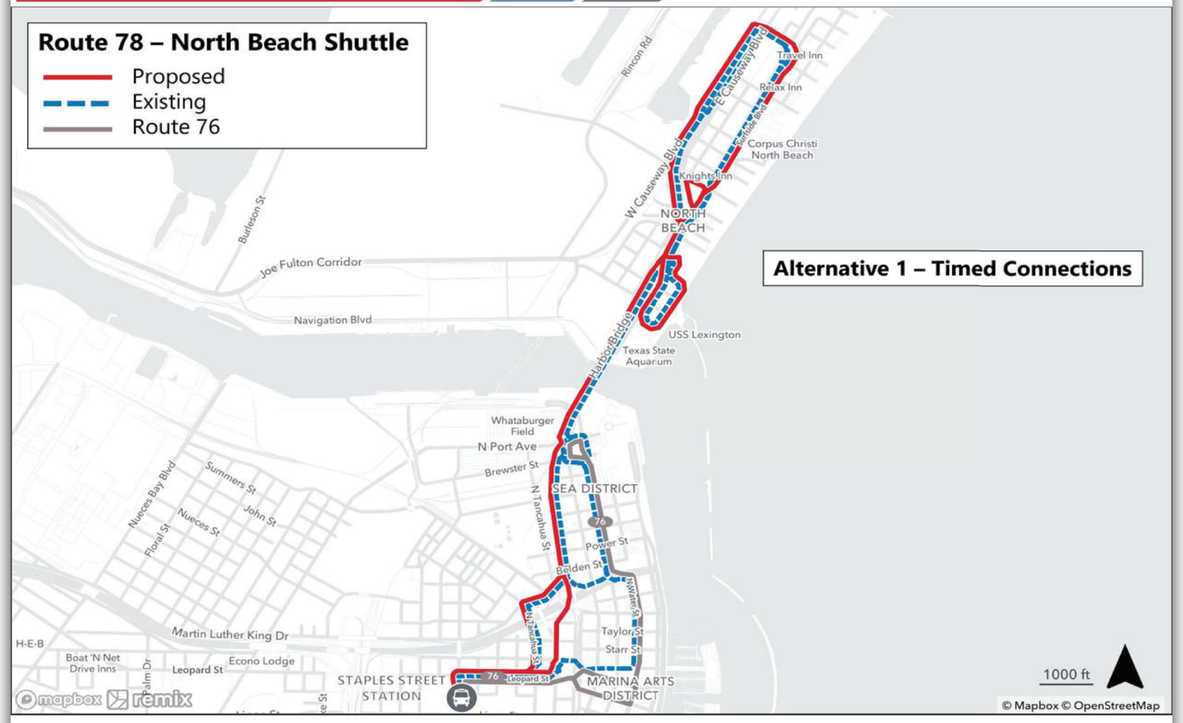
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:20 AM-7:55 PM
	Saturday	60	8:00 AM-6:55 PM
	Sunday	60	8:00 AM-6:20 PM
Recommended	**Weekday**	**60**	**6:20 AM-7:55 PM**
	Saturday	**60**	**8:00 AM-6:55 PM**
	Sunday	**60**	**8:00 AM-6:20 PM**

Route 78
North Beach Shuttle

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 78 is indirect and has low ridership. Route 78 should be restructured to provide a direct, fast connection between North Beach and Staples Street Station, without serving downtown Corpus Christi. Removing the downtown segments also allows Route 78's alignment shift to the new Harbor Bridge access points once they are complete. Route 76 will continue to serve downtown Corpus Christi, as will a restructured Route 6. Route 78 should be interlined with Route 6.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

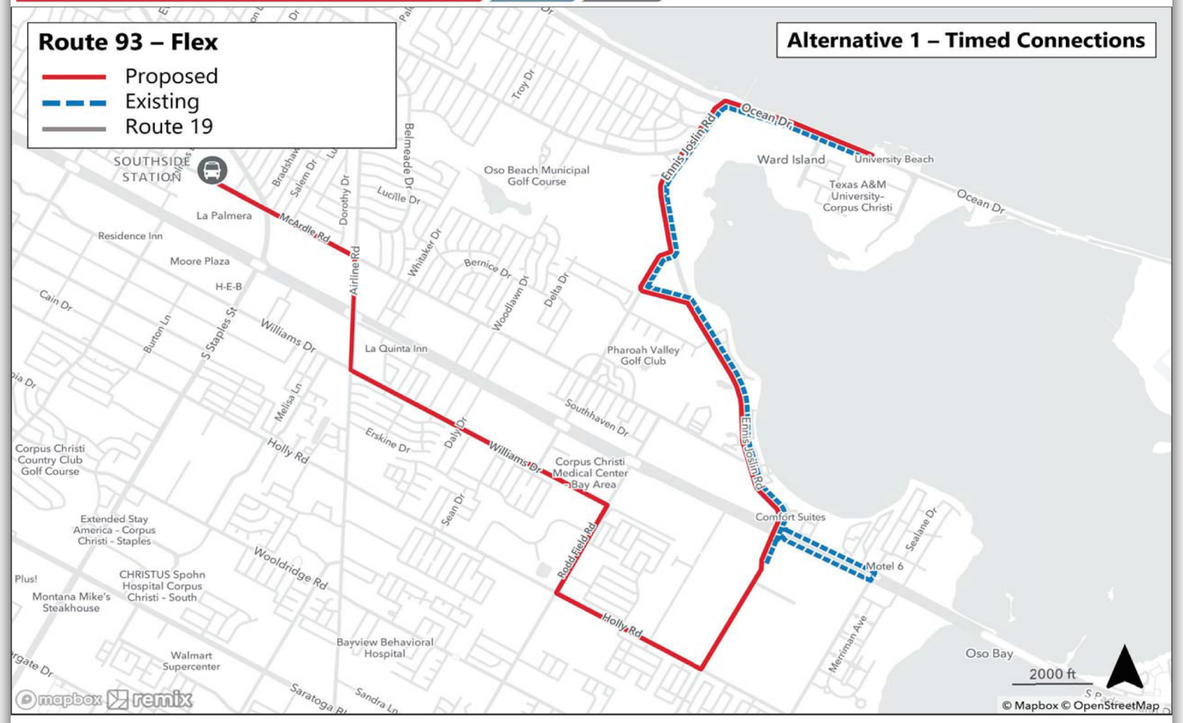
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:50 AM-7:25 PM
	Saturday	60	6:50 AM-7:25 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:50 AM-7:25 PM**
	Saturday	**60**	**6:50 AM-7:25 PM**
	Sunday	**-**	**-**

Route 93
Flex

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 93 provides service between residential areas and TAMU-CC with a small bus. Ridership demand is increasing, and CCRTA needs to upgrade to a larger bus to meet demand. Few people are using the flex function as well. Route 93 should be converted to a regular bus line that connects TAMU-CC, Williams Drive, and Southside Station.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

