



GoTriangle
 Board of Trustees
 March 23, 2022
 12:00 pm-2:30 pm Eastern Time

Based on NC Safer At Home executive orders in response to COVID-19, the GoTriangle Board of Trustees will meet remotely on Wednesday, March 23, 2022, at 12:00 pm.

*Click here to: [Join Webex Meeting](#)
 Or dial: +1 415-655-0003
 Access code: 2433 259 3227*

I. Call to Order and Adoption of Agenda

(Sig Hutchinson)

ACTION REQUESTED: Adopt agenda with any changes requested.

II. Recognition

A. Employee Service Awards

(5 minutes Charles Lattuca)

III. Public Comment

(Sig Hutchinson)

The public comment period is held to give citizens an opportunity to speak on any item. The session is no more than thirty minutes long and speakers are limited to no more than three minutes each. Speakers are required to sign up in advance with the Clerk to the Board at mdawson@gotriangle.org.

IV. Consent Agenda

(Sig Hutchinson)

Items listed on the consent agenda are considered as a single motion. At the request of any Board member, or member of the public, items may be removed from the consent agenda and acted on by a separate motion. Items pulled from the consent agenda will be placed at the beginning of the general business agenda for discussion and action. Any Board member wishing to remove an item from the consent agenda should advise staff in advance.

ACTION REQUESTED: Approve consent agenda.

A. Meeting Minutes

ACTION REQUESTED: Approve draft minutes.

Minutes | February 16, 2022

Minutes | February 23, 2022

B. Durham Transit FY2022 Q3 Work Plan & Budget Amendment

O&F RECOMMENDATION: Approve the FY2022 Q3 Durham Transit Work Plan and budget amendments.

Ordinance 2022 0005

Ordinance 2022 0006

FY2022 Q3 Budget Change Impact

Memo to Durham Staff Working Group

C. Contract for Purchase of Replacement Radios and Communication Equipment

O&F RECOMMENDATION: Authorize the President/CEO to execute a contract with Motorola Solutions Inc. for the purchase of replacement radios and associated communication system equipment for an amount not to exceed \$1,394,468.

Motorola Cost Proposal

V. Presentation | Durham Transit Plan Update

(20 minutes Ellen Beckmann, Durham County)

Memo from Durham County

Presentation

VI. General Business Agenda

Items listed on the general business agenda are for discussion and possible action. Such designation means that the Board intends to discuss the general subject area of that agenda item before making any motion concerning that item.

A. Items Removed from the Consent Agenda

(Sig Hutchinson)

ACTION REQUESTED: Discuss and take action on any items removed from the consent agenda.

B. RUS Bus Development

(15 minutes Katharine Eggleston)

1. Closed Session | RUS Bus Agreements

(30 minutes Byron Smith)

ACTION REQUESTED: Enter into Closed Session pursuant to NCGS §143-318.11(a)(3) to consult with an attorney employed or retained by the public body in order to preserve the attorney-client privilege between the attorney and the public body, which privilege is hereby acknowledged.

(30 minutes Byron Smith)

Return to open session

2. RUS Bus Predevelopment MOU Addendum

(10 minutes Katharine Eggleston)

ACTION REQUESTED: Trustees authorize the President/CEO to execute an addendum to the Predevelopment MOU with RB Infrastructure LLC, a special purpose entity owned and controlled by Hoffman & Associates, for an amount not to exceed \$3,255,962 to continue advancing development of the RUS Bus Transit Facilities.

Presentation

C. Operations & Finance Committee Report

(5 minutes Renee Price)

D. Planning & Legislative Committee Report

(5 minutes Vivian Jones)

VII. Other Business

A. D-O LRT Project Expenses

(30 minutes Sandra Freeman)

B. President & CEO's Report

(5 minutes Charles Lattuca)

Contracts

New Hires & Promotions

1. Operations Update

(5 minutes Patrick Stephens)

2. Capital Projects Status Report

Presentation - Major Projects Update

(10 minutes Katharine Eggleston)

C. General Counsel's Report

(5 minutes Byron Smith)

D. Chair's Report

(5 minutes Sig Hutchinson)

E. Board Member Reports

1. CAMPO Executive Board Representative

(5 minutes Will Allen III)

2. Regional Transportation Alliance (RTA) Rep.

(5 minutes Will Allen III)

3. DCHC MPO Board Representative

(5 minutes Michael Parker)

VIII. Adjournment

(Sig Hutchinson)

Service Awards

Congratulations, and thank you for your service!

Eric Young 10 Years

Eric owns his own business and works at an Operator Part-time. He joined the GoTriangle team as a Bus Operator I and has been promoted through the ranks to his current position as Bus Operator III.

In his spare time he enjoys spending time with his wife, family and friends. He has been married to Willa Joe for 36 years and they have one child.



Cynthia Hawkins 10 Years

Cynthia joined the GoTriangle team as a Bus Operator I and was quickly promoted through the ranks to her current position as Bus Operator III.

In her spare time she enjoys a variety of things, a little wine and cheese with good company, riding her motorcycle, and concert going. Being the former leader of a small band, music brings her great joy.

Single having no children, she dotes on her niece and nephew.



Vinson Hines

15 Years

Vinson joined GoTriangle as the Paratransit Manager. He is very grateful for the opportunities to grow during his tenure at GoTriangle and currently serves as Assistant Director of Transit Operations. With 28 years of experience in the public transportation industry, GoTriangle has been one of his favorite places to work due great people and mentors in the organization. He says, "You cannot have success without having good people around you who are also for you."

In his spare time, he enjoys traveling with his family and friends, playing basketball, reading, watching sports, and finding good places to eat with great food and desserts!

He has been married to his wife Da'Meka for 16 years, and they have four children: Rha'Kwon, Khendra, Kaleb, and the recent addition of Lucille.



Robin Leonard/Nweke 20 Years

Robin joined the GoTriangle team as a Bus Operator. She was later promoted to Dispatcher/Supervisor and currently serves as a Transit Service Supervisor. Robin is also an entrepreneur and owns her own business.

Robin loves multitasking and the multifaceted aspects of her position. She enjoys helping people reach their greatest potential and motivating them to think outside the box.

Robin says, “what I like about Go Triangle is our **promise to customers**, what they can expect from our services, and how we strive daily to offer them a reliable and consistent service. I’m glad to be a part of maintaining and building our brand while I’m here.”



Special Recognition: Retirement



Laurie Barrett

31 Years

Laurie is the first GoTriangle employee to meet this milestone. She was hired shortly after the creation of our organization and is one of the only original employees remaining.

During Laurie's tenure she has held the positions of vanpool coordinator, Wake County Transportation Manager, Director of Operations and currently is our Director of Regional Partnerships.

Laurie has hired, developed and promoted many employees that hold key positions within our organization.

Continued>



Laurie Barrett

30 Years

Laurie has played an integral role in creating many policies and procedures and implementing many employee-related programs such as the Employee Assistance Program before GoTriangle had a Talent Services department.

Having dedicated most of her career to our organization, she has left an indelible mark on GoTriangle. A few of her accomplishments include developing the paratransit service, the Regional Pass and the veterans discount (for transit fares) and writing the application for the grant that awarded funds to buy our electric buses.



Laurie Barrett

30 Years

Other notable projects include:

Procurement of our first Gillig Busses, our first AVL system (Radio Satellite Integrators), and the Regional Fareboxes. She also wrote the Lo No Grant that helped us buy two electric buses.

Leading the initiative for the creation of Regional Pass with our partner agencies and to expand the maintenance facility (2007)

Over the last 10 years, she has worked with GoDurham to improve the operation and more recently led the Regional Partner agency meetings through the Pandemic.

Our hats off to a job well done and congratulations on your retirement!



Thank you all for your service and a job well done!





**BOARD OF TRUSTEES
WORK SESSION
MEETING MINUTES**

4600 Emperor Boulevard
Suite 100
Durham, NC 27703

Wednesday, February 16, 2022

12:00 p.m.

Virtual | Microsoft Teams

Board members present | Will Allen III, Michael Fox [left 2:37 p.m.], Brenda Howerton, Sig Hutchinson, Valerie Jordan [arr. 12:29 p.m., left 1:31 p.m.], Vivian Jones, Elaine O'Neal, Michael Parker, Jennifer Robinson, Stelfanie Williams [arr. 12:42 p.m., left 3:02 p.m.]

Board members absences | Corey Branch [excused], Renée Price

Chair Sig Hutchinson officially called the meeting to order at 12:01 p.m. A quorum was present.

I. Adoption of Agenda

Action: On motion by Jones and second by Allen the agenda was adopted. Upon vote by roll call, the motion was carried unanimously.

II. Opening

Chair Hutchinson welcomed participants to the meeting to hear an update on the Greater Triangle Commuter Rail project. He offered a special thanks and welcome to NCR Board Chairman Bill Bell, President and CEO Carl Warren and other board members.

Chuck Lattuca offered appreciation to NCR; NCDOT; the counties of Durham, Johnston and Wake; CAMPO and DCHC MPO for their work over the past 18 months on this study and for the efforts to educate Triangle residents, stakeholders and elected officials on the project.

Carl Warren thanked GoTriangle for the invitation to participate and offered NCR's enthusiasm about the potential and possibilities for commuter rail.

III. Orientation

Katharine Eggleston stated that GoTriangle staff and the consultant team will present an update on the Greater Triangle Commuter Rail project. She has offered thanks to the staff of the study partners for their support and collaboration. The presentation is attached and hereby made a part of these minutes.

Eggleston then provided an overview of the project and the Phase 1 feasibility study:

- North Carolina Railroad Company owns the 317-mile corridor.
- Class I freight rail provider Norfolk Southern operates and maintains the railroad through a long-term lease with NCR.
- Amtrak operates four intercity passenger rail routes in the corridor, including the Carolinian and the Piedmont, which are sponsored by NCDOT.
- Added capacity in the NCR corridor for commuter rail would require additional infrastructure, including added tracks.

- Projected ridership is an important criteria for qualifying for federal funding, which is critical for the Greater Triangle Commuter Rail project. Phase 1 of the feasibility study determined that the area between Durham and Garner or Durham and Clayton would be most likely to qualify for federal funding and this area was carried forward for this phase of more detailed feasibility study.
- Ridership is projected at 10,000 daily riders by 2040, with the service providing a faster trip between major destinations than the bus network is able to today and a trip that is time competitive with driving in many cases.
- The initial capital investment was estimated at \$1.8-\$2.1 billion, with operating costs of \$29-\$37 million annually.
- April 2022 is the target date for completion of the technical study. The modeling study being led by Norfolk Southern directly impacts the schedule and although those results are expected soon, they have not been received.
- The MOU allocated six months for deliberation to decide whether to move forward with the project based on the feasibility study results.

Eggleston asked the board for input following the presentation on this question: “Can regional boards decide whether and how to move forward with the project [including local cost shares] based on the information expected to be available this spring.” She added that additional effort will be required for answers to some questions:

- Norfolk Southern infrastructure requirements and cost estimate for an all-day service plan. Current modeling by Norfolk Southern is for the baseline service plan of 30 minute service in peaks with limited service midday and in the evenings.
- Decisions about vehicles and station accessibility approach.
- Whether the end point is Garner or Clayton in Johnston County.
- Signed railroad term sheets.

Eggleston added that due to the scale and complexity of the project, some information will not be known until a greater level of design is achieved during an implementation phase as opposed to a study phase. This information includes the third-party agreements, a greater certainty of project cost and schedule and the potential of FRA grants for complementary projects.

IV. Public Engagement

Liz Raskopf provided an update on public engagement efforts. She highlighted the establishment of a downtown Durham information hub and the canvassing of businesses to provide information to the community, with a focus on black and Hispanic-owned businesses. Staff has created an email group to receive information on the project, with over 2,612 names. A webinar conducted in November focused on proposed stations had 281 attendees with over 500 post-presentation views. Over 100 questions were asked during the webinar to which staff has responded. Staff continues to maintain and update the dedicated commuter rail project website and is active in online discourse about the project.

V. Railroad Agreements

Tom Henry advised that GoTriangle will need to complete a rigorous federal process satisfying federal requirements and expectations in order to successfully implement this project. In addition to demonstrating financial and technical capacity to carry out the project, federal law requires that GoTriangle also demonstrate legal capacity. This includes third party agreements with the other railroads allowing GoTriangle to construct, operate and maintain a passenger rail system on long term basis. Henry added that as this project is in an active railroad corridor, GoTriangle will have to navigate a variety of expectations already cemented in agreements between current users of the corridor and the owner.

Henry explained that GoTriangle is preparing term sheets as a basis for future MOUs with the railroads. The results of Norfolk Sothern's modeling study will help define operational and physical characteristics of the system that will be incorporated into the legal agreements. He shared a list of the numerous agreements that will be required for the project including specific agreements for planning, design and property; construction and operation.

Byron Smith noted that the liability and indemnification and insurance issues have been resolved. GoTriangle also will have to deal with CSX and Amtrak operations in portions of the corridor.

VI. Planning Study Status

STV consultant team project manager Monica Barrow presented the goals for the phase 2 feasibility study:

- *Refine the project concept* - Phase 1 identified station locations and assumed 8-2-8-2 train schedule [40 trains per day]. Phase 2 refined the schedule and provided that to Norfolk Southern for simulation. Considerable interest has been raised in a more robust service scenario for all-day service with half hourly service in morning and afternoon peaks and hourly service at other times of day for a total of 44 daily trains. Barrow stated that another round of modeling by Norfolk Southern would be required. Refining the concept includes considerations of additional track; bridge widenings and replacements; modifications to at-grade crossings; vehicle storage and maintenance facility and the rolling stock [trains]. Additional GoTriangle must comply with the Americans with Disabilities Act [ADA] for accessibility.
- *Estimate benefits*
- *Update cost estimates and potential for FTA funding*
- *Document risks*

Vehicle Accessibility

Tim Potens, transportation planner with STV, discussed accessibility for folks who need assistance boarding. He stated that there are other considerations with accessibility such as enhancements for the sight and hearing impaired. He explained that in a shared use corridor with freight, intercity passenger trains and commuter rail trains there is a mix of train heights, widths and lengths. He said that results in gaps between the platform and the train [vertical gap - between the platform and train floor; horizontal gap - between the platform and train].