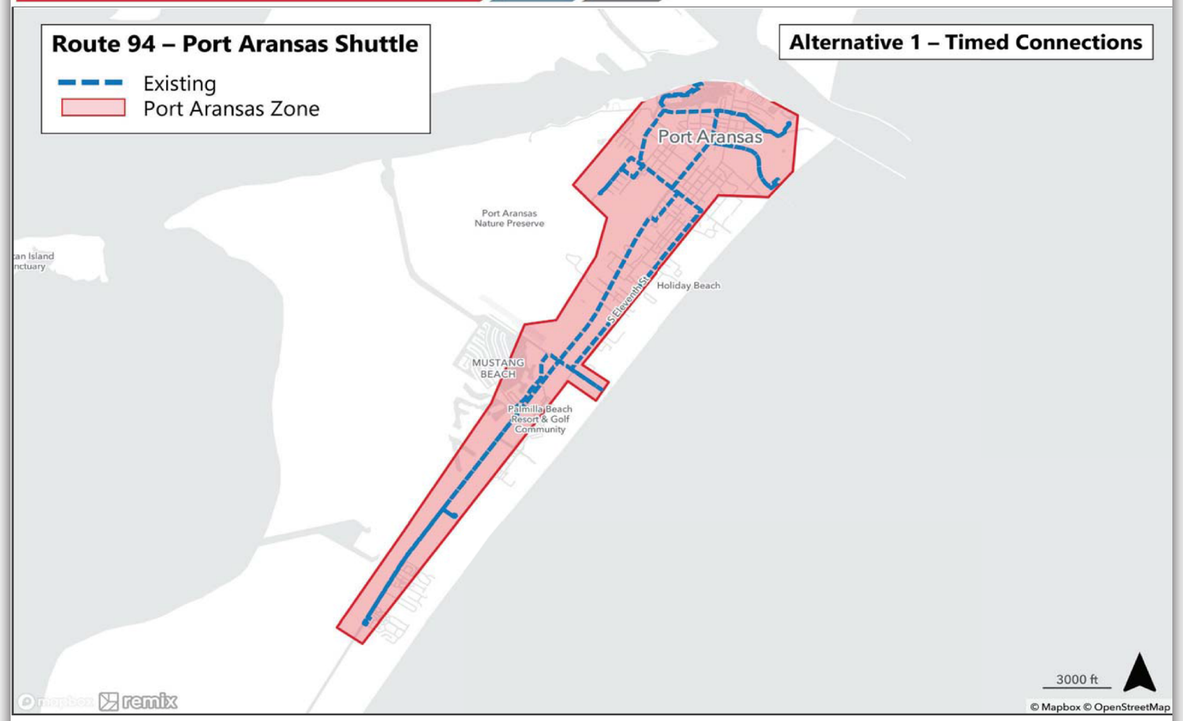
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	7:35 AM-10:35 PM
	Saturday	30	9:35 AM-8:05 PM
	Sunday	-	-
Recommended	**Weekday**	**30**	**7:35 AM-10:35 PM**
	Saturday	**30**	**9:35 AM-8:05 PM**
	Sunday	**-**	**-**

Route 94
Port Aransas Shuttle

ALTERNATIVE 1: IMPROVED CONNECTIONS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

The existing route has extremely low ridership and a confusing, indirect alignment. Mobility in Port Aransas would be better served by transitioning this fixed-route service into a general public on-demand service, or flex route, where Route 94 takes patrons directly to their destinations on request.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

Changed to on-demand.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	10:00 AM-5:52 PM
	Saturday	60	10:00 AM-5:52 PM
	Sunday	60	10:00 AM-5:52 PM
Recommended	**Weekday**	**On Demand**	-
	Saturday	**On Demand**	-
	Sunday	**On Demand**	-

APPENDIX B – HIGH-FREQUENCY CORRIDORS SCENARIO

The High-Frequency Corridors Scenario's goal was to create three high-frequency corridors serving the highest ridership locations in Corpus Christi, effectively meeting people where they are. The three high-frequency corridors would connect the CCRTA's largest transit centers (Staples, Southside, and Port Ayers Stations) with 15-minute all-day frequency on Routes 19 along Ayers St, Route 29 on Staples St, McArdle Rd, and Ennis Joslin Rd, and with Routes 28 and 29 operating offset schedules to achieve 15-minute frequency along Leopard St.

The High-Frequency Corridors Scenario was designed to be able to be implemented within CCRTA's existing budget.

Implementing high-frequency corridors would improve the riders' experience by making bus schedules less important when using the bus, as better frequency means more buses departing bus stops more often. Operating bus services at higher frequencies reduces the waiting time of riders. Under this scenario, customers using Staples Street, Southside, and Port Ayers Stations, either as a first stop or as a transfer, would be able to travel longer distances and connect amongst transit centers with a reduced overall trip time thanks to the reduction in waiting times.

Key Benefits of Scenario 2:

- Greater frequency provides a more convenient service for customers
- Ridership will be rebuilt and consolidated more quickly
- Less schedule coordination required for customers transferring between routes

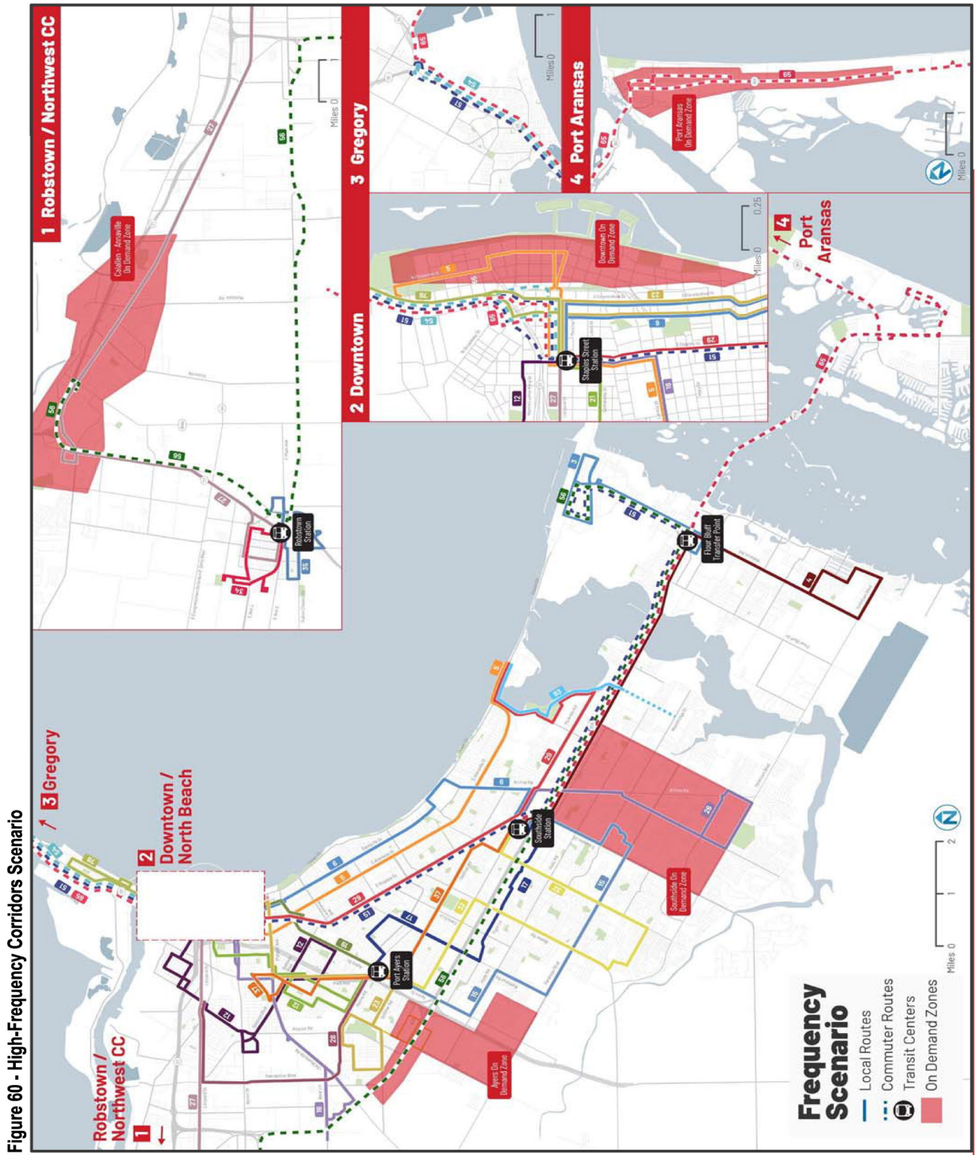
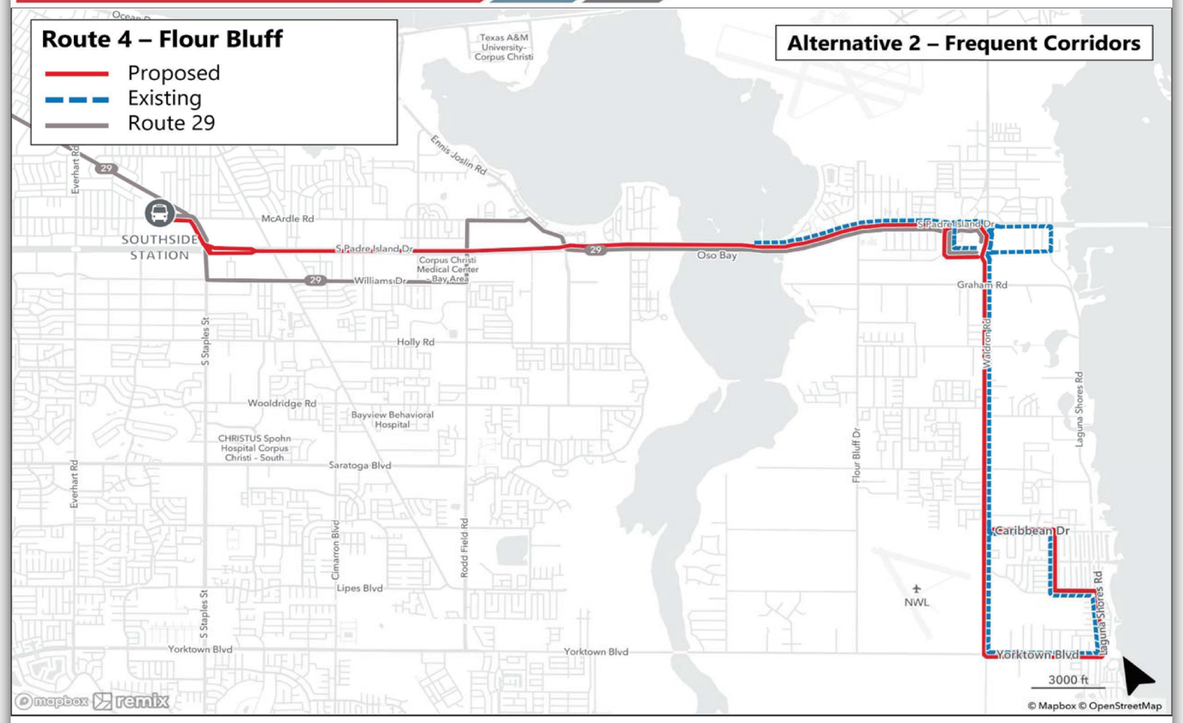