Federal regulations for accessibility are contained in the ADA:

- Commuter rail systems must provide accessible boarding to every car in a train.
- Commuter rail systems or stations where the track is used by passenger trains only must provide level boarding [no vertical nor horizontal gap between the platform and train and no intervention or assistance needed for boarding passengers].
- Commuter rail systems and stations where the track is shared with freight operations may achieve accessibility using level-entry boarding, car-borne lifts bridge plates or ramps, mini-high platforms or station-based lifts.

Potens said the NCR/NS corridor does not permit high platforms on tracks shared with freight and low-level platforms are limited to 8 inches in height, which is very low and no rolling stock has a floor this low. These requirements mean that level boarding is not possible on shared tracks without constructing dedicated station tracks or using another method from the list above. He shared pictures and videos from other commuter rail systems to demonstrate these options. Potens said bridge plates, mini-high platforms and car-borne lifts are common in the industry and were the approach assumed in phase 1.

He said a more in-depth evaluation of dedicated tracks for accessibility was conducted in the Phase 2 study. It was determined to be physically feasible, with greater infrastructure impacts and property acquisitions to increase size of station area. The preliminary cost estimate for level boarding [dedicated tracks] is around \$270 million, doubling the cost for stations in the corridor. Operationally, level boarding performs modestly better regarding delay to freight trains, but there are no anticipated time savings for commuter rail trains. Regarding rolling stock, diesel locomotives and diesel multiple units are compatible with level boarding or assisted boarding.

Potens said a comparison with peer commuter rail systems was conducted. Of 24 systems opened or constructed in the ADA was adopted, 14 operate locomotives pulling coaches and ten use diesel multiple units. The systems are evenly split between level and assisted boarding. Of those with assisted boarding, they typically operate in shared use corridors, with Class I railroads and higher levels of freight traffic. These systems also commonly use locomotives and coaches with mini-high platforms or car-borne lifts. The systems with level boarding typically operate in exclusive or low-traffic corridors controlled by the transit agency with diesel multiple unit trains serving platforms with level boarding. Potens added that level boarding would be unique in a shared corridor like the NCR/NS corridor.

Potens stated that the Accessible Services Advisory Committee would be consulted and the discussion would continue with NCR before a recommendation is made.

Allen asked about Norfolk Southern's maintenance windows. Eggleston stated that will to be discussed actively. Monica Barrow added how mid-day work windows are modeled will influence what Norfolk Southern applies to alternate service scenarios that GoTriangle could ask them to model.

Chair Hutchinson called for a break from 1:25 -1:30 p.m. Jordan left during the break.

Corridor Screening

Patrick Livingston, STV engineer, discussed the corridor screening process to identify key engineering or constructability risks and determine areas that require extra attention to improve the project definition and reduce risk to the preliminary cost estimate [with contingencies] and implementation schedule. He added that no risk items were determined to potentially derail the project; however, some risk areas were noted for future study and mitigation. Raleigh Union Station was elevated to “high risk” status due to the complexity of the area, potential challenges to operational reliability and the West Street extension project. Four grade crossings were identified for potential attention due to proximity to proposed stations or suboptimal existing configuration: Plum Street in Durham, Rush and St. Mary’s streets in Raleigh and Yeorgan Road in Garner. Eight additional crossings have volumes or crash history that suggest potential for separation or closure. These are subject to study in the environmental phase and local input.

Cary Concepts

Livingston then discussed downtown Cary, one of two areas of specific focus, with the goals being:

- Add required track capacity
- Provide compatibility with plans for new multimodal facility
- Improve pedestrian/cyclist mobility
- Minimize impacts to roadways, traffic and historic structures
- Comply with Norfolk Southern, CSX and NCDOT requirements

Livingston said monthly meetings with the town of Cary were held since May 2020. Three initial concepts were discussed and led to the generation of two concepts that are moving out of this phase of study. One is a low-level platform option with no impacts to nearby historic structures and avoids a renegotiation of a railroad control point that previously took several years to negotiate. This cost for this concept is the same as the Phase 1 estimate for the Cary station. The other concept also avoids impacts to historic properties and renegotiation of the railroad control point; however, this concept has high-level platforms to accommodate level boarding with dedicated tracks. This concept is approximately \$15 million more than the phase 1 estimate. He shared images of the area and visualizations of the concepts of Harrison Avenue.

Durham Concepts

Moriah Ellington reiterated the challenges in Durham from aged infrastructure, low clearance under bridges, the curvy nature of the track and the tight congested corridor. She added that the goals in Durham are:

- Add required track capacity
- Improve clearance under rail bridges
- Improve pedestrian/cyclist mobility
- Preserve connection between Durham Station and train station
- Minimize impacts to roadway, traffic and historic structures
- Comply with Norfolk Southern, CSX and NCDOT requirements

Six initial concepts were identified in Durham and stakeholder engagement with various interested parties, NCDOT and NCRR was conducted. Discussions led to the refining of these concepts and the addition of others, ultimately with two concepts having the best ability to meet the established goals with the fewest impacts – one with a low-level platform and the other a high-level platform. Ellington shared images of the area and visualizations of the concepts for Chapel Hill Street and Gregson at Duke Street.

Both concepts include more elements that were assumed in Phase 1 – raising existing and proposed tracks along with additional structural work. The low-level platform option is approximately \$15 million more; the high-level platform, with additional tracks, is approximately \$35 million more.

Monica Barrow stated the planning study will conclude by using the Norfolk Southern modeling results to inform additional infrastructure requirements that may not have been assumed, which will modify the capital cost. She reiterated that capital cost, along with ridership, is a key driver of the potential for federal funding.

VII. Project metrics

Jay Heikes recapped two opportunity analysis reports previously presented by TJCOG and information on Tri-Rail in south Florida, a peer commuter rail system.

Affordable Housing

- 27% of the region’s permanent or legally binding affordable housing is located within a half mile of the proposed rail corridor, which is 4% of the region’s land area.
- The corridor presents significant opportunities for local governments to increase permanent affordable housing proximate to station areas on land owned by public agencies and institutional partners.
- In Durham, a partnership between the city, county and Durham housing authority will create more than 1,800 new units of affordable housing in and around town and proximate to frequent bus service and future potential rail stations.
- Households that spend more than 45% of their combined income on housing, utilities and transportation are considered cost-burdened. Over half the region’s residents are considered cost-burdened.

Travel Market Analysis

- Eight of the ten largest job hubs in the region are located along the proposed rail line - more than 280,000 today, accounting for more than 30% of the region’s total employment.
- Nearly 70,000 residents live in transportation disadvantaged communities along the corridor. Fast and reliable rail service has the potential to open up more of our region to these transportation disadvantaged communities increasing their access to opportunity.
- The Greater Triangle Commuter Rail project would provide a choice for cost burdened families to save money by driving less.

Peer System Tri-Rail

Tri-Rail is similar to the proposed Greater Triangle Commuter Rail project as it spans three counties, is located in a fast-growing and diverse region, serving a variety of destinations with strong connections to local transit, and is not focused just on bringing workers to single downtown destination but rather serves multiple destinations along its 73 mile corridor.

Tri-Rail began in 1989. Today the service runs 50 weekday trains with 30 on the weekends and holidays. It provides peak service every 20-30 minutes and 60 minutes during midday and the evening. Prior to the pandemic there were approximately 15,000 weekday trips.

Initially the service was temporary, as mitigation for a major construction project on I-95 and focused on peak times. Initial demographics show ridership was predominantly white, non-Hispanic. After the service became permanent, the route was extended and significant infrastructure investment was made. More trains were added, decreasing headways and increasing midday and evening service. Following these improvements, demographics of the system are now more representative of the region.

Economic Impact

Kyle Vangel of HR&A shared results of the economic impact study for the Greater Triangle Commuter Rail [GTCR] project:

- GRCR will provide a 2.4 times return on the initial capital investment, with \$2.1 billion in federal and local investment generating a \$5 billion increase in gross regional product over the first 20 years of operations.
- The Commuter Rail will help develop and sustain a region that thrives economically and ecologically, by enhancing the quality of life of commuters, fostering better connectivity between workers and employers, and encouraging compact development patterns that are economically and environmentally resilient.
- Workers would experience increased personal incomes as a result of increased economic activity in the region, with cumulative growth of nearly \$3.7 billion by 2050 – equating to \$2,050 in additional income per employee.
- Commuter rail is expected to serve over 100,000 riders every weekday, saving 4,186 hours daily at a value of \$12.25 per hour saved or \$12.9 million annually.

Fox left.

VIII. Cost-Sharing Discussions

Steve Schlossberg recapped the cost assumptions for the Greater Triangle Commuter Rail project:

- Total project cost is consistent with the phase 1 estimate.
- Construction is anticipated to start in FY2026 and be complete in FY2030.
- FTA would contribute 50% of the cost through Full Funding Grant Agreement.
- Federally-backed TIFIA loan would fund 30% of the cost, to be repaid over 35 years from Wake and Durham transit plan funds.
- Cash and conventional debt from the Wake and Durham transit plans would provide the remaining 20% of the cost.

- Operations will begin in 2030 with a first year cost projected at \$41 million, which are expected to grow at 2.5% per year.
- Funding for operations and maintenance will be from a mix of local funds, farebox revenues and federal apportionment.
- Debt service expenditures will begin in year two of operations and continue for 35 years.

Schlossberg pointed out the project currently has a funding gap, with Wake County committed to 66.7% and Durham 20% of the non-federal share. The 13.3% difference equates to approximately \$130 million. Discussions with the counties continue with various solutions being considered for raising the additional funds.

IX. **Wrap-up / Next Steps**

Katharine Eggleston asked if the Board has the information it needs, based on what was presented today and what is expected to be delivered over the next several months, to make a decision on the project.

X. **Discussion**

Parker asked what the Board will be asked to commit to when making a decision to proceed with the project. Eggleston stated that implementation scenarios are being prepared that will show the schedule and associated costs for each phase.

Williams left.

Hutchinson thanked staff and partners from NCRR who participated today.

After the meeting staff followed up on several questions posted in the meeting chat

XI. **Adjournment**

Action: Chair Hutchinson adjourned the meeting at 3:08 p.m.

Sig Hutchinson, Chair

Attest:

Michelle C. Dawson, CMC
Clerk to the Board



**BOARD OF TRUSTEES
MEETING MINUTES**

4600 Emperor Boulevard
Suite 100
Durham, NC 27703

Wednesday, February 23, 2022

12:00 p.m.

Virtual | Webex

Board members present | Will Allen III, Corey Branch [left 1:37 p.m.], Michael Fox [arr. 12:19 p.m., left 1:28 p.m.], Brenda Howerton, Sig Hutchinson, Elaine O'Neal [arr. 12:09 p.m., left 2:17 p.m.], Michael Parker, Renée Price, Jennifer Robinson [left 2:16 p.m.], Stelfanie Williams

Board members excused | Vivian Jones, Valerie Jordan

Chair Sig Hutchinson officially called the meeting to order at 12:00 p.m. A quorum was present.

I. Adoption of Agenda

Brenda Howerton requested to add a report from the Personnel Committee for the Board to give direction to the General Counsel.

Action: On motion by Allen and second by Price the agenda was adopted with the addition of a Personnel Committee Report. Upon vote by roll call, the motion was carried unanimously.

II. Recognition

A. Employee Service Awards

President/CEO Charles Lattuca recognized the following employees for their service:

- Carolyn Williams, 20 years' service
- Juan Alencastro, 15 years' service
- Arthur Colson, 10 years' service

III. Public Comment

No comments.

IV. Consent Agenda

Brenda Howerton requested that the item regarding the Interlocal Agreement for reimbursement of commuter rail related waterline adjustments be removed from the consent agenda.

Action: A motion was made by Parker and seconded by Allen to approve the consent agenda. Upon vote by roll call, the motion was carried unanimously.

The following consent agenda items were approved:

- January 31, 2022 | Regular Session Minutes.
- FY2022 Wake Transit work plan and budget ordinance amendments 2022 0003 - 0004.

The budget ordinance amendments are attached and hereby made a part of these minutes.

V. General Business Agenda

A. Items Removed from Consent Agenda

1. Interlocal Agreement for Reimbursement of Commuter Rail Related Waterline Adjustments

Katharine Eggleston explained this opportunity was identified during the commuter rail study. She said there are a number of locations in Durham where the rail crossing clearance over roadways is substandard and trucks often hit the bridges. One engineering solution for this problem is to increase the height of the rail and push down the height of the road. Durham is doing a waterline replacement to Gregson Street and the design calls for minimum cover under the existing roadway. In order to lower the road in the future, it would require an additional relocation of the waterline. Durham has agreed to lower the line now and split the cost with GoTriangle. The cost to lower the line now is \$78,000. Eggleston added that a future relocation would be many times that cost and would cause additional disruption for the closing of Gregson Street.

Action: On motion by Parker and second by Price the Board voted to authorize the President/CEO to execute an Interlocal Agreement between GoTriangle and the City of Durham for Reimbursement of Commuter Rail Related Waterline Adjustments with a reimbursement amount of \$39,000 to be paid by GoTriangle. Upon vote by roll call, the motion was carried unanimously.

B. Operations & Finance Committee Report

Operations & Finance Committee Chair Renée Price reported that the Committee discussed the FY2022 Q3 wake transit work plan and budget amendments from the consent agenda and the ILA just approved as well as the next item, MOU for joint procurement of on-call services. The committee also received a financial report on the Orange and Durham County transit plans.

C. MOU for Joint Procurement of On-Call Services

Michelle Peele informed the Board that CAMPO had offered GoTriangle, the City of Raleigh and the Town of Cary to participate in a joint procurement process for on-call services related to transportation planning, program and project management and financial services. The Memorandum of Understanding [MOU] will institutionalize the roles and responsibilities of the participating parties in the selection process of qualified firms and allow the parties to enter into agreements with the chosen consultants. GoTriangle staff has not identified the need for these services at this time, but could in the future. The MOU will be active for a five year period and CAMPO intends to issue two additional requests for qualifications during that time.

Peele also noted an upcoming Wake Transit virtual “Ask the Planners” meeting on March 17. She stated this is an opportunity to provide comment, ask questions and have general discussion with planning staff regarding the FY2023 work plan.

Action: A motion was made by Allen and seconded by Howerton to authorize the President/CEO to execute the Joint Procurement of On-Call Transit Planning/Engineering Services Memorandum of Understanding [MOU] with CAMPO and CAMPO member jurisdictions. Upon vote by roll call, the motion was carried unanimously.

D. Personnel Committee Report

Brenda Howerton stated that as chair of the Personnel Committee she has discovered that the by-laws provide little direction to the committee and no policies and procedures have been put in place to handle personnel matters that might arise. She requested that the Board authorize the General Counsel to issue a solicitation for a consultant to evaluate the by-laws and recommend potential changes to the by-laws and/or new policies/procedures related to the Board's oversight of GoTriangle.

Board members discussed the request and agreed that this should be directed to the full Board and not just the Personnel Committee.

Action: On motion by Branch and second by the Price the Board voted to schedule a special Board meeting to discuss Commissioner Howerton's request to look at policies, procedures and the by-laws related to the Personnel Committee. Upon vote by roll call, the motion was carried unanimously.

VI. Other Business

A. President and CEO's Report

A list of contracts approved by the president and CEO is attached and hereby made a part of these minutes.

Lattuca reported on the following items:

- The disagreement with CAMPO regarding bus service operating reimbursements is mostly resolved with a small balance that is outstanding.
- Senior staff provided a commuter rail briefing to NC Department of Commerce staff senior staff on the project's economic impacts for the state and Triangle region and the opportunities for economic development.
- Met with the Mayor of Selma to discuss commuter rail and how the town can connect to a future rail station if built.
- GoTriangle will celebrate National Operator Appreciation Day on March 18.
- Additional information is being prepared on spending for the D-O LRT project to answer lingering questions as well as real estate transactions and the status of those properties.

Fox and Branch left.

1. Operations Update

The monthly report is attached and hereby made a part of these minutes.

Patrick Stephens reported that the signs for the Bus on Shoulder System [BOSS] have been installed on 540. He explained that this program allows buses to travel on the shoulder of the highway during times of congestion when traffic slows to 35 MPH or less. He also stated that a class of five new operators is scheduled to begin March 7 with another 21 applicants being screened.

Scott Thomas reported that the recruitment office for Durham Station will be delivered and should be operational within 7-14 days.

2. Covid-19 Update

Carolyn Lyons reported that 86% of GoTriangle employees are fully vaccinated and no positive tests have been reported this testing period. Parker asked if boosters are required. Lyons responded no.

3. Capital Projects Status Report

The capital projects status report and presentation on major projects update is attached and hereby made a part of these minutes. Katharine Eggleston discussed activities related to RUS Bus. She also reported that some results have been received from Norfolk Southern on the capacity modeling for the Greater Triangle Commuter Rail project. The GoTriangle team and NCRRT are reviewing the results and will meet with Norfolk Southern in March to discuss their recommendations.

B. General Counsel's Report

Byron Smith discussed legal activities related to the two major capital projects. He said discussions are underway with the sale of property at Seaboard Station, a review of GoTriangle policies is underway and legal staff is assisting departments with various contracts.

Robinson and O'Neal left.

C. Chair's Report

Chair Hutchinson reminded Board members that travel requests for FY2023 are due March 18 and the event for regional leaders on March 21. He also suggested that meetings could return to in-person as Covid-19 cases are decreasing.

D. Board Member Reports

1. CAMPO Executive Board Representative

Will Allen III reported that the CAMPO Executive Board approved the Q3 work plan amendments that we approved by GoTriangle today. The 2050 Metropolitan Transportation Plan also was approved.

2. Regional Transportation Alliance (RTA) Representative

Will Allen III stated there is nothing new to report, but reminded members of the rescheduled trip to south Florida, March 29-31.

3. DCHC MPO Board Representative

Michael Parker stated that the MPO Board received a presentation from NCDOT on complete streets which triggered a discussion about the degree to which bicycles and pedestrians are or are not integral to roads and who should be responsible for maintaining.

VII. Adjournment

Action: Chair Hutchinson adjourned the meeting at 2:28 p.m.

Sig Hutchinson, Chair

Attest:

Michelle C. Dawson, CMC
Clerk to the Board

DRAFT

MEMORANDUM

TO: Operations and Finance Committee
FROM: Finance & Administrative Services
DATE: March 3, 2022
SUBJECT: Durham Transit FY 2022 Q3 Durham Transit Work Plan/Budget Amendment

Strategic Objective or Initiative Supported

Implement the Durham Transit Plan. This item supports initiative 1.2, "Pursue service improvement and expansion opportunities."

Action Requested

Staff requests that the GoTriangle Operations & Finance Committee recommend to the GoTriangle Board of Trustees the approval of the FY 2022 Q3 Durham Transit Work Plan amendment.

Background and Purpose

One (1) amendment

1. Durham Transit Plan Development (Additional Funding for Plan Development) – The original project was adopted as part of the FY20 Work plan. Due to a variety of issues, the need to increase funds has been identified for the development of the plan. In order to complete the development of the plan to its adoption by the three governing bodies, an additional \$225,000 is needed. To offset the increase to the Durham Transit Plan, the project Fare Collection Improvements 21DCI002 will be reduced by the same amount requested.

Included in these attachments has been submitted for approval:

- Detailed Project Amendment Request

At the time of the GoTriangle Operations and Finance Committee receiving this item, the Durham Staff Working Group will have already reviewed and recommended the listed amendment to the GoTriangle Board of Trustees.

Financial Impact

The proposed amendment, if recommended by this committee and approved by the Board of Trustees, will have zero increase to the Durham Transit Work Plan.

Staff Contact(s)

- Steven Schlossberg, Budget and Finance Manager, sschlossberg@gotriangle.org, (919) 485-7590
- Sandra Freeman, CFO/Director of Finance and Administrative Services, sfreeman@gotriangle.org, (919) 485-7415

2022 0005

**GOTRIANGLE
FISCAL YEAR 2022
TRIANGLE TAX DISTRICT – DURHAM OPERATING FUND
BUDGET ORDINANCE AMENDMENT**

BE IT ORDAINED by the Research Triangle Regional Public Transportation Authority Board of Trustees:

Section 1. It is estimated that the following revenues will be available in the **Triangle Tax District Durham Operating Fund** for the fiscal year beginning July 1, 2021, and ending June 30, 2022:

	Original	Revised
Article 43 ½ Cent Sales Tax	\$ 22,051,715	\$ 21,447,715
Vehicle Rental Tax	885,300	885,300
\$7 County Vehicle Registration Tax	1,654,500	1,654,500
\$3 Vehicle Registr Transfer from Dur/Orange Special Tax District	<u>709,500</u>	<u>709,500</u>
Total	\$ 25,301,015	\$ 24,697,015

Section 2. The following amounts hereby are appropriated in the **Triangle Tax District Durham Operating Fund** for the fiscal year beginning July 1, 2021, and ending June 30, 2022:

	Original	Revised
Tax District Administration	\$ 415,800	\$ 415,800
Transit Plan Administration	0	0
DCHC MPO	58,200	58,200
GoTriangle	1,607,500	1,607,500
Durham County	205,900	205,900
Bus Operations	0	0
Durham County Access	196,100	196,100
GoDurham	5,914,300	5,689,300
GoTriangle	1,999,300	1,999,300
Transfer to Triangle Tax District - Durham Capital Fund	14,903,915	0
Transfer to Durham Operating Fund Balance	<u>0</u>	<u>14,524,915</u>
Total	\$ 25,301,015	\$ 24,697,015

Section 3. The FY22 Durham Transit Work Program reflects ongoing projects that remain vital to providing service to current transit customers and new projects that address immediate needs during a transition year to a new Transit Plan with updated priorities. The current project budgets identified are those that are deemed time-sensitive ongoing efforts or involve time-sensitive external grant sources as part of their overall funding mechanism. DCHC MPO, GoTriangle and

Durham County will consider amendments to the FY22 Durham Transit Work Program as priorities are identified in the new Transit Plan.

Section 4. Copies of this Budget Ordinance shall be furnished to the Clerk to the Board of Trustees and to the Budget Officer of this Authority to be kept on file for their direction in the disbursement of funds.

ADOPTED THIS THE 23RD DAY OF MARCH 2022.

Sig Hutchinson, Board of Trustees Chair

ATTEST:

Michelle C. Dawson, Clerk to the Board

2022 0006

**GOTRIANGLE
FISCAL YEAR 2022
TRIANGLE TAX DISTRICT – DURHAM CAPITAL FUND
BUDGET ORDINANCE AMENDMENT**

BE IT ORDAINED by the Research Triangle Regional Public Transportation Authority Board of Trustees:

Section 1. It is estimated that the following revenues will be available in the **Triangle Tax District – Durham Capital Fund** for the fiscal year beginning July 1, 2021, and ending June 30, 2022:

	Original	Revised
Article 43 ½ Cent Local Option Sales Tax	\$9,129,685	\$9,733,685
Allocation from Durham Capital Fund Balance	<u>0</u>	<u>0</u>
Total	\$ 9,129,685	\$ 9,733,685

Section 2. The following amounts hereby are appropriated in the **Triangle Tax District – Durham Capital Fund** for the fiscal year beginning July 1, 2021, and ending June 30, 2022:

	Original	Revised
Transit Infrastructure	\$ 0	\$ 0
GoTriangle	3,776,685	4,126,685
City of Durham/GoDurham	436,000	436,000
Vehicle Purchase	0	0
GoTriangle	1,445,000	1,445,000
City of Durham/GoDurham	3,222,000	3,222,000
Capital – Planning	0	0
GoTriangle	250,000	250,000
DCHC MPO	<u>0</u>	<u>254,000</u>
Total	\$ 9,129,685	\$ 9,733,685

Section 3. The FY22 Durham Transit Work Program reflects ongoing projects that remain vital to providing service to current transit customers and new projects that address immediate needs during a transition year to a new Transit Plan with updated priorities. The current project budgets identified are those that are deemed time-sensitive ongoing efforts or involve time-sensitive external grant sources as part of their overall funding mechanism. DCHC MPO, GoTriangle and Durham County will consider amendments to the FY22 Durham Transit Work Program as priorities are identified in the new Transit Plan.

Section 4. Triangle Tax District - Durham Capital Funds are appropriated pursuant to section 13.2 of Chapter 159 of the General Statutes of North Carolina; therefore, appropriations do not lapse at the end of the fiscal year and are available for duration of the project unless subsequently approved for reallocation by the GoTriangle Board of Trustees.

Section 5. Copies of this Budget Ordinance shall be furnished to the Clerk to the Board of Trustees and to the Budget Officer of this Authority to be kept on file for their direction in the disbursement of funds.

ADOPTED THIS THE 23^{TRD} DAY OF MARCH 2022.

Sig Hutchinson, Board of Trustees Chair

ATTEST:

Michelle C. Dawson, Clerk to the Board

FY22 Budget Change Impact - Durham Transit Plan

	<u>Revenue</u>	<u>Expenditures</u>	<u>Reserve/Cash Impact</u>	<u>Fund Affected</u>	<u>Comments</u>
FY22 Approved Budget	\$ 58,559,708	\$ 43,655,796	\$ 14,903,912		
Amended FY22 Budget (Nov 2021)	\$ 58,559,708	\$ 44,005,796	\$ 14,553,912		
Amended FY22 Budget (Dec 2021)	\$ 58,559,708	\$ 44,034,796	\$ 14,524,912		
DCHC MPO - (Capital - Capital Planning)		225,000	(225,000)	41	Transit Plan Development - Due to a variety of issues and increase in funding is needed for the development in the transit plan.
GoDurham - (Operating - Bus Operations)		(225,000)	225,000	41	Fare Collection Improvements - Due to the suspension of FY22 fare collection this project will not be utilized and funds can offset the requested amendment.
Amended FY21 Budget (Mar 2022)	\$ 58,559,708	\$ 44,034,796	\$ 14,524,912		
Changes from Amendments	\$ -	\$ -	\$ -		

DURHAM • CHAPEL HILL • CARRBORO
METROPOLITAN PLANNING ORGANIZATION

101 City Hall Plaza • Durham, NC 27701 • Phone (919) 560-4366 • dchcmpto.org



To: Durham Staff Working Group
From: Aaron Cain, Planning Manager, DCHC MPO
Re: FY22 Budget Amendment Request – Use of Funds from Fare Collection Improvements (21DCIOO2) for Development of Durham Transit Plan (20MPOAD1)

Summary. Development of a new Durham Transit Plan has been underway since early 2020. Due to a variety of issues development of the plan has stalled and cost increases have occurred. In order to complete the development of the plan to its adoption by the three governing bodies, an additional \$225,000 is needed.

In the FY22 Work Program, \$250,000 was budgeted for Fare Collection Improvements. Due to the suspension of fares, none of these funds have been expended and there are no plans to do so this fiscal year. DCHC MPO requests that a large portion of these funds, \$225,000, be moved to the development of the Durham Transit Plan so the plan can be completed.

Background. The original budget for the development of a new Durham Transit Plan was \$750,000 in the FY21 Work Program. At the time that funding was considered sufficient, and a portion of those funds was approved for use on a Comprehensive Operational Analysis for the GoDurham and the City of Durham. However, several factors have led to cost increases on the project, such as additional meetings that were previously anticipated, additional requested community outreach, and disagreements on financial modelling and assumptions that have led to additional required work.

The consultant working with DCHC MPO and Durham County on the development of the Durham Transit Plan, Kimley-Horn and associates, has provided an estimate of \$218,043 to complete the project through to adoption by the three governing boards. That scope is still being negotiated and has not been signed at this time, but in order to move forward with confidence DCHC MPO requests that funding be budgeted for the completion of the transit plan.

Alternatives. Should the Durham Staff Working Group choose not to recommend this budget amendment, or should the GoTriangle Board of Trustees decline to approve this requested budget amendment, the completion of the plan would need to be done without consultant assistance. Since DCHC MPO is already shortstaffed with two current vacancies, work on a new transit plan would likely not be able to continue at an appropriate pace.

Staff Contact. Aaron Cain, Planning Manager, DCHC MPO, aaron.cain@durhamnc.gov, 919-560-4366



Connecting all points of the Triangle

MEMORANDUM

TO: GoTriangle Board of Trustees Operations & Finance Committee
FROM: Transit Operations
DATE: February 18, 2022
SUBJECT: Contract for Purchase of Replacement Radios and Communication Equipment

Strategic Objective or Initiative Supported

Develop a 5-Year ITS Strategy, including fare and customer information systems and data management systems

Action Requested

Staff requests that the Board authorize the president and CEO to execute a contract with Motorola Solutions Inc. for the purchase of replacement radios and associated communication system equipment for an amount not to exceed \$1,394,468.