Figure 60 - High-Frequency Corridors Scenario

Route 4
Flour Bluff

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Currently, most areas of Flour Bluff require at least one transfer to get to Corpus Christi. Route 4 should be extended to operate between the Compton Rd/ Waldron Rd stop and Southside Station – replacing the existing Route 29 service. Flour Bluff residents will have much faster access to other CCRTA routes as well as commercial areas.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	5:05 AM-8:05 PM
	Saturday	60	8:00 AM-7:55 PM
	Sunday	60	8:00 AM-7:55 PM
Recommended	**Weekday**	**30**	**5:05 AM-8:05 PM**
	Saturday	**60**	**8:00 AM-7:55 PM**
	Sunday	**60**	**8:00 AM-7:55 PM**

Route 5
Alameda

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

To improve service to downtown and from downtown to TAMU-CC, extend Route 5 to Staples Street Station and into downtown Corpus Christi. This extension would provide a one-seat ride between TAMU-CC and downtown. It would also replace existing Route 78 and 76 service in downtown Corpus Christi. The extended Route 5 would also replace Route 17 on Brownlee Boulevard, Laredo/ Agnes Street, and Staples Street.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

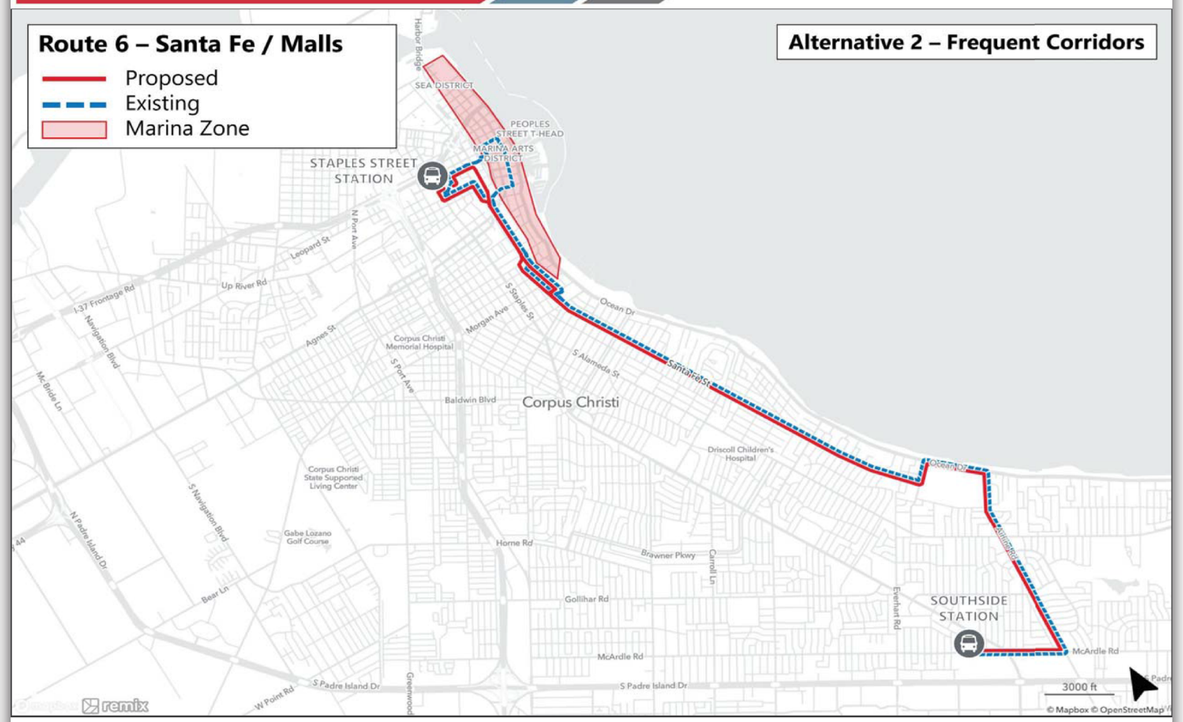
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	4:50 AM-8:13 PM
	Saturday	60	8:15 AM-8:13 PM
	Sunday	60	8:15 AM-8:13 PM
Recommended	**Weekday**	**60**	**4:50 AM-8:13 PM**
	Saturday	**60**	**8:15 AM-8:13 PM**
	Sunday	**60**	**8:15 AM-8:13 PM**

Route 6
Santa Fe/Malls

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 6 currently only serves downtown Corpus Christi in the northbound direction with a one-way loop. Route 6 should be revised to directly serve Staples Street Station in both directions via Carancahua Street and Tancahua Street.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

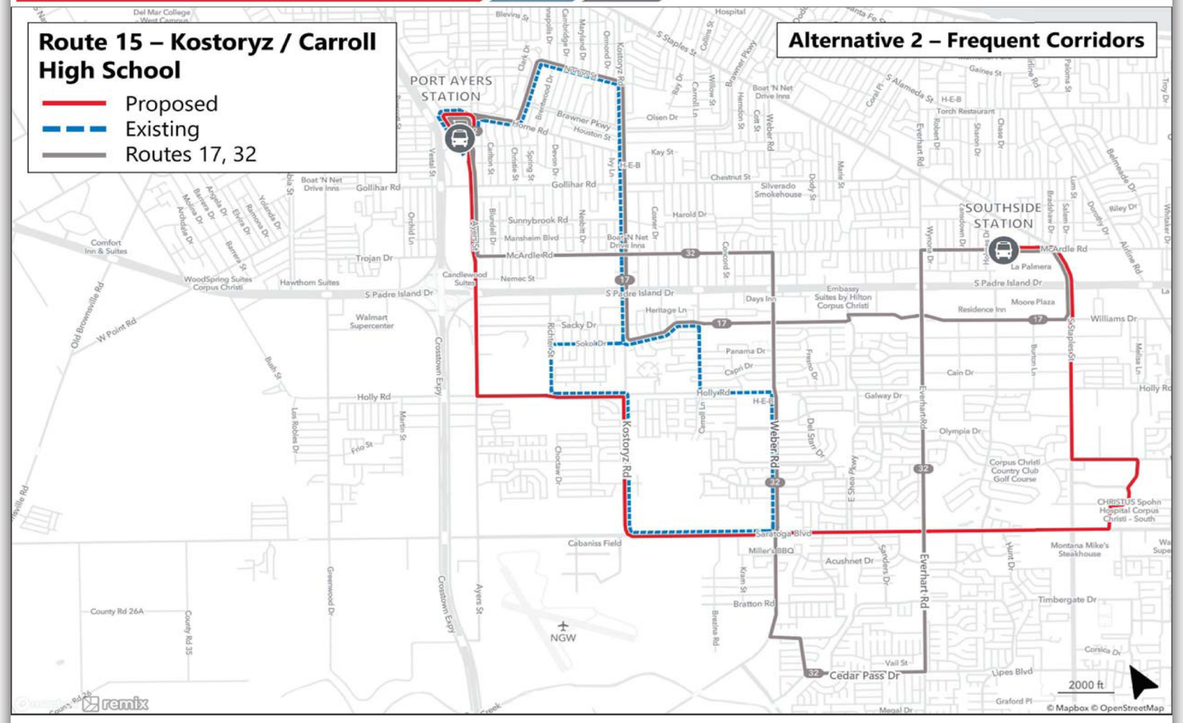
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:05 AM-7:45 PM
	Saturday	60	6:05 AM-7:45 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:05 AM-7:45 PM**
	Saturday	**60**	**6:05 AM-7:45 PM**
	Sunday	**-**	**-**

Route 15
Kostoryz/Carroll High School

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 15 operates a circuitous, one-way loop south of SPID around Kostoryz Rd, Weber Rd, and Saratoga Blvd. Route 15 should be revised to operate crosstown on Saratoga Boulevard and connect Port Ayers and Southside Stations via Ayers Street, Holly Road, Kostoryz Road, Saratoga Boulevard, and Staples Street. Riders on Kostoryz Rd and Weber Rd would use Route 17 and Route 32, respectively.

Hours of Service (When it runs)

Recommended route would operate seven days a week.

Frequency (How often it runs)

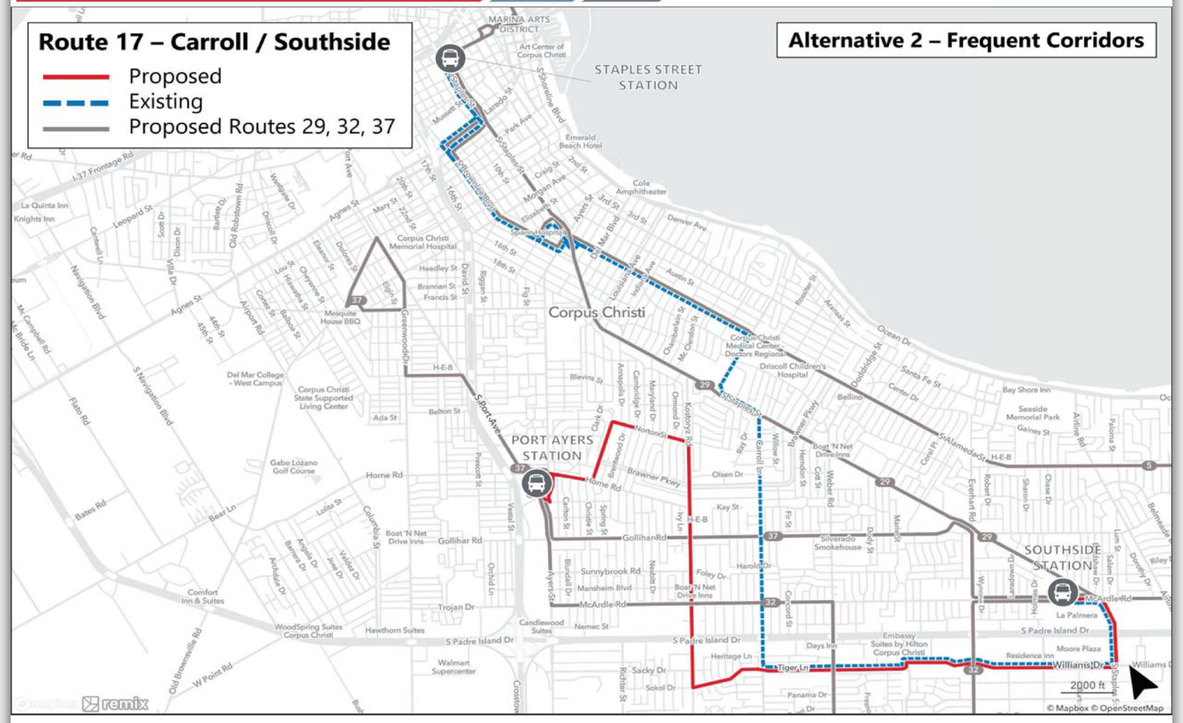
To improve transfer opportunities at both Stations, frequency would be improved to operate every 60 minutes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	90	6:30 AM-7:55 PM
	Saturday	90	8:00 AM-7:10 PM
	Sunday	90	8:00 AM-7:10 PM
Recommended	**Weekday**	**60**	**6:30 AM-7:55 PM**
	Saturday	**60**	**8:00 AM-7:10 PM**
	Sunday	**60**	**8:00 AM-7:10 PM**

Route 17
Carroll / Southside

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 17's travel path is duplicative of multiple routes in various segments. Route 17 should be revised to provide a new connection between Mary Carroll HS to Port Ayers and Southside Stations by traveling via Kostoryz Rd and Tiger Ln/Corona Dr/Williams Rd. Patrons wishing to travel to Staples Street Station could continue to do so with transfers to Routes 19 or 29. Service along Carroll Ln would be discontinued due to low ridership. Riders on Carroll Ln would need to walk to either McArdle Rd (Route 32), Gollihar Rd (Route 37), or Staples St (Route 29). Service along Alameda St would be covered by Route 5.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