Background and Purpose

GoTriangle has been using the Cary/Wake County 800MHz radio system for area-wide communication with its buses since the early 2000's. The current Motorola XTL Radios in use by GoTriangle are no longer supported by Motorola as of December 2019. Additionally, Wake County has informed us that these XTL radios will no longer be able to be used on the system after 2025. The purchase of these new radios and associated equipment will ensure GoTriangle has supportable and reliable radio system for at least the next eight to ten years.

The Cary/Wake County 800MHz radio system provides GoTriangle with the ability to quickly respond to our motor coach operators and supervisors during the course of our daily business. It also provides seamless communications between many public agencies including police, fire, emergency management, and many other agencies including public transit.

GoTriangle is an important element of emergency response to community needs especially during natural disasters, terror related incidents, and other emergency situations. The community relies on GoTriangle to assist with evacuation of citizens and transportation of goods and equipment. It is extremely important that GoTriangle maintain reliable communications with these agencies when called upon.



This contract is for the purchase of the following equipment from the North Carolina State contract:

- Six (6) MCC7500E console operator positions
- Four (4) Watson Mercury Furniture positions with chairs
- 40 TDMA flashes
- One (1) Archiving Interface Server (AIS)
- Radio Subscriber Equipment Listed below:
 - Three (3) 800 MHz APX Console RF control stations
 - One (1) KVL Encryption Key loader
 - 103 APX6500 mobile dash mount radios, 1 APX6500mobile Remote mount radio, 2 APX65400 Base Radios

The MCC7500E Console system will connect with the Cary/Wake County P25 Radio Network.

Financial Impact

This purchase will be funded with local and federal grant funds from the FY2022 capital budget. The allocated funding breakdown is a federal contribution of \$1,115,574 and a local contribution of \$278,894.

Attachments

- Cost proposal from Motorola

Staff Contact

- Patrick Stephens, pstephens@gotriangle.org, 919-485-7456



GO TRIANGLE

MCC7500E

CONSOLE SYSTEM

Prices in accordance with North Carolina State Contract 725G



The design, technical, and cost information furnished with this proposal is proprietary information of Motorola Solutions, Inc. (Motorola). Such information is submitted with the restriction that it is to be used only for the evaluation of the proposal, and is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the proposal, without the express written permission of Motorola Solutions, Inc.

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REF/Control No. XX-XXX

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Motorola Solutions, Inc.
1303 E. Algonquin Rd.
Schaumburg, IL 60196
USA

Tel. + 1 847 576 5000
Fax + 1 847 538 6020

2/7/2022

Go Triangle
Patrick Stephens
4600 Emperor Blvd. Suite 100, Durham, NC 27703
Subject: MCC7500E Console System

Dear Mr. Stephens,

Motorola Solutions, Inc. ("Motorola") is pleased to have the opportunity to provide Go Triangle with quality communications equipment and services. The Motorola project team has taken great care to propose a solution that will meet your needs and provide unsurpassed value.

To best meet the functional and operational specifications of this solicitation, Motorola's solution includes a combination of hardware, software, and services. Specifically, this solution is for MCC7500E console equipment and Radio subscriber devices and provides:

- Six MCC7500E console operator positions with conventional channel gateway equipment
- 4 Watson Mercury Furniture positions
- 4 3142R1 Highback Concept Chairs
- 40 TDMA flashes
- One Archiving Interface Server (AIS)
- Radio Subscriber Equipment listed below
 - Three (3) 800 MHz APX Console RF control stations for backup at Emperor Blvd
 - One (1) KVL5000 Encryption Keyloader
 - 103 APX6500 mobile dash mount radios, 1 APX6500 mobile Remote mount radio, 2 APX6500 Base Radios

The MCC7500E Console system will connect with the Cary/Wake County P25 Radio Network

We thank you for the opportunity to furnish Go Triangle with "best in class" solutions and we hope to strengthen our relationship by implementing this project. Our goal is to provide you with the best products and services available in the communications industry.

Sincerely,

Motorola Solutions, Inc.

Andrew Curd
Account Executive

SECTION 1

STATEMENT OF WORK

Motorola is proposing to Go Triangle the installation and configuration of the following equipment at the specified locations.

Site Name	Major Equipment
Go Triangle Operation Dispatch Center	MCC7500E Console equipment with CSC and CCGWs, Six console operator positions. One Archiving Interface Server (AIS), and APX radio subscriber equipment

The document delineates the general responsibilities between Motorola and Go Triangle as agreed to by contract.

1.1 MOTOROLA RESPONSIBILITIES

Motorola's general responsibilities include the following:

- Perform the programming and optimization of the Motorola supplied equipment described above.
- Schedule the programming and optimization in agreement with Go Triangle.
- Install all console operator dispatch and related backroom network equipment.
- Provide and install all required network and peripheral equipment and cables. These to include any KVM extension cables that may be required
- Provide Go Triangle with the appropriate system interconnect specifications.

1.2 GO TRIANGLE RESPONSIBILITIES

Go Triangle will assume responsibility for the installation and performance of all equipment and work necessary for completion of this project that is not provided by Motorola. Go Triangle's general responsibilities include the following:

- Provide all buildings, equipment shelters, and towers required for system installation
- Ensure communications sites meet space, grounding, power, and connectivity requirements for the installation of all equipment.
- Obtain all licensing, site access, or permitting required for project implementation.
- Obtain frequencies or FCC licenses for project as required.
- Provide required system Ethernet interconnections to the Cary/Wake County P25 Master Sites in Cary, NC.
- Provide adequate physical space, HVAC and electrical requirements at all locations for the new equipment
- Motorola will assist Go Triangle with technical requirements and specifications for the console site link.
- Go Triangle will provide a dedicated delivery point, such as a warehouse, for receipt, inventory and storage of equipment prior to delivery to the site(s).
- Coordinate the activities for all Go Triangle vendors or other contractors.



1.3 ASSUMPTIONS

Motorola has based the system design on information gathered from meetings with Go Triangle personnel and an analysis of their existing system and requirements. All assumptions have been listed below for review. Should Motorola's assumptions be deemed incorrect or not agreeable to Go Triangle, a revised proposal with the necessary changes and adjusted costs will be required. Changes to the equipment or scope of the project after contract will require a change order.

- Six new MCC7500E console positions are provided to be located at the Go Triangle Dispatch Operations Center. Two positions at Nelson Rd and four positions at Emperor Blvd. The system will also include CCGW gateway equipment to operate up to eight (8) conventional radio resources.
- 4 Watson Furniture positions and 4 chairs which will be provided for the operator positions which will be located at 4600 Emperor Blvd, Durham.
- Instant Recall Recorder software for each operator position is included.
- Twenty two (22) inch touch screen computer monitor displays are included for the operator positions.
- The standard console system spare equipment package is included for the Dispatch Center
- A Conventional Site Controller is supplied to operate the console in backup mode in the event of a Master Site link failure
- The CARY/WAKE COUNTY System Manager must approve the addition of all consoles or new talk groups for Go Triangle. Go Triangle shall work directly with CARY/WAKE COUNTY personnel to obtain any working agreements or documentation that may be required regarding use of the CARY/WAKE COUNTY system as well as connection of the MCC7500E console system.
- CARY/WAKE COUNTY Master Site License expansion costs required for the console system are included.
- Consoles utilized on the CARY/WAKE COUNTY system will operate on version 2020.1 ASTRO P25 system release. Cost for future system upgrades of the console system is not included in the equipment but will be provided as part of the proposal. CARY/WAKE COUNTY console users must maintain console system release versions that are current with the CARY/WAKE COUNTY system release.
- The Go Triangle console site will require Ethernet connectivity with the designated CARY/WAKE COUNTY P25 Master Site. Obtaining Ethernet connectivity as well as any recurring costs for connectivity to CARY/WAKE COUNTY shall be the responsibility of Go Triangle. Motorola will provide Go Triangle with the Ethernet requirements and specifications for the console to Master Site link.
- One Archiving Interface Server and control room Firewall have been provided with this proposal for Go Triangle. The AIS provides the console system interface with a P25 IP recording system utilized to record console and radio traffic for the P25 Radio and conventional resources used by the MCC7500E consoles. The P25 IP Logging Recorder is not provided by Motorola with this proposal.
- Three APX console control stations are provided for use with the MCC7500E console system for Emperor Blvd as backup
- New RF line will be provided and installed per R56 standards. Assume reuse of customer's existing antenna(s) and meet required specifications.
- One hundred six total APX6500 mobile subscriber radios are provided (103 dash mount, 1 remote mount, 2 base stations (Base Stations for Nelson Rd as a backup center). Installation costs included for mobile installations.
- No towers, shelters, generators or UPS devices are included in this pricing.
- The pricing quoted assumes adequate physical space, HVAC and electrical requirements at all locations for the new equipment.
- MCC7500e on site, instructor-led training provided by MSI for 11 participants.

SECTION 2

SYSTEM DESCRIPTION

In response to a request from Go Triangle, NC, Motorola is providing pricing for a MCC7500E Console System as detailed below. Consoles are anticipated to be utilized with the CARY/WAKE COUNTY P25 radio network. The pricing provided is based on the Design Assumptions listed below. Services include installation, optimization, and project management.

The system design consists of a MCC7500E IP based Console System to be located at the new Go Triangle Dispatch facility. The proposal provides a six operator position MCC7500E IP based Console System. Consoles are anticipated to be utilized and connected with the CARY/WAKE COUNTY P25 radio network. Conventional Channel Gateway (CCGW) equipment is provided to control up to eight (8) conventional resources for use with the MCC7500E consoles. Examples of conventional resources are backup 800 MHz resources for CARY/WAKE COUNTY.

A Conventional Site Controller (CSC) is supplied to operate the console in backup mode in the event of a Master Site link failure. Operating in conjunction with the CSC, APX Control stations are provided to serve as backup for Primary Cary/Wake County talk groups in the event of a Master Site link failure.

Software based Instant Recall voice recorder systems will be installed on each operator position computer. This will allow for recall of recordings of recent voice traffic by the dispatch operator.

One Archiving Interface Server (AIS) and network Firewall are provided. The AIS provides the console system interface with a P25 IP recording system utilized to record console and radio traffic for the P25 Radio network and conventional resources used by the MCC7500E consoles. The P25 IP Logging Recorder is not provided by Motorola with this proposal.

In addition to the MCC7500E Console system the following APX Consolette subscribers units are provided.

- Three (3) 800 MHz APX Consolette RF control stations at Emperor Blvd for backup
- One (1) KVL5000 Keyloader
- 103 APX6500 mobile dash mount radios, 1 APX6500 mobile Remote mount radio, 2 APX6500 Base Radios (Base Stations for Nelson Rd as a backup center)

The system equipment costs provided are based on the Design Assumptions in section of this proposal. Services include engineering, installation, optimization, project management and first year warranty.



2.1 COMMUNICATIONS CONSOLES

Motorola Solutions proposes our MCC 7500E dispatch console to provide Go Triangle with the confidence of state-of-the-art secure communications, seamless IP-based connectivity, flexible system architecture with scalable components, and centralized console management.

Motorola Solutions designs its console to help reduce the total cost of owning an IP-based, feature-rich dispatch system without compromising quality and reliability. The console provides Go Triangle with sophisticated network management and easy migration to future capabilities.

2.2 DISPATCH CONSOLE CONFIGURATION FOR GO TRIANGLE

The proposed console system will interface seamlessly with the Cary/Wake County ASTRO® 25 system.

The proposed solution offers Go Triangle six dispatch positions. The figure titled “MCC 7500E Dispatch Position” shows an MCC 7500E operator position.



Figure 2-1: MCC 7500E Dispatch Position provides a small form factor, familiar GUI, and advanced features.

The table titled "Dispatch Locations" outlines the number of consoles and their location.

Table 1: Dispatch Locations

Number of Operator Positions	Location Name
Six	Go Triangle Dispatch Center (2 at Nelson Rd, 4 at Emperor location)

2.3 EMBRACING INTEROPERABILITY AND INTEGRATION

Motorola Solutions is an active participant in establishing P25 standards for interoperability. The proposed console is a key component for the interoperability of the ASTRO 25 system. When a situation requires coordination between multiple agencies, the proposed dispatcher can patch together Mutual Aid radios and required subscribers on the ASTRO 25 system (see the figure titled "Mutual Aid Components").

Incident conversations are seamless from the moment of the patch initiation and can be recorded like any talkgroup conversation within the Land Mobile Radio (LMR) network. The dispatcher can also take part in and monitor conversations for the duration of the incident, as necessary.

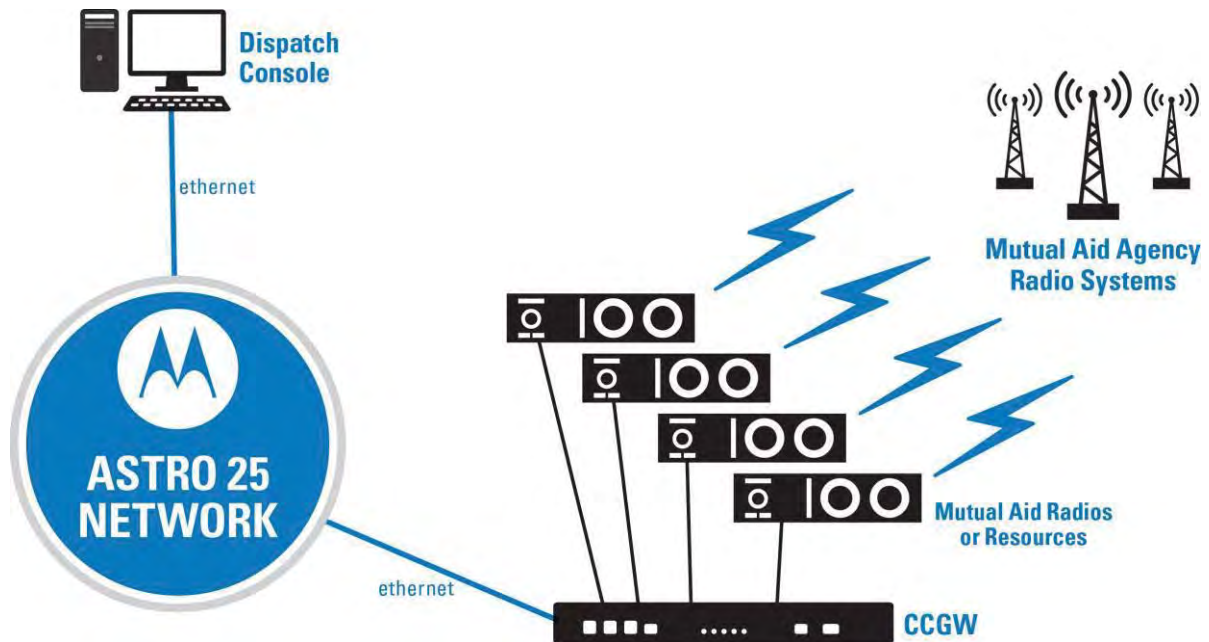


Figure 2-2: MutualAidComponents - Mutual Aid agency radio systems connect to the ASTRO 25 network through a CCGW.

2.3.1 Integration with the ASTRO 25 Network

The proposed dispatch console seamlessly integrates into the ASTRO 25 system without interface boxes, digital voice gateways, or backroom electronics for an integrated, mission-critical network. This tight union between radio infrastructure and console equipment has several operational benefits.

The physical space to accommodate the proposed console is comparable to that required for a personal computer. The console can access both trunked talkgroups and conventional radio channels over the same network. This architecture reduces overall transport costs and the need for duplicate fixed network equipment.

2.3.2 Connection to ASTRO 25 System

The flexibility of the ASTRO 25 system architecture allows the connection of the proposed console to be suited specifically to Go Triangle's needs.

Single Site Link

A single site gateway will provide an interface that handles the following IP traffic between the dispatch center and the Cary/Wake County ASTRO 25 system's core site:

- Network management traffic.
- Call control and audio traffic for all the calls being handled by the dispatch positions.
- Aux I/O traffic for the Aux I/Os being handled by the dispatch positions.

The site gateway fragments large IP packets according to industry standards, prioritizes packets, and converts Ethernet data to the desired transport medium.

LAN Switches

The site LAN switches provide LAN interfaces for console site equipment and a LAN port for the link to the core site. Through the switch, service technicians can access the system's configuration manager and service the equipment.

Advanced Conventional

This option provides the dispatcher with the ability to control ASTRO 25 conventional channels and/or MDC 1200 channels.

Conventional Base Station Interfaces

The proposed consoles access and control Go Triangle's analog and digital conventional base stations through the use of Enhanced Conventional Channel Gateways (ECCGW). The console processes audio received from the station and controls various features on the stations, such as frequency selection, private line selection, and repeater on/off.

2.4 MAKING CONSOLES EASY TO OPERATE

Motorola Solutions designs its proposed console to provide mission-critical audio between the dispatcher and users in the field. It is optimized for real-time audio, prioritizing emergency calls over other traffic, and minimizing voice queuing. Using robust error mitigation to maintain call quality even when the system is heavily loaded, the proposed console reduces communication errors that may force dispatchers or radio users to repeat their transmissions.

2.4.1 Customizable Dispatch Interface

The proposed console provides dispatchers with a graphical user interface (GUI) that can be customized by agency or by individual users to optimize user efficiency. Based on dispatcher



preference, the proposed GUI can be customized to show details of trunked and conventional RF channels on a per-channel basis.

Busy dispatchers can respond to a missed call by simply clicking on an entry in the Activity Log. The number of calls and call information displayed in the Activity Log is customizable to suit the needs of the user. The status of Auxiliary I/Os can be easily interpreted from the GUI with the use of familiar graphical icons, such as a door shown open or closed.

Elite Dispatch Graphical User Interface

The proposed Elite Dispatch GUI is an enhanced version of Motorola Solutions' Gold Elite Dispatch GUI. For existing Gold Elite users, the GUI allows a smooth transition and minimal training for dispatchers. For new users, the graphical icons and customization options make the proposed console GUI easy to learn and operate.

Auxiliary Inputs/Outputs

The proposed console supports Global Auxiliary Inputs/Outputs (Aux I/Os) for remote status indications or remote control through dispatch positions. Global Aux I/Os are typically implemented by hardware that is independent of the dispatch positions in a system and may be accessible to multiple dispatch positions. Aux I/O Servers provide the Aux I/O feature for the consoles.

2.4.2 Standard Radio Transmission and Reception

A typical proposed dispatch position has a headset and two speakers. One speaker is for selected audio and the second speaker is for all remaining unselected audio. Additional speakers can be added to a console allowing dispatchers to configure a specific speaker for a set of designated audio sources. This simplifies multitasking between multiple audio sources and allows flexibility in the way the audio is presented to the dispatcher.

Receiving Calls from the Field and Other Dispatchers

The proposed console provides dispatchers with greater flexibility for how to hear calls from field radio users and other dispatchers. Each dispatcher can define his or her own audio reception profile by selecting a single audio source, whether conventional or talkgroup, to be heard on a selected speaker or headset (Single Select). The dispatcher can also define groups of radio resources that can all be heard on a selected speaker or headset (Multi- Select).

Initiating Calls to the Field and Other Dispatchers

The dispatcher has several different ways of initiating a call. In most circumstances, a General Transmit is appropriate. With the General Transmit, the dispatcher selects a resource on the console and activates the transmission through a footswitch, headset transmit button, or a microphone transmit button. If the dispatcher needs to quickly transmit on a resource that is not selected, the dispatcher uses the Instant Transmit function.

An Instant Transmit safety switch prevents accidental activation of functions that may cause negative consequences. The safety switch can be used with Aux I/Os and preprogrammed pages, as well as Instant Transmit switches.

Audio Communication to the Field and Other Dispatchers

The dispatcher can transmit audio in different ways. They can make calls to all users listening to a specific conventional radio resource or a specific trunking talkgroup. When multiple resources are required, the dispatcher can select additional talkgroups and/or conventional channels, as needed using the Multi-Select feature.



The proposed console also enables dispatchers to make private calls to individual field radio users or dispatchers. Once a private call is established, it can be patched in with another resource at the dispatcher's discretion.

Controlling Console Audio

The proposed console offers dispatchers several different ways of controlling or muting the audio on their consoles, such as the following:

- Audio volume can be changed for any specific resource.
- All non-selected resources on the console can be muted for 30 seconds (All Mute) or unmuted, if already muted.
- A dispatcher can transmit on a resource while receiving audio from the same resource or other resources.
- A dispatch position can be configured to automatically mute the other dispatch audio on a shared resource to prevent acoustic feedback when a co-located dispatch position transmits.
- RF Cross Mute automatically mutes the receive audio from a specified channel when the dispatcher transmits on another specified channel to prevent acoustic feedback.

Controlling Network Audio

Dispatchers can control audio on the ASTRO 25 network. The dispatcher can enable or disable radio users to compartmentalize traffic, reduce interruptions, and maintain communications between dispatch and the field. When this function is enabled or disabled, all dispatch consoles with this resource assigned are updated with the current status of the feature. This feature can be controlled from any dispatch position.

2.4.3 Emergency Radio Transmission and Reception

As part of a mission-critical communications network, the proposed dispatch console facilitates immediate prioritization and resolution of emergency communications between dispatch and first responders in the field. This enables dispatchers and first responders to focus on their mission and not their equipment, especially during critical situations.

Receiving an Emergency Call

When a user in the field or another dispatcher initiates an emergency call, the console emits both visual and audible indications (Emergency Alarm). The audible indication alerts the dispatcher that an emergency is underway; the visual indication directs the dispatcher's attention to the specific resource making the emergency call. The dispatcher can immediately reserve a voice channel for the duration of the emergency.

Responding to an Emergency Call

A dispatcher can bypass the standard console interface to auto-open a quick list, which contains specific controls for recognizing an emergency call, initiating an emergency call, and ending an emergency call (Auto-Open of Quick List). The dispatcher can then recognize the emergency call, which ends the audible emergency indication and notifies all dispatchers that the emergency is being addressed (Emergency Recognize).

The audible emergency indication may also be muted by a dispatcher without recognizing the emergency alarm (Mute Tones at a Single Op). This can be used in a situation where one agency is monitoring a channel that belongs to another agency. That channel can be configured to not generate audible and/or visual emergency indications.

Ending an Emergency Call

When an emergency is over, the dispatcher can end the Emergency Alarm. The visual indication on the dispatch position GUI is removed, and the console informs the other dispatch positions that the emergency is over (Emergency End/ Knockdown). The emergency mode remains active on the initiating radio unit until it is ended (reset) by the radio user.

2.4.4 Radio Patch Control

The dispatcher can patch communication between trunked and/or conventional radios that are normally unable to communicate with each other due to different features, programming, or even different frequency bands. A patch group is a group of linked resources that can both receive messages from a console and transmit to all other members of the patch group.

Setting up a Standard Patch

Patches are supported between trunked resources and/or conventional resources. After the patch is created, the dispatch position transmits all audio on one resource to all other resources in the patch group. In a patch between trunked resources, patched radio users with displays see the ID or alias of the other patched radio(s), as opposed to that of the console. This minimizes confusion and the need for the dispatcher to intervene in the call. Patches are automatically reestablished, if interrupted, so the dispatcher can concentrate on continuing operations.

Predefined Patches

Patches can be predefined and automatically reinitiated each time a dispatch position computer is restarted (Patch Auto-Start).

2.4.5 Call Management and Control

The dispatcher can use the following functionality to manage and control audio for different types of calls between the dispatch position and radio users or other dispatchers.

Automatic Prioritization of Calls

Calls on the dispatch position are prioritized through a transmission hierarchy. Calls from primary supervisors take priority over those from secondary supervisors, which in turn take priority over non-supervisors. Instant Transmit or All-Points Bulletin (APB) transmissions, regardless of whether they are from a supervisor, take priority over general or patch transmissions.

Multiple dispatchers can be designated as primary supervisors on the same system, which is useful when multiple agencies share one system. With the Network Manager Client installed, supervisors can disable and enable dispatch console functionality as needed.

Manual Prioritization of Calls

System Access Priority Select allows a dispatcher to prioritize trunked resources on the system as either normal or tactical. A dispatcher can change the priority of a trunked resource to tactical to give the resource a better chance of gaining communication access on a busy system. Only emergency calls have a higher priority than tactical.

When the System Access Priority Select status of a resource is changed, it is updated at all dispatch consoles in the systems that are monitoring that trunked resource.



Using the Multi-Select Feature

The Multi-Select feature allows a dispatch position to define groups of selected radio resources. When a Multi-Select group is opened, all of the resources in the group are simultaneously selected. Resources can be added or removed from a Multi-Select group while the group is open. The dispatcher can transmit on several resources simultaneously or can listen to multiple resources simultaneously in their headset or select speakers.

Standard Call Indications

The dispatch position indicates the availability of any given resource, regardless of whether the resource is involved in a transmission. An inbound call indication provides the dispatcher with a visual cue of audio activity on a radio resource and allows a dispatcher to see at a glance what the status of a resource is at any moment.

Call Alerting

A dispatcher can use Call Alert to page an unattended radio or dispatch position through a series of beeps and an indication of the sender's ID. When available, the radio user or dispatcher sees the unit ID of the calling dispatch console or radio ID and is able to return the call.

Additionally, a Call Alert can trigger an activity. For instance, a Call Alert may cause a vehicle's horn to sound and its lights to flash. The dispatcher can even send a Call Alert to a user who is involved in voice and data communications over the network.

2.5 CAPTURING AND LOGGING AUDIO

The proposed console system includes an Archiving Interface Server (AIS) that will interface with a P25 IP logging recorder subsystem that enables the recording and replay of audio and other information associated with real-time conversations over the P25 network.

Motorola is not providing the P25 IP Logging recorder with this proposal. It is expected the Go Triangle will procure the P25 IP logging recorder from a third party vendor as a separate procurement. Information provided in this section and all sections referencing recording is informational only for Go Triangle

The AIS will interface the console system with the NICE P25 IP logging recorder. This allows the third party logger to provide voice recording and additional information from the system as explained in the following description. In addition to recording audio, the logging recorder has the ability to capture the following information, if supported:

- Talkgroup and channel information
- User identification, such as unit ID and alias
- Call type, such as Talkgroup Call, Telephone Patch Call, and Emergency Call
- Non-voice events, such as Call Alerts, Radio Status Check, and Radio Message

Upon playback, this information can be displayed and searched to retrieve a desired call. The logging recorder's capacity is based on the number of radio transmissions it needs to record simultaneously, not on the number of channels that it can record.

A call can be saved either as a complete call (audio and any information associated with the call) or as a simple .wav file. Files saved as complete calls must be played using the application included with the logging recorder. Files saved as .wav files can be played on any application that supports them.

2.5.1 Record and Replay of Archived Calls

If you have a logging recorder it would need to be an IP-based recorder that can record all IP traffic sent to it. It would provide the capability to record audio at the same level of quality as that heard at the dispatch position. In addition, it can record information associated with the call beyond just the audio.

2.5.2 Management of Logging Recorder Subsystem

Security and fault management for a logging recorder subsystem are configured and managed by a common administration application, residing on either a playback station or a dedicated PC.

Administrative personnel can use the management controls of the logging recorder subsystem to configure how calls are recorded.

On a global level, administrators can define which calls are recorded by which agency or department. On a more granular level, administrators can define the following recording behavior:

- Which talkgroups and conventional resources to record and which resources are critical.
- Whether secure calls are recorded.
- What access rights are assigned to replay station user accounts.
- What operational characteristics are assigned to the recorders (for example watermark limits for the recording media, or what to do when the recording media fills up).

2.5.3 Long-Term Logging Port

The long-term logging port allows an external logging recorder to be connected to a dispatch console. Long-term audio recording is used to record a portion of the inbound and outbound audio present on a specific dispatch position. These recordings are typically archived for long-term storage, and provide a historical record of the radio communications made at a given dispatch position.

The long-term logging port can be configured to log any combination of these audio sources, such as:

- Audio received from a currently selected radio.
- Microphone audio being transmitted by this dispatcher to the currently selected or unselected radio resources.
- Any tones generated by the dispatch position that appear in its speakers (trunking tones, emergency tones, etc.) or tones generated by an external paging encoder.

This output may be used with an instant recall recorder as well as a long-term logging recorder.