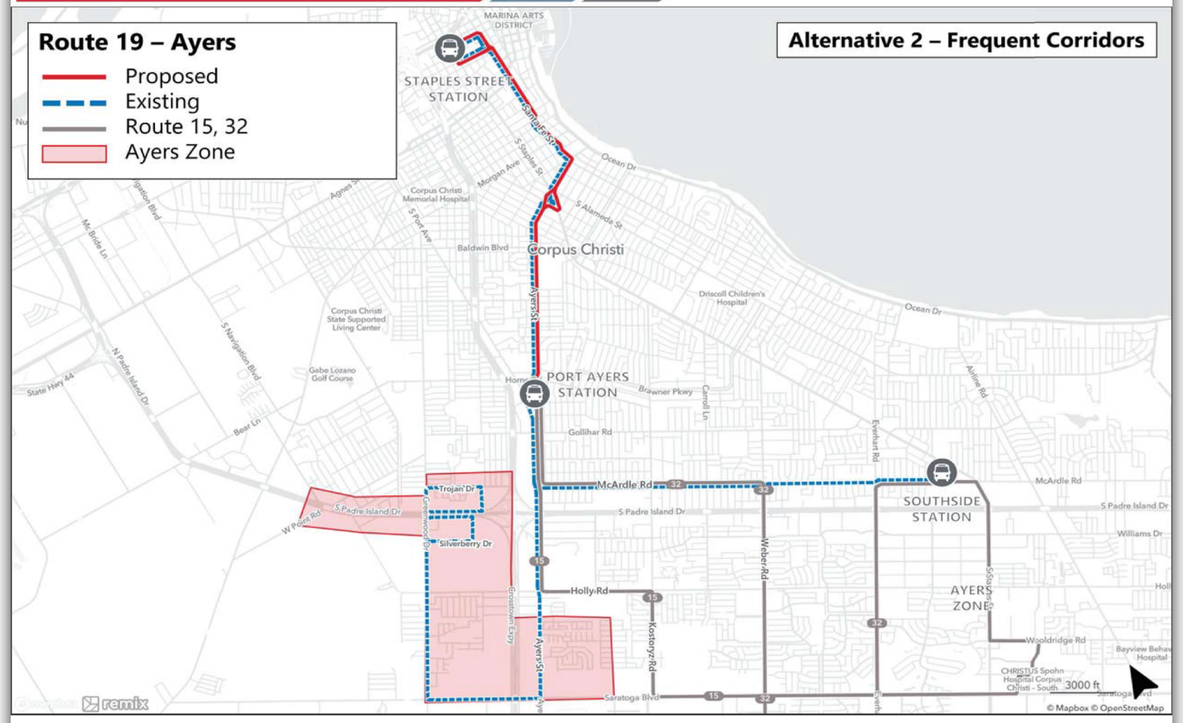
The route would change from an hourly headway to a 45-minute service.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	7:00 AM-7:50 PM
	Saturday	60	8:00 AM-7:50 PM
	Sunday	60	8:00 AM-7:50 PM
Recommended	**Weekday**	**45**	**7:00 AM-7:50 PM**
	Saturday	**45**	**8:00 AM-7:50 PM**
	Sunday	**45**	**8:00 AM-7:50 PM**

Route 19
Ayers

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 19's highest ridership areas are between Port Ayers and Staples Street Stations. Route 19 should be simplified operating only between these two Stations. The Greenwood and McArdle branches would be removed and served with other routes. Riders on Ayers St south of Port Ayers station would use Route 15 or a new On-Demand Zone that would also provide service between Greenwood Dr and Saratoga Blvd - south of Port Ayers Station. Riders on McArdle Rd can use Route 32 as an alternative.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

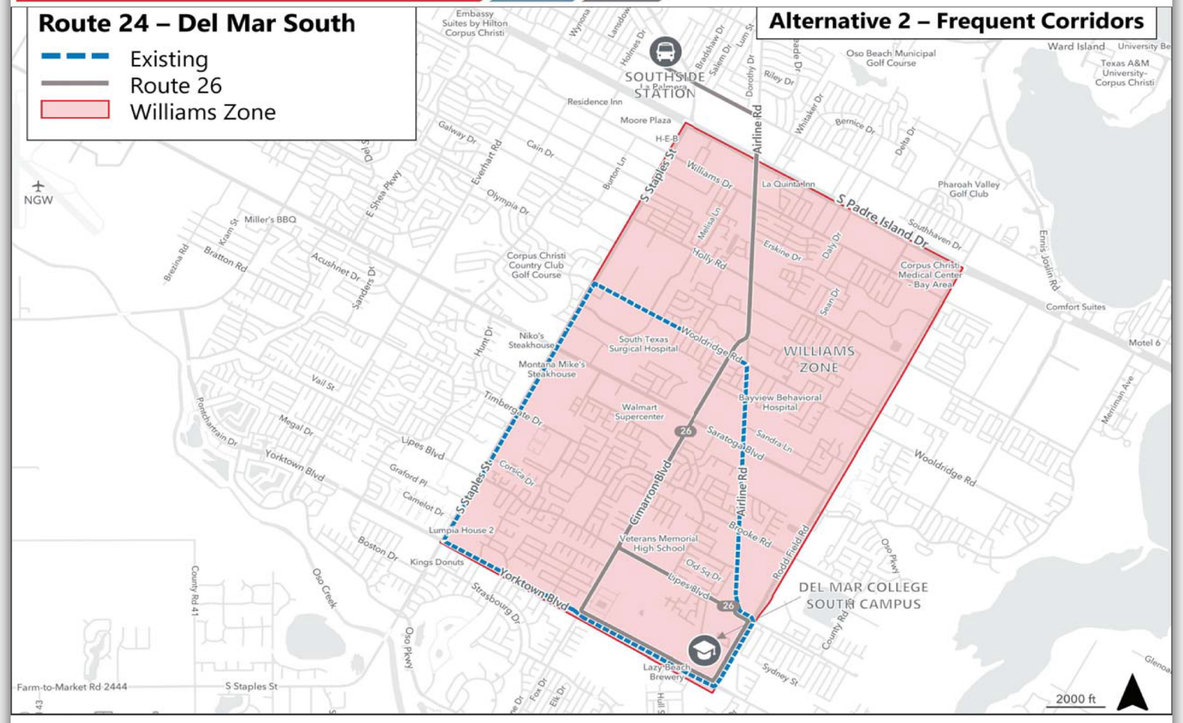
To improve transfers, the route would operate every 15 minutes between Staples and Port Ayers Stations.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	5:50 AM-8:17 PM
	Saturday	30	7:50 AM-8:17 PM
	Sunday	30	7:50 AM-8:17 PM
Recommended	**Weekday**	**15**	**5:50 AM-8:17 PM**
	Saturday	**15**	**7:50 AM-8:17 PM**
	Sunday	**15**	**7:50 AM-8:17 PM**

Route 24
Del Mar South

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Route Changes Overview

The circuitous nature of Route 24 makes the route unattractive to customers and results in low ridership. To improve service in South Side east of S Staples Street and to provide additional access to Del Mar College, Route 24 would be discontinued and replaced with On-Demand Zone Service and proposed Route 26. The On-Demand Zone includes Southside Station, and allows anyone to call in for a ride to a destination within the zone.

Hours of Service (When it runs)

Discontinued.

Frequency (How often it runs)

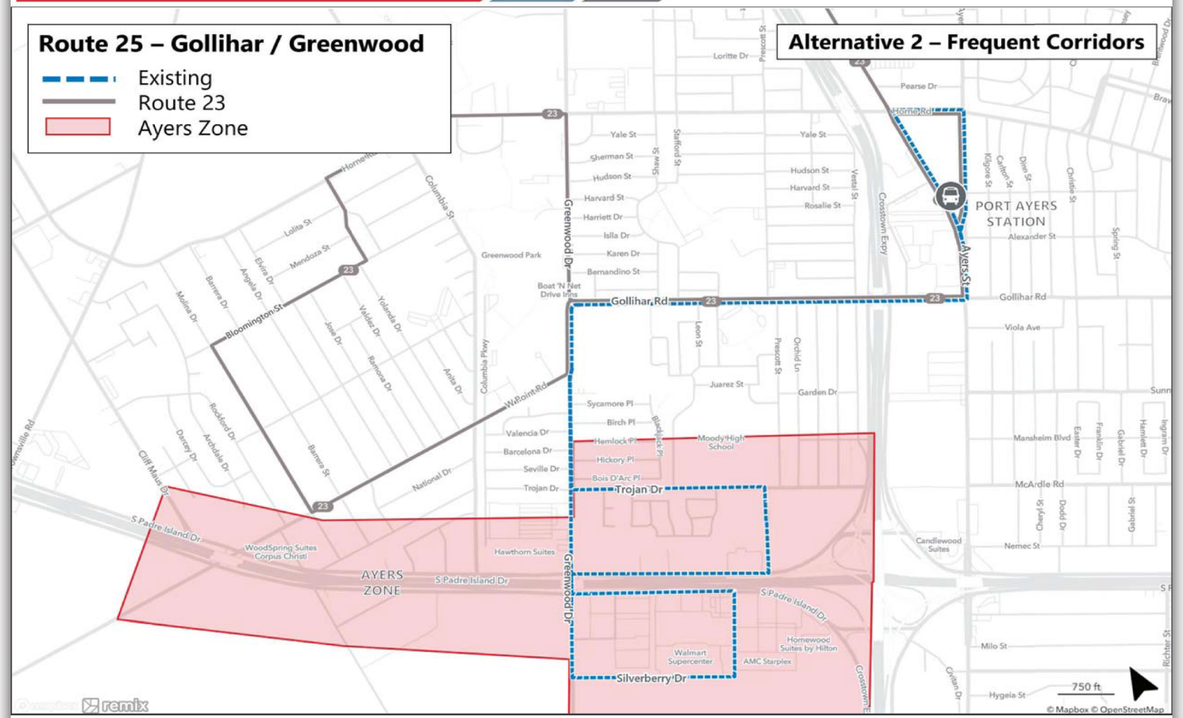
Discontinued.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	7:00 AM-7:12 PM
	Saturday	30	7:00 AM-7:12 PM
	Sunday	-	-
Recommended	**Weekday**	**-**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

Route 25
Gollihar / Greenwood

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Route Changes Overview

Due to low ridership, indirect alignment, and low service frequency, Route 25 would be discontinued and replaced with an On-Demand Zone Service. The new On-Demand Ayers Zone avoids duplication and expands coverage area. Riders on Gollihar Rd can use Route 23.

Hours of Service (When it runs)

Discontinued.

Frequency (How often it runs)

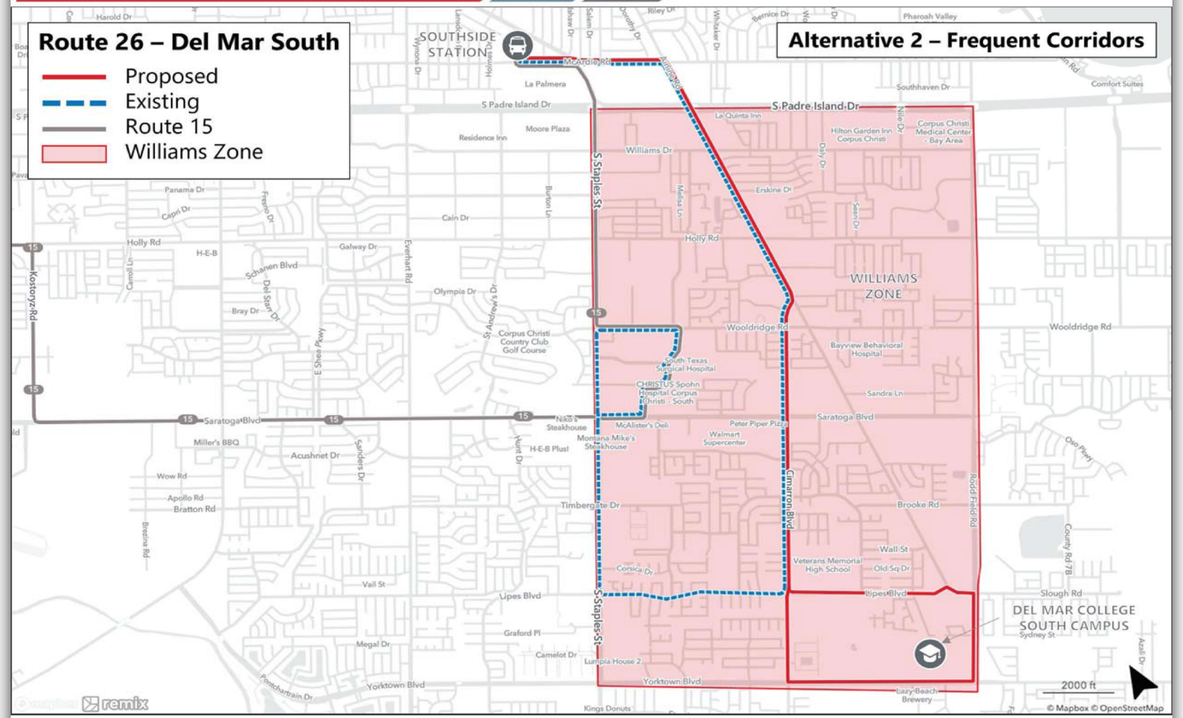
Discontinued.

	Day	All-day frequency	Hours of Service
Existing	Weekday	90	7:15 AM-6:20 PM
	Saturday	90	8:45 AM-6:20 PM
	Sunday	90	8:45 AM-6:20 PM
Recommended	**Weekday**	-	-
	Saturday	-	-
	Sunday	-	-

Route 26
Del Mar South

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 26's travel path is inconvenient to riders and forces them to travel indirectly between Southside Station and Spohn South Hospital. Route 26 should be extended to serve Del Mar College via Lipes Blvd and Yorktown Blvd and connect to Southside Station. Riders on Staples St and the Spohn South Hospital can use Route 15 as an alternative. This recommendation reduces the need for two transfers between campuses.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

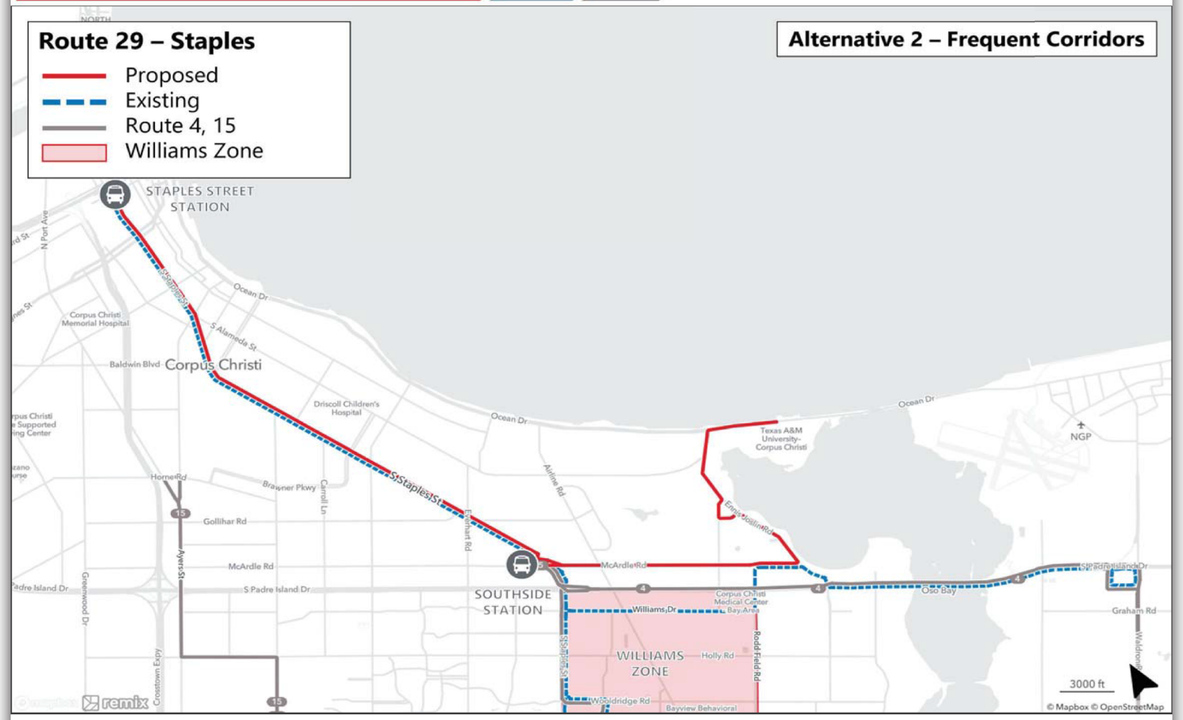
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:00 AM-8:05 PM
	Saturday	60	8:00 AM-8:05 PM
	Sunday	60	8:00 AM-8:05 PM
Recommended	**Weekday**	**60**	**6:00 AM-8:05 PM**
	Saturday	**60**	**8:00 AM-8:05 PM**
	Sunday	**60**	**8:00 AM-8:05 PM**

Route 29
Staples

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 29 between Southside and Staples Street Stations is the highest ridership corridor served by CCRTA. Route 29 resources should be rearranged to serve this corridor more frequently and more reliably. An extension to TAMUCC via McArdle Rd and Ennis Joslin Rd would offer a direct, frequent connection between a high-ridership location and Southside Station and Staples Street Station.