2.6 PROTECTING CONSOLES AND COMMUNICATIONS

The console enables end-to-end encryption from the dispatcher to the ASTRO 25 network, so communications will not be undermined by unencrypted transmissions. Each dispatcher is able to fully participate in secure communications while being confident that sensitive, vital information is not heard by unauthorized individuals.

2.6.1 Secure Access to the Console

To use the dispatch position, a dispatcher must enter a valid radio system user account name and password. The dispatch position validates that information with the radio system's network manager

and allows the dispatcher to access only the resources for which the user has access rights. This also applies to third-party applications that use the dispatch console's API.

2.6.2 Secure Communications at the Console

The console encrypts and decrypts radio voice messages. Thus, radio voice messages are encrypted from end-to-end between the radio user to the dispatch position. The dispatcher can choose whether to encrypt their transmissions on a particular trunked resource. Dispatchers can interface with agencies that have different encryption configurations without any manual intervention or delay.

2.6.3 Securing Communications at the Logging Recorder

Not only are real-time communications encrypted, encryption extends to call logging to ensure that even recorded communications are not vulnerable to retrieval by unauthorized people. The AIS can support different encryption algorithms simultaneously.

Like the dispatch console, the AIS also requires a valid radio system user account name and password be entered and validated by the radio system's network manager before it allows access to recorded information. A user can access only the recordings for which the user has access rights. This enables agencies to keep their logs private from other agencies on the same system.

2.7 INCORPORATING CONSOLE CONFIGURATION AND MANAGEMENT

The proposed console system is configured and managed by the same configuration manager, fault manager, and performance reporting applications as the radio system. The user can define exactly which resources are available and how they are presented to the dispatcher. This provides Go Triangle with a single point for configuring and managing the entire console system. Changes are automatically distributed throughout the system.

This centralized approach saves valuable time and effort for system administrators and technicians and reduces the errors that can occur when radio IDs and other data are entered at multiple locations. In addition, call traffic and performance reports for each dispatch position can be generated from the system's network manager, enabling administrators to quickly and easily ensure optimal effectiveness and efficiency. Motorola and Cary/Wake County personnel will manage the system level configuration and administration of the console system, Go Triangle administrative personnel will have console screen configuration privileges.

2.8 INTERFACING WITH COMPUTER-AIDED DISPATCH (CAD)

The console is capable of an interface with a computer aided dispatch (CAD) system through Application Programming Interfaces (APIs). These APIs provide CAD vendors with access to the same features and functionality as the dispatchers. **These are optional interface APIs and if required are purchased separately as required for the specific need, No APIs are provided or required by this proposal. Descriptions are informational only for Go Triangle.**

The console supports three third-party APIs. Each of these APIs performs a different function in the console/CAD interface allowing for control of the console through the CAD system and information transfer between the console and the CAD system.

Console Dispatch Interface API

This API does the following:

- Provides overall management and maintenance of the connections between a software application and the dispatch system.
- Authenticates the dispatcher's login account and associates it with the security groups defined in the radio system's network manager.
- Allows a CAD application to interface with the console system.
- Delivers API messages either directly to the CAD application or enables retrieval of API messages upon request by the CAD application.

Resource Configuration API

This API performs the following:

- Retrieves configuration information, such as lists of radio resources, capabilities/features available on each radio resource, and lists of accessible Auxiliary input/output signals.
- Retrieves aliasing information, such as the end user radio unit IDs (for example, Unit 4352 = Division ABCD) and end user radio unit status (for example, Status 7 = En Route).

Console Features API

This API performs the following:

- Monitors and controls subscriber and console activity on the radio system.
- Initiates voice and data radio communications with a subscriber unit and controls access to external equipment.

2.8.1 Software Developer Kit for the APIs

To aid in the integration of the console system with the CAD system, Motorola Solutions provides a Software Developer Kit (SDK) that contains all information necessary to enable access and use the APIs described above. The SDK's manuals document the supported dispatch APIs, including access to various dispatch features, configuration information, and aliasing information.

The SDK also includes various files needed by software developers as they create applications that use the APIs. These files include source code header/include (.h) files, library (.LIB) files, and dynamic link libraries (DLLs).

All SDK licensing fees and software development costs associated with CAD integration with the MCC 7500E dispatch console through APIs are the responsibility of Go Triangle and its selected CAD vendor. Depending upon the vendor's implementation, additional equipment may be required such as firewalls or a dedicated console position, which are not included in this proposal. Shared or multi-agency systems may have policies in place that restrict some vendor implementations. For more information, please review the API Developer Considerations document.

2.9 DISPATCH CONSOLE SOLUTION COMPONENTS

The proposed components are connected together and to the rest of the ASTRO 25 system on an IP network through console site routers and switches. The console functions as an integrated component

of the total radio system and fully participates in system-level features, such as end-to-end encryption and Agency Partitioning.

The console connects directly to the radio system's IP transport network. Audio processing, encryption, and switching intelligence for dispatch are performed within each software-based dispatch position without additional centralized electronics.

Since the network is IP-based, the system interfaces and components can be distributed physically throughout the network. Some of the available console components are identified below.

2.9.1 MCC 7500E Console Operator Position

The dispatch position supports commercially available accessories, including a USB microphone, USB headset, and USB footswitch, as shown in the figure titled "MCC 7500E Dispatch Position." The following list describes the components included in the proposed configuration.



Figure 2-3: MCC 7500E Dispatch Position supports multiple accessories.

Audio Interface Module (AIM)

The USB Audio Interface Module (AIM) acts as an interface between analog devices and the dispatch position and as a general purpose input/output module. The USB AIM supports audio routing between the dispatcher and Motorola Solutions standard peripherals. The USB AIM connects to the MCC 7500E dispatch position with a USB cable.

Personal Computer (PC)

The personal computer included with the dispatch position is Windows-based and certified by Motorola Solutions.

Computer Display

The dispatch position will use a 22 inch Computer Display with Touch Screen.

Enhanced Integrated Instant Recall Recorder (IRR)

The Enhanced IRR is seamlessly integrated with the dispatch position's software, allowing audio and call data from any radio or telephony resource to be recorded and easily played back. Call data includes PTT IDs, name of resource, start time and date, and stop time and date. Two analog inputs are available for use with recording audio from external devices.

Desktop Speakers

Two audio speakers have been included with each dispatch position and can be configured to transmit audio from a specific talkgroup or set of talkgroups. Each speaker is a self-contained unit, with individual volume controls, and can be placed on a desktop or mounted on a rack

or computer display.

Headset Jack

The dispatch position supports up to two headset jacks, both push-to-talk (PTT) and non-PTT-enabled, for simultaneous use by the dispatcher and a supervisor. The headset jack contains two volume controls for the separate adjustment of received radio and telephone audio.

Headset

The proposed headset consists of two elements. The headset base includes an audio amplifier, a Push-to-Talk switch, and a long cord that connects to the dispatch position. The headset top consists of the earpiece and microphone as well as a short cable that connects to the headset base.

Gooseneck Microphone

The microphone controls the dispatch position's general transmit and monitor features through two buttons on its base. The microphone can be fastened down or left loose. It can be used alone or in conjunction with a headset.

Footswitch

Each dispatch position includes a dual pedal footswitch that controls general transmit and monitor functions.

Telephone Headset Interface Port

The telephone/headset port provides a connection for an external telephone to the dispatch position. This allows the operator to use a single headset to communicate on both the radio system and a telephone system.

Redundant Ethernet Connection

The optional redundant Ethernet connections increase MCC 7500E console availability by protecting against the loss of multiple dispatch positions. In the event of a LAN switch failure, the system will automatically detect and switchover with no manual intervention required. Dispatching operations will not be interrupted.

WATSON FURNITURE CONTINUED ON NEXT PAGE



4 Mercury Standard Consoles - 66" Primaries

Project:Go Triangle (Triangle Transit Authority)

DURHAM

NC

GoTriangle.01.cmdrw

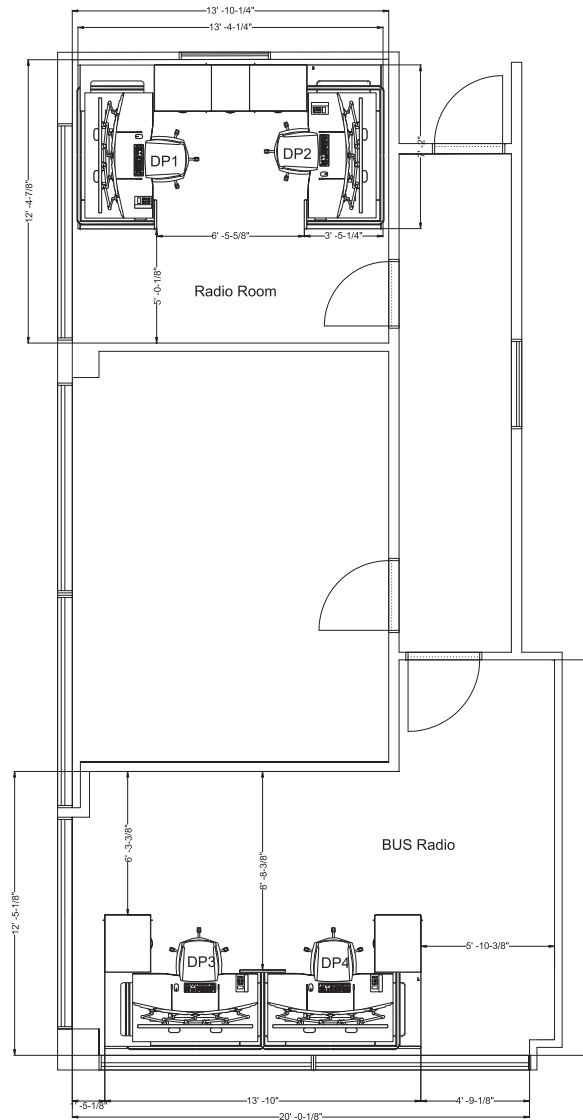


Sales Rep:
King Carter Jr.

Account Manager:
Lisa Dotterweich

Project Designer:
Michelle Steele

REV 00: MS 12/22/21
Preliminary Drawing
REV 01: MS 01/04/22
Revised Radio Room



Scale~1:65

CP 01
Full Room 2D

NOTE: Verify all building dimensions on-site prior to purchase or installation of product. Watson agrees to provide product Symbols that are correct. In turn, the agent or customer is responsible for providing accurate building plans, including dimensions, features, and information required for space planning and installation.

Approved By:

Name

Date

Title

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Poulsbo, WA 98370
www.watsonconsoles.com
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4 Mercury Standard Consoles - 66" Primaries

Project: Go Triangle (Triangle Transit Authority)

DURHAM

NC

GoTriangle.01.cmdrw



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REV 01: MS 01/04/22
Revised Radio Room



CP 01
Full Room 3D
Color

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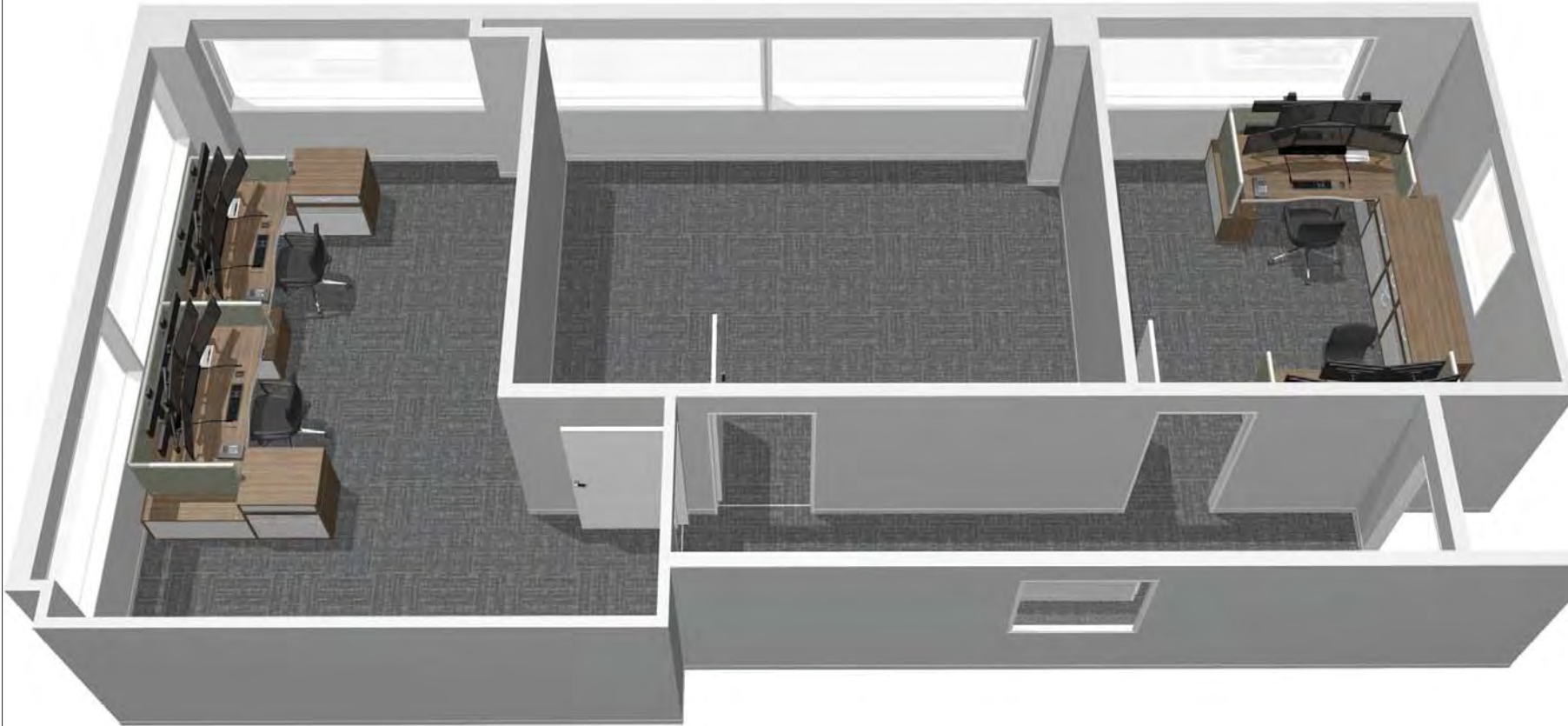


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Revised Radio Room



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Color

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REV 00: MS 12/22/21
Preliminary Drawing
REV 01: MS 01/04/22
Revised Radio Room



CP 02
Full Room 3D
Color

NOTE: Verify all building dimensions on-site prior to purchase or installation of product. Watson agrees to provide product Symbols that are correct. In turn, the agent or customer is responsible for providing accurate building plans, including dimensions, features, and information required for space planning and installation.