The existing Route 29 Flour Bluff branch would be replaced by an extension of Route 4 from Southside Station to Flour Bluff. Service between Southside Station and Flour Bluff would be hourly. Existing riders on Williams Dr. would still have access to service by using the new On-Demand Williams Zone.

The existing Route 29 Spohn South branch would be replaced by a restructured Route 15, which would continue to serve almost all existing Route 29 stops between Spohn South and Southside Station.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

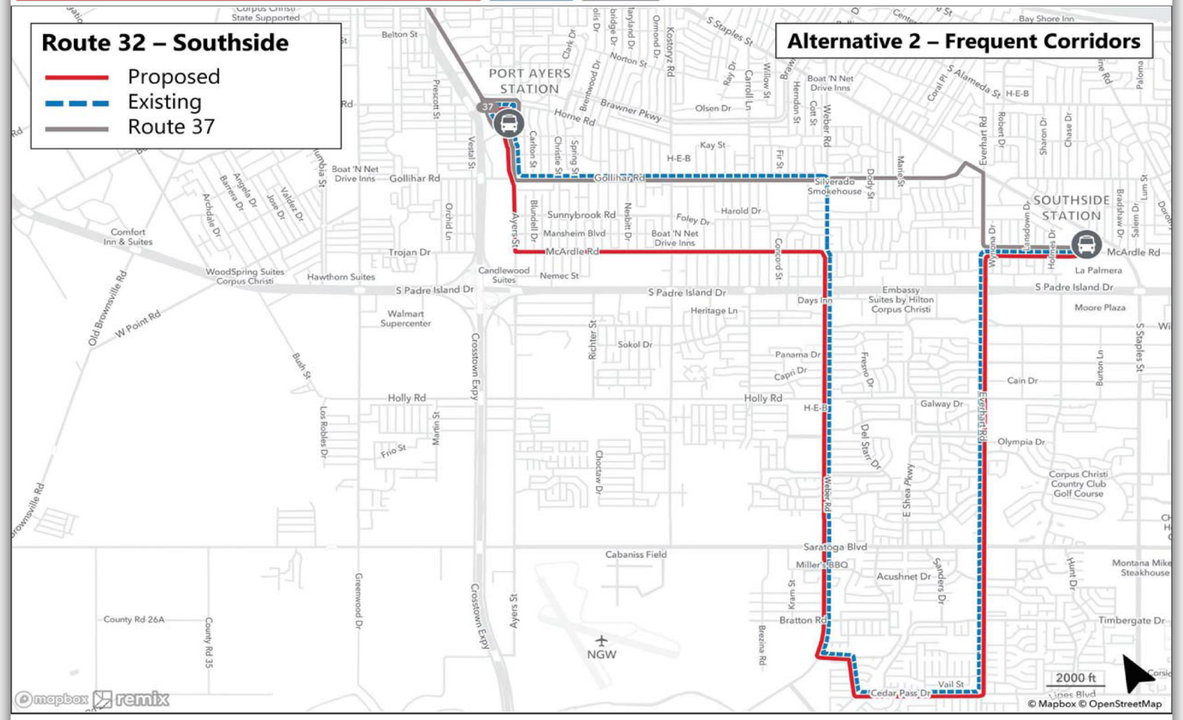
Service would operate every 15 minutes, all-day, throughout entire route.

	Day	All-day frequency	Hours of Service
Existing	Weekday	40	6:00 AM-8:12 PM
	Saturday	40	6:00 AM-8:08 PM
	Sunday	30	8:00 AM-8:20 PM
Recommended	**Weekday**	**15**	**6:00 AM-8:12 PM**
	Saturday	**15**	**6:00 AM-8:08 PM**
	Sunday	**15**	**8:00 AM-8:20 PM**

Route 32
Southside

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 32 is duplicative of Route 37 along Gollihar Rd. Route 32 should be adjusted to maintain the same general alignment but would operate on McArdle Rd to avoid duplication with Route 37 along Gollihar Road.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:15 AM-7:57 PM
	Saturday	60	8:07 AM-7:57 PM
	Sunday	60	8:07 AM-7:57 PM
Recommended	**Weekday**	**60**	**6:15 AM-7:57 PM**
	Saturday	**60**	**8:07 AM-7:57 PM**
	Sunday	**60**	**8:07 AM-7:57 PM**

Route 37
Crosstown

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

Route 37 currently duplicates multiple different routes. Route 37 should be shortened to Southside Station to avoid duplication with the proposed high-frequency Route 29. It would maintain service along Gollihar Road. Riders on McArdle Rd would have access to service on extended, more frequent Route 29.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:10 AM-8:05 PM
	Saturday	60	8:10 AM-8:05 PM
	Sunday	60	8:10 AM-8:05 PM
Recommended	**Weekday**	**60**	**6:10 AM-8:05 PM**
	Saturday	**60**	**8:10 AM-8:05 PM**
	Sunday	**60**	**8:10 AM-8:05 PM**

Route 60
Momentum Shuttle

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.

Route Changes Overview

Route 60 would be discontinued and 15-minute, all-day service would be provided by Route 29.

Hours of Service (When it runs)

Discontinued.

Frequency (How often it runs)

Discontinued.

	Day	All-day frequency	Hours of Service
Existing	Weekday	10	7:30 AM-7:17 PM
	Saturday	-	-
	Sunday	-	-
Recommended	**Weekday**	**-**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

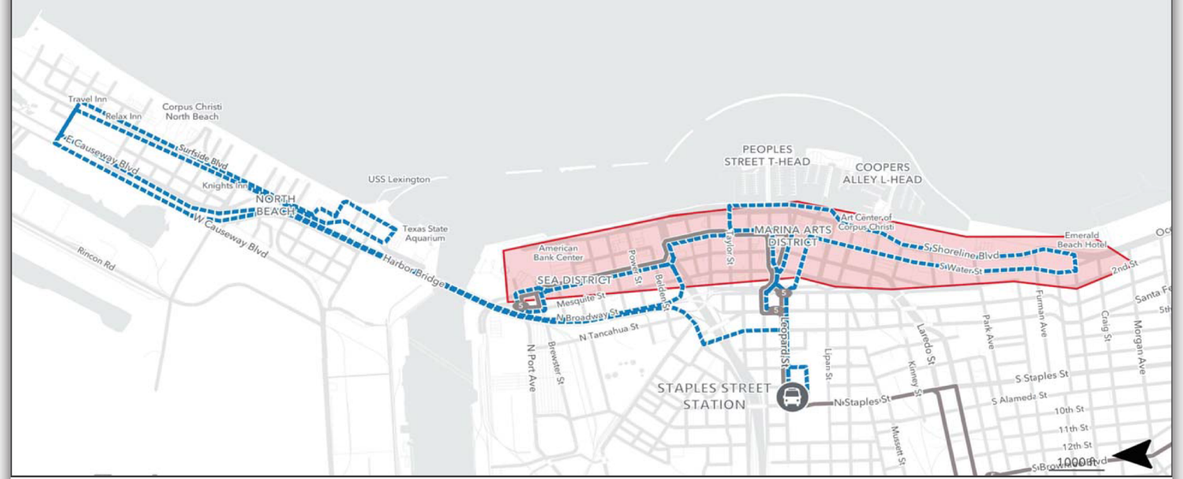
Route 76
Harbor Beach Shuttle

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.