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Preliminary Drawing
REV 01: MS 01/04/22
Revised Radio Room

CP 02
Full Room 3D
Color

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Mercury STANDARD

Perfectly suited to your dispatch needs



Finishes shown in Shenandoah color scheme with Quench Fabric.



Practical Performance + Smart Design

Built for high focus, 24/7 task-intensive environments and backed by the industry's strongest standard warranty, Mercury Standard is an ideal solution for any application, from call-taker and back-up dispatch positions, to security and network ops and utilities monitoring.

Tackable privacy screens create functional privacy. Acrylic upper section controls sound but preserves sightlines.

Slat rail monitor system provides for a variety of user created configurations. Monitor system provides height and focal depth adjustability.

Steel lifting columns provide up to 26" surface height adjustment and have a capacity of 535 lbs.

Stackable storage assists in organization, with no wasted space.

Hub cabinets allow for dedicated power and data entry points as well as cable management.

Outboard Technology Cabinets with axial fans to provide active cooling extend technology life and allow for easy IT access.

Cable Management:

An adjustable worksurface requires superior cable management. Watson's energy chains are high capacity, simple to use, and keep everything organized and convenient.



Designed to Scale:

Efficient use of space with side-by-side and back-to-back planning suits small spaces and large teams.



Mercury STANDARD at a glance

Size Ranges:

Worksurface widths: 60"-96"
Hub depth: 39"
Screen heights: 36"-60"

Adjustability:

Worksurface height range: 22"-48"
Monitor capacity: Up to ten 24" monitors
Monitor arm focal depth adjustment: 20"
Monitor height: Custom +/- 7" additional height adjustment
Lifting columns: 2
Lifting capacity: 535 lb.

Environment Controls:

Heating, cooling and individual dimmable task lighting and ambient lighting available as optional, modular accessories.

Screening:

Tackable
12" acrylic toppers: Optional

Technology:

Standard PC max capacity: 12+
Rack mount ready: Optional in Technology Cabinets
User accessible plug-ins: 4
110V NEMA 5-15R receptacles: Two 10-outlet PDUs provided per console.

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Functional. Durable. Flexible.



Functional: Mercury Standard provides operators, IT technicians and facility managers benefits that boost performance efficiency for public safety and operations control teams.

Durable: Mercury Standard exceeds standards across the board—in fire safety, BIFMA durability, R-56 compliance, FCC, ASTM E84, and CA TB 117. Watson's use of industry-best materials, expert machining and rigorous quality assurance ensure that your console will serve your team for more than a decade.

Flexible: Not only is Mercury's in-line design a space-saver, the true modular build means technology and personal storage components can be moved and added as technology and staffing changes.



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REDESIGNED TO BE THE BEST

3142r1 HIGH BACK

The 3142 set the standard for 24/7 Intensive Use Chairs. The first chair to combine state of the art ergonomics with unmatched durability; the newly redesigned 3142r1 is raising the bar for 24/7 chairs, now offering quick-change slip covers.



— KEY — POINTS

ERGO AIR SUSPENSION SYSTEM™

Our Ergo Air Suspension (EAS²)™ dissipates the occupant's weight over the entire chair surface improving blood flow and increasing oxygen levels to tissues. Improved blood flow and increased oxygen levels improves concentration and productivity and decreases fatigue. EAS² conforms to the shape of each occupant, as it almost instantly bounces back to original shape when weight is lifted. No springs eliminates the chances of squeaky or flattened springs.

REPLACEABLE COVERS - Covers can wear, but our frames are virtually indestructible. Bring back that 'brand new' look in minutes even after years of 24/7 service. Covers are held on by hook-and-loop and can be replaced in a matter of minutes.

SAFETY CASTERS - Smooth dual wheel design with spring action not to roll away unless there is weight in the chair. Dual connection point eliminates rattle for a smooth roll.

ALL STEEL FRAME - Ten gauge steel maintains original tensile strength and rigidity over years of 24/7 heavy duty use.

ADJUSTABLE ARMRESTS - No tools required to adjust. You can choose style, width and height for customized comfort, security, and support. Swing arm style will swing out of the way from a seated position.

WARRANTY - The best warranty you'll never need. Chair is covered by a 6 year warranty that includes all normal wear and tear. Chair is covered by a 10 year warranty that includes all manufacturing defects in materials and/or workmanship. Weight limit is 550 lbs. in a multi-shift environment.

SEAT PAN DEPTH	19"
SEAT PAN WIDTH	20.5"
BACK HEIGHT - TO TOP OF CHAIR BACK	25"
BACK HEIGHT - TO TOP OF HEADREST	31"
ARM HEIGHT ADJUSTMENT RANGE	7 POSITIONS (3.5") OR INFINITE ADJUSTMENT
ARM WIDTH ADJUSTMENT RANGE	2.5" (22"-27")
PNEUMATIC CYLINDER SPECIFICATION	CERTIFIED TO 100,000 CYCLES 500 NEWTONS - DIN CLASS 4551-4
SEAT HEIGHT RANGE ADJUSTMENT	16"-21.5" (DEPENDING ON CYLINDER)
TILT CONTROL W/ TENSION ADJUSTMENT AND UPRIGHT POSITION LOCK	YES
UPRIGHT POSITION LOCK	YES
BASE SIZE DIAMETER AND CONFIGURATION	28" AND 7 LEG (TESTED TO 10,000 LB. DYNAMIC LOAD)
LUMBAR SUPPORT ADJUSTMENT	INFINITE ADJUSTMENT FROM SEATED POSITION
ARMREST CHOICES	C-LOOP OR OPTIONAL SWING ARMS OR FIXED
FRAME CONSTRUCTION	10 GAUGE STEEL
SEAT BOTTOM ASSEMBLY	ERGO AIR SUSPENSION (EAS ²)™
SEAT BACK ASSEMBLY	ERGO AIR SUSPENSION (EAS ²)™
CASTERS	SAFETY CASTER, DUAL CONNECTION POINT 165 LB./CASTER - OPTIONAL 75mm, GLIDES OR ESD CASTERS
COVER MATERIALS	STACCATO OR OPTIONAL LEATHER AND ALTERNATIVE LEATHER
REPLACEABLE COVERS	YES
TEST STANDARDS	30% HIGHER: GSA FNEW83-269A and ANSI/BIFMA X5.11 STANDARD TEST: ANSI/BIFMA and FIRA 055:2005
WARRANTY	6 YEAR 24/7 INTENSIVE USE WARRANTY - INCLUDES NORMAL WEAR AND TEAR - 10 YEAR ON FRAME
ADJUSTABLE NECK ROLL	CLOTH OR LEATHER
EMBROIDERY	CUSTOM EMBROIDERY AVAILABLE

SECTION 3

EQUIPMENT LIST

This section lists the equipment necessary for the proposed solution.

Console System

QTY	NOMENCLATURE	DESCRIPTION
1	B1948	MCC 7500E DISPATCH POSITION LICENSES
6	UA00653AA	ADD: BASIC CONSOLE OPERATION
6	UA00654AA	ADD: ASTRO 25 TRUNKING OPERATION
6	UA00655AA	ADD: ADVANCED CONVENTIONAL OPERATION
6	UA00659AA	ADD: ADP/AES/DES-OFB ENCRYPTION
6	UA00658AA	ADD: SECURE OPERATION
6	UA00652AA	ADD: 160 RADIO RESOURCES LICENSE
6	UA00661AA	ADD: ENHANCED IRR
1	B1949	MCC 7500E SOFTWARE DVD
6	DSEV221B	TECH GLOBAL EVOLUTION SERIES 22INCH WITH TOUCH
6	TT3903A	Z2 G5 MINI WORKSTATION NON RETURNABLE
12	B1952	SPEAKER, DESKTOP, USB
12	CA03405AA	ADD: POWER SUPPLY WITH DC CORD
12	CA03406AA	ADD: AC LINE CORD, NORTH AMERICA
12	CA03412AA	ADD: USB CABLE, TYPE C TO TYPE C, 4.5M
6	B1941	USB AUDIO INTERFACE MODULE
6	B1951	MICROPHONE, DESKTOP, USB
6	CA03413AA	ADD: USB CABLE, TYPE A TO TYPE C, 4.5M
12	B1913	MCC SERIES HEADSET JACK
6	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
6	T8742	MCAFFEE FOR WINDOWS CLIENT, A2019.2
4	DSF2B56AA	USB EXTERNAL DVD DRIVE
6	DSST7300U3M	STARTECH 7 PORT USB 3.0 HUB
2	CLN1868	2930F 24-PORT SWITCH
1	T8492	SITE ROUTER & FIREWALL- AC
1	CA03445AA	ADD: MISSION CRITICAL HARDENING
1	CA03448AA	ADD: STATEFUL FIREWALL
1	F4543	SITE MANAGER BASIC
1	VA00874	ADD: AUX I-O SERV FW CURR ASTRO REL
1	V266	ADD: 90VAC TO 260VAC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	T7038	GCP 8000 SITE CONTROLLER
1	CA03677AA	ADD: ASTRO SYSTEM RELEASE 2020.1



1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
1	CA01136AA	MCC 7500 CONVEN SITE OPER
1	X153AW	ADD: RACK MOUNT HARDWARE
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	BVN1013	MKM 7000 Console Alias Manager Software
1	TT3903A	Z2 G5 MINI WORKSTATION NON RETURNABLE
1	DSEV221B	TECH GLOBAL EVOLUTION SERIES 22INCH WITH TOUCH
1	B1905	MCC 7500 ASTRO 25 SOFTWARE
1	B1933	MOTOROLA VOICE PROCESSOR MODULE
1	CA00288AB	ADD: MCC 7500 ARCHIVING INTERFACE SERVER SOFTWARE LICENSE
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00143AC	ADD: DES-OFB ALGORITHM
1	CA00182AB	ADD: AES ALGORITHM
1	CA00245AA	ADD: ADP ALGORITHM
1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
1	TT3903A	Z2 G5 MINI WORKSTATION NON RETURNABLE
1	DSEV221B	TECH GLOBAL EVOLUTION SERIES 22INCH WITH TOUCH
1	T8639	JUNIPER FIREWALL APPLIANCE
1	T8806A	WINDOWS SUPP TRANS CONFIG, A2020.1/A2021.1
1	B1941	USB AUDIO INTERFACE MODULE
1	B1952	SPEAKER, DESKTOP, USB
1	CA03405AA	ADD: POWER SUPPLY WITH DC CORD
1	CA03406AA	ADD: AC LINE CORD, NORTH AMERICA
1	CA03412AA	ADD: USB CABLE, TYPE C TO TYPE C, 4.5M
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
1	B1913	MCC SERIES HEADSET JACK
1	TT3903A	Z2 G5 MINI WORKSTATION NON RETURNABLE
1	T8492	SITE ROUTER & FIREWALL- AC
1	CA03445AA	ADD: MISSION CRITICAL HARDENING
1	CA03448AA	ADD: STATEFUL FIREWALL
1	CLN1868	2930F 24-PORT SWITCH
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	B1934	MCC 7500 VOICE PROCESSOR MODULE FRU
1	CA00143AC	ADD: DES-OFB ALGORITHM
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00182AB	ADD: AES ALGORITHM
1	CA00245AA	ADD: ADP ALGORITHM
3	L37TSS9PW1 N	ALL BAND CONSOLETTTE
3	CA01598	ADD: AC LINE CORD US
3	G361	ENH: P25 TRUNKING SOFTWARE APX

3	G51	ENH: SMARTZONE OPERATION APX
3	G78	ADD: 3Y ESSENTIAL SERVICE
3	G806	ENH: ASTRO DIGITAL CAI OP APX
3	G90	ADD: NO MICROPHONE NEEDED
3	GA00580	ADD: TDMA OPERATION APX
3	G843	ADD: AES ENCRYPTION APX AND ADP
3	W969	ADD: MULTIPLE KEY ENCRYPTION OPERATION
3	GA05508	DEL: DELETE VHF BAND
3	GA05509	DEL: DELETE UHF BAND
3	L999	ADD: FULL FP W/E5/KEYPAD/CLOCK/VU
3	HKN6233C	APX CONSOLE RACK MOUNT KIT
1	TRN7343	SEVEN AND A HALF FOOT RACK
1	T8476B	KVL 5000
1	CA00182AW	ADD: AES ENCRYPTION SOFTWARE
1	CA00243AJ	ADD: ADP PRIVACY
1	CA03358AA	ADD: ASTRO 25 MODE
1	CA03467AA	ADD: NORTH AMERICA MICRO USB CHARGER 100/240V
1	X423AG	ADD: DES/DES-XL/DES-OFB ENCRYPTION
1	DQUUSBOTG	STARTECH.COM 5IN MICRO USB TO USB OTG HOST ADAPTER M/F - USB ADAPTER
1	PMNN4549A	BATT IMPRES 2 LIION 2925T
1	TKN8531C	CABLE FOR RNC, DIU MGEQ
1	PMKN4013C	PROGRAMMING, TEST & ALIGNMENT CABLE
1	PMPN4119A	CHARGER,CHGR VEHICULAR ADAPTER EXT USB CHGR 5VDC
103	M25URS9PW1BN	APX6500 ENHANCED 7/800 MHZ
103	G193	ADD: ADP ONLY (NON-P25 CAP COMPLIANT) (US ONLY)
103	G361	ENH: P25 TRUNKING SOFTWARE APX
103	G444	ADD: APX CONTROL HEAD SOFTWARE
103	G51	ENH: SMARTZONE OPERATION APX6500
103	G66BJ	ADD: DASH MOUNT E5 APXM
103	G806	ENH: ASTRO DIGITAL CAI OP APX
103	G831	ADD: SPKR 15W WATER RESISTANT
103	G89	ADD: NO RF ANTENNA NEEDED
103	GA00318	ADD: 5Y ESSENTIAL SERVICE
103	GA00580	ADD: TDMA OPERATION APX
103	GA01606AA	ADD: NO GPS/WI-FI ANTENNA NEEDED
103	GA01670	ADD: APX E5 CONTROL HEAD
103	W22	ADD: STD PALM MICROPHONE APX
1	M25URS9PW1BN	APX6500 ENHANCED 7/800 MHZ
1	G193	ADD: ADP ONLY (NON-P25 CAP COMPLIANT) (US ONLY)
1	G361	ENH: P25 TRUNKING SOFTWARE APX
1	G444	ADD: APX CONTROL HEAD SOFTWARE
1	G51	ENH: SMARTZONE OPERATION APX6500
1	G67DT	ADD: REMOTE MOUNT E5 APXM
1	G806	ENH: ASTRO DIGITAL CAI OP APX



1	G831	ADD: SPKR 15W WATER RESISTANT
1	G89	ADD: NO RF ANTENNA NEEDED
1	GA00221	ADD: MODEL III GCAI KEYPAD HANDSET
1	GA00318	ADD: 5Y ESSENTIAL SERVICE
1	GA00580	ADD: TDMA OPERATION APX
1	GA01606AA	ADD: NO GPS/WI-FI ANTENNA NEEDED
1	GA01670	ADD: APX E5 CONTROL HEAD
2	M25URS9PW1BN	APX6500 ENHANCED 7/800 MHZ
2	G142	ADD: NO SPEAKER NEEDED
2	G193	ADD: ADP ONLY (NON-P25 CAP COMPLIANT) (US ONLY)
2	G361	ENH: P25 TRUNKING SOFTWARE APX
2	G444	ADD: APX CONTROL HEAD SOFTWARE
2	G51	ENH: SMARTZONE OPERATION APX6500
2	G66BJ	ADD: DASH MOUNT E5 APXM
2	G806	ENH: ASTRO DIGITAL CAI OP APX
2	G89	ADD: NO RF ANTENNA NEEDED
2	GA00235	ADD: NO GPS ANTENNA NEEDED
2	GA00318	ADD: 5Y ESSENTIAL SERVICE
2	GA00580	ADD: TDMA OPERATION APX
2	GA01670	ADD: APX E5 CONTROL HEAD
2	W382	ADD: CONTROL STATION DESK GCAI MIC
2	W665	ADD: CONTROL STATION OPERATION

SECTION 4

PRICING

Motorola is pleased to provide the following equipment and services to Go Triangle:

EQUIPMENT:

MCC7500E IP Console System/Radio Subscribers/
6 Positions MCC7500E/4 Concept Chairs

Total Equipment	\$ 1,024,754.20
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SERVICES:

Installation/System Integration Services/Training

Total Services	\$ 369,713.59
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Total	\$ 1,394,467.79
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Advanced Plus Maintenance: (5 years)

Year 2

Total	\$ 42,028.01
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Year 3

Total	\$ 44,129.41
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Year 4

Total	\$ 46,335.88
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Year 5

Total	\$ 48,651.62
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Year 6

Total	\$ 51,085.05
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Total Maint.	\$ 232,229.97
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SUA on Cary/Wake system: (5 years: MCA, depot and MDR)

Year 2

Total	\$ 34,437.26
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Year 3

Total	\$ 34,488.62
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Year 4

Total	\$ 34,541.51
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Year 5

Total	\$ 34,596.00
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Year 6

Total	\$ 33,926.71
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Total SUA	\$ 171,990.10
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System Total	\$ 1,798,687.86
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Prices in accordance with North Carolina State Contract 725G



SECTION 5

CONTRACT INFORMATION

Motorola Solutions, Inc. (“Motorola”) and Go Triangle, North Carolina (“Customer”) enter into this “Agreement,” pursuant to which Customer will purchase and Motorola will sell the System and Services, as described below. Motorola and Customer may be referred to individually as a “Party” and collectively as the “Parties.” For good and valuable consideration, the Parties agree as follows:

Section 1 ATTACHMENTS

1.1. EXHIBITS. The Exhibits listed below are exhibits related to the System sale and implementation. These Exhibits are incorporated into and made a part of this Agreement.

Exhibit A	“Motorola Software License Agreement”
Exhibit B	“Payment”
Exhibit C	Motorola Proposal dated February 7, 2022
Exhibit D	“System Acceptance Certificate”

1.2. ADDENDUM (ADDENDA). Customer may elect to purchase professional or subscription services in addition to the System and related services. Any such services will be governed by the terms in the main body of the Agreement and an applicable Addendum containing terms specific to such service. Such Addenda will be labeled with the name of the service being purchased.

1.3. ORDER OF PRECEDENCE. In interpreting this Agreement and resolving any ambiguities: 1) the main body of this Agreement takes precedence over the exhibits (unless otherwise specified in an exhibit), and any inconsistency between Exhibits A through D will be resolved in their listed order, and 2) The applicable service Addendum will take precedence over the main body of the Agreement and the Exhibits.

Section 2 DEFINITIONS

Capitalized terms used in this Agreement have the following meanings:

“Acceptance Tests” means those tests described in the Acceptance Test Plan.

“Addendum (Addenda)” is the title of the document(s) containing a specific set of terms and conditions applicable to a particular service or other offering beyond the Communication System and System implementation services. The terms in the Addendum are applicable only to the specific service or offering described therein.

“Administrative User Credentials” means an account that has total access over the operating system, files, end user accounts and passwords at either the System level or box level. Customer’s personnel with access to the Administrative User Credentials may be referred to as the Administrative User.

“Beneficial Use” means when Customer first uses the System or a Subsystem for operational purposes (excluding training or testing).

“Confidential Information” means all information consistent with the fulfillment of this Agreement that is (i) disclosed under this Agreement in oral, written, graphic, machine recognizable, and/or sample form, being clearly designated, labeled or marked as confidential or its equivalent or (ii) obtained by examination, testing or analysis of any hardware, software or any component part thereof provided by discloser to recipient. The nature and existence of this Agreement are considered Confidential Information. Confidential Information that is disclosed orally must be identified as confidential at the time of disclosure and confirmed by the discloser by submitting a written document to the recipient within thirty (30) days after such disclosure. The written document must contain a summary of the Confidential Information disclosed with enough specificity for identification purpose and must be labeled or marked as confidential or its equivalent.



“Contract Price” means the price for the System and implementation Services, excluding applicable sales or similar taxes and freight charges. Further, unless otherwise stated in Exhibit B, “Payment” or the pricing pages of the proposal, recurring fees for maintenance, SUA, or subscription services are not included in the Contract Price.

“Deliverables” means all written information (such as reports, specifications, designs, plans, drawings, analytics, Solution Data, or other technical or business information) that Motorola prepares for Customer in the performance of the Services and is obligated to provide to Customer under this Agreement. The Deliverables, if any, are more fully described in the Statement of Work.

“Derivative Proprietary Materials” means derivatives of the Proprietary Materials that Motorola may from time to time, including during the course of providing the Services, develop and/or use and/or to which Motorola provides Customer access.

“Effective Date” means that date upon which the last Party executes this Agreement.

“Equipment” means the hardware components of the Solution that Customer purchases from Motorola under this Agreement. Equipment that is part of the System is described in the Equipment List.

“Feedback” means comments or information, in oral or written form, given to Motorola by Customer in connection with or relating to Equipment or Services, during the term of this Agreement.

“Force Majeure” means an event, circumstance, or act that is beyond a Party’s reasonable control, such as an act of God, an act of the public enemy, an act of a government entity, strikes, other labor disturbances, supplier performance, hurricanes, earthquakes, fires, floods, epidemics, embargoes, war, riots, or any other similar cause.

“Motorola Software” means software that Motorola or its affiliated companies owns.

“Non-Motorola Software” means software that a party other than Motorola or its affiliated companies owns.

“Open Source Software” (also called “freeware” or “shareware”) means software with either freely obtainable source code, license for modification, or permission for free distribution.

“Proprietary Materials” means certain software tools and/or other technical materials, including, but not limited to, data, modules, components, designs, utilities, subsets, objects, program listings, models, methodologies, programs, systems, analysis frameworks, leading practices and specifications which Motorola has developed prior to, or independently from, the provision of the Services and/or which Motorola licenses from third parties.

“Proprietary Rights” means the patents, patent applications, inventions, copyrights, trade secrets, trademarks, trade names, mask works, know-how, and other intellectual property rights in and to the Equipment and Software, including those created or produced by Motorola under this Agreement and any corrections, bug fixes, enhancements, updates or modifications to or derivative works from the Software whether made by Motorola or another party.

“Services” means system implementation, maintenance, support, subscription, or other professional services provided under this Agreement, which may be further described in the applicable Addendum and/or SOW.

“Software” (i) means proprietary software in object code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, enhancements, new versions and new releases of the software provided by Motorola; and (iii) may contain one or more items of software owned by a third party supplier. The term “Software” does not include any third party software provided under separate license or third party software not licensable under the terms of this Agreement.

“Software License Agreement” means the Motorola Software License Agreement (Exhibit A).

“Software Support Policy” (“SwSP”) means the policy set forth at <http://www.motorolasolutions.com/softwarepolicy> describing the specific technical support that will be provided to Customers under the Warranty Period and during

any paid maintenance support period for Motorola Software. This policy may be modified from time to time at Motorola's discretion.

"Solution" means the combination of the System(s) and Services provided by Motorola under this Agreement.

"Solution Data" means Customer data that is transformed, altered, processed, aggregated, correlated or operated on by Motorola, its vendors or other data sources and data that has been manipulated or retrieved using Motorola know-how to produce value-added content to data consumers, including customers or citizens which is made available to Customer with the Solution and Services.

"Specifications" means the functionality and performance requirements that are described in the Technical and Implementation Documents.

"SUA" or "SUA II" means Motorola's Software Upgrade Agreement program.

"Subsystem" means a major part of the System that performs specific functions or operations. Subsystems are described in the Technical and Implementation Documents.

"System" means the Equipment, including incidental hardware and materials, Software, and design, installation and implementation services that are combined together into an integrated system; the System(s) is (are) described in the Technical and Implementation Documents.

"System Acceptance" means the Acceptance Tests have been successfully completed.

"System Data" means data created by, in connection with or in relation to Equipment or the performance of Services under this Agreement.

"Warranty Period" for System Hardware, Software, or services related to system implementation means one (1) year from the date of System Acceptance or Beneficial Use, whichever occurs first. Unless otherwise stated in the applicable Addendum, Warranty Period for other Services means ninety (90) days from performance of the Service.

Section 3 SCOPE OF AGREEMENT AND TERM

3.1. **SCOPE OF WORK.** Motorola will provide, install and test the System(s), and perform its other contractual responsibilities to provide the Solution, all in accordance with this Agreement. Customer will perform its contractual responsibilities in accordance with this Agreement.

3.2. **CHANGE ORDERS.** Either Party may request changes within the general scope of this Agreement. If a requested change causes an increase or decrease in the cost or time required to perform this Agreement, the Parties will agree to an equitable adjustment of the Contract Price or applicable subscription fees, Performance Schedule, or both, and will reflect the adjustment in a change order or Addendum. Neither Party is obligated to perform requested changes unless both Parties execute a written change order.

3.3. **TERM.** Unless terminated in accordance with other provisions of this Agreement or extended by mutual agreement of the Parties, the term of this Agreement begins on the Effective Date and continues until the date of Final Project Acceptance or expiration of the Warranty Period, or completion of the Services, whichever occurs last. The term and the effective date of recurring Services will be set forth in the applicable Addendum.

3.4. **ADDITIONAL EQUIPMENT OR SOFTWARE.** For three (3) years after the expiration date of the Agreement, Customer may order additional Equipment or Software, if it is then available. Each purchase order must refer to this Agreement, the expiration date of the Agreement, and must specify the pricing and delivery terms. The Parties agree that, notwithstanding expiration of the Agreement, the applicable provisions of this Agreement (except for pricing, delivery, passage of title and risk of loss to Equipment, warranty commencement, and payment terms) will govern the purchase and sale of the additional Equipment or Software. Additional or contrary terms in the purchase order will be inapplicable, unless signed by both parties. Title and risk of loss to additional Equipment will pass at shipment, warranty will commence upon delivery, and payment is due within thirty (30) days after the invoice date. Motorola will send Customer an invoice as the additional Equipment is shipped or Software is licensed. Alternatively, Customer may register with and place orders through Motorola Online ("MOL"), and this Agreement



will be the “Underlying Agreement” for those MOL transactions rather than the MOL On-Line Terms and Conditions of Sale. MOL registration and other information may be found at <https://businessonline.motorolasolutions.com> and the MOL telephone number is (800) 814-0601.

3.5. **MOTOROLA SOFTWARE.** Any Motorola Software, including subsequent releases, is licensed to Customer solely in accordance with the Software License Agreement. Customer hereby accepts and agrees to abide by all of the terms and restrictions of the Software License Agreement.

3.6. **NON-MOTOROLA SOFTWARE.** Any Non-Motorola Software is licensed to Customer in accordance with the standard license, terms, and restrictions of the copyright owner on the Effective Date unless the copyright owner has granted to Motorola the right to sublicense the Non-Motorola Software pursuant to the Software License Agreement, in which case it applies and the copyright owner will have all of Licensor’s rights and protections under the Software License Agreement. Motorola makes no representations or warranties of any kind regarding Non-Motorola Software. Non-Motorola Software may include Open Source Software.

3.7. **SUBSTITUTIONS.** At no additional cost to Customer, Motorola may substitute any Equipment, Software, or services to be provided by Motorola, if the substitute meets or exceeds the Specifications and is of equivalent or better quality to the Customer. Any substitution will be reflected in a change order.

3.8. **OPTIONAL EQUIPMENT OR SOFTWARE.** This paragraph applies only if a “Priced Options” exhibit is shown in Section 1, or if the parties amend this Agreement to add a Priced Options exhibit. During the term of the option as stated in the Priced Options exhibit (or if no term is stated, then for one (1) year after the Effective Date), Customer has the right and option to purchase the equipment, software, and related services that are described in the Priced Options exhibit. Customer may exercise this option by giving written notice to Seller which must designate what equipment, software, and related services Customer is selecting (including quantities, if applicable). To the extent they apply, the terms and conditions of this Agreement will govern the transaction; however, the parties acknowledge that certain provisions must be agreed upon, and they agree to negotiate those in good faith promptly after Customer delivers the option exercise notice. Examples of provisions that may need to be negotiated are: specific lists of deliverables