Route 76 – Harbor Beach Shuttle
- Existing
- Route 5
- Marina Zone

Alternative 2 – Frequent Corridors



Route Changes Overview

Route 76 is circuitous and duplicative of Route 78. Due to lack of ridership, Route 76 should be replaced with an On-Demand Zone service that would provide service in Downtown Corpus Christi and on Shoreline Blvd and Water St, with connections to Staples Street Station.

Hours of Service (When it runs)

Discontinued. Replacement service would operate same hours as existing Route 76.

Frequency (How often it runs)

Discontinued. Replacement service would be On-Demand Zone.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:20 AM-7:55 PM
	Saturday	60	8:00 AM-6:55 PM
	Sunday	60	8:00 AM-6:20 PM
Recommended	**Weekday**	**-**	**-**
	Saturday	**-**	**-**
	Sunday	**-**	**-**

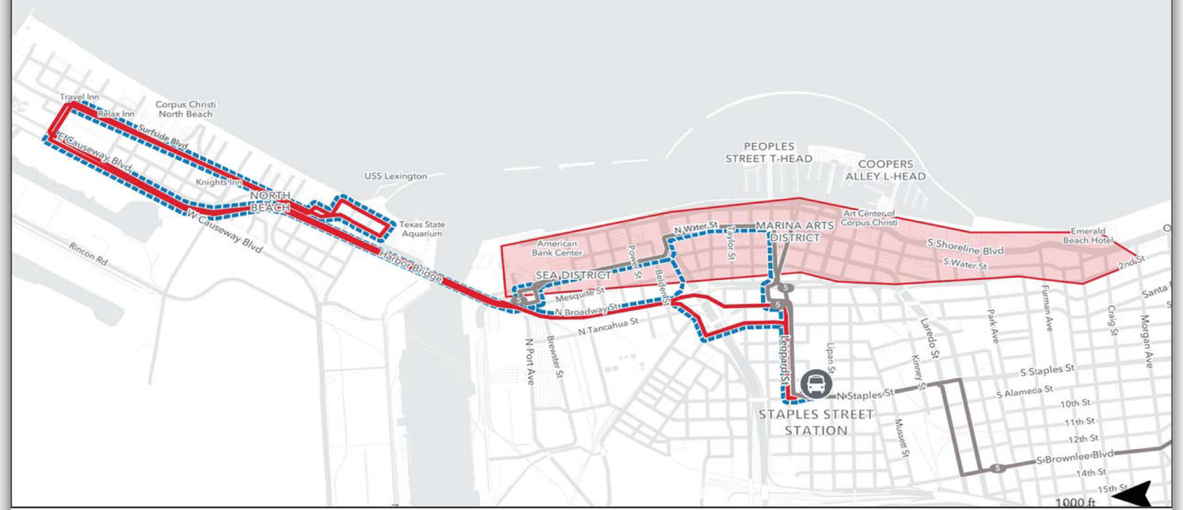
Route 78
North Beach Shuttle

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.

Route 78 – North Beach Shuttle
- Proposed
- Existing
- Route 5

Alternative 2 – Frequent Corridors



Coverage (where it goes)

Route 78 is indirect and has low ridership. Route 78 should be restructured to provide a direct, fast connection between North Beach and Staples Street Station, without serving downtown Corpus Christi. Removing the downtown segments also allows Route 78's alignment shift to the new Harbor Bridge access points once they are complete. The proposed extension of Route 5 will provide service to downtown Corpus Christi.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

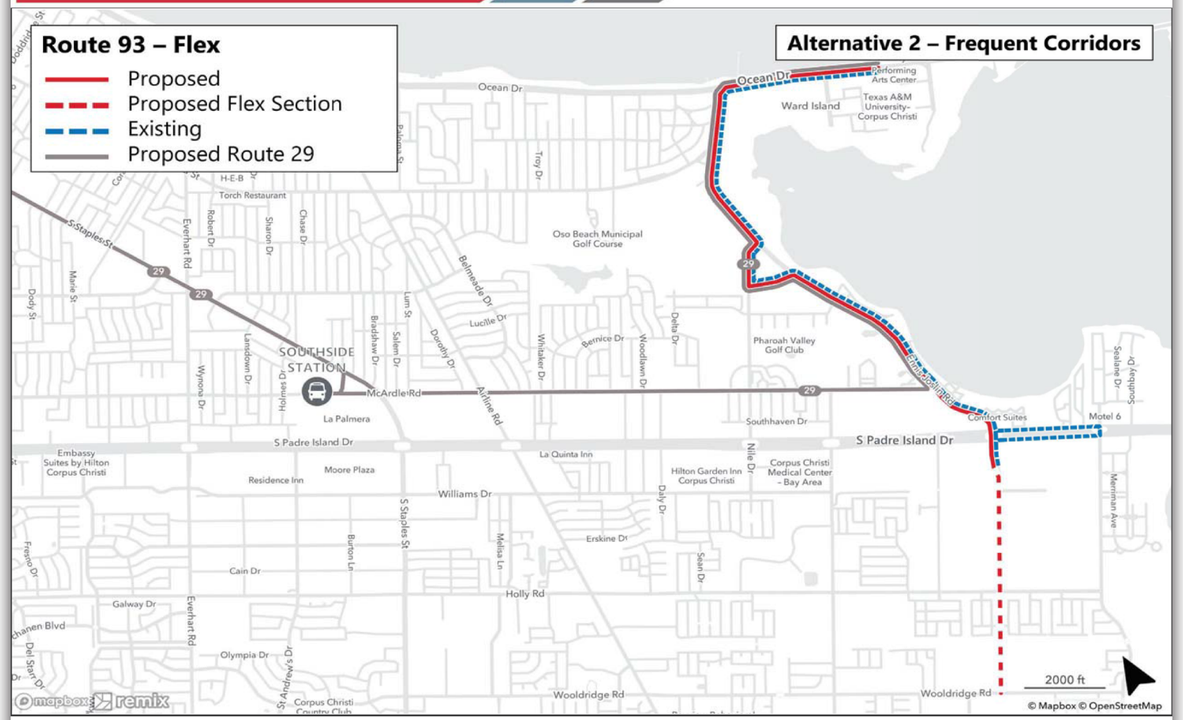
No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	60	6:50 AM-7:25 PM
	Saturday	60	6:50 AM-7:25 PM
	Sunday	-	-
Recommended	**Weekday**	**60**	**6:50 AM-7:25 PM**
	Saturday	**60**	**6:50 AM-7:25 PM**
	Sunday	**-**	**-**

Route 93
Flex

ALTERNATIVE 2: HIGH FREQUENCY CORRIDORS

FLEET forward 2022
Enhancing the Rider Experience, Together.



Coverage (where it goes)

This route would discontinue its flex function from Flour Bluff. A new flex option would be added along Ennis Joslin Rd south of Aspen Heights (its current terminus) to meet potential growing demand. The Momentum Village Stops would act as a transfer to the high-frequency Route 29 service.

Hours of Service (When it runs)

No changes.

Frequency (How often it runs)

No changes.

	Day	All-day frequency	Hours of Service
Existing	Weekday	30	7:35 AM-10:35 PM
	Saturday	30	9:35 AM-8:05 PM
	Sunday	-	-
Recommended	**Weekday**	**30**	**7:35 AM-10:35 PM**
	Saturday	**30**	**9:35 AM-8:05 PM**
	Sunday	**-**	**-**

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Corpus Christi Regional Transportation Authority
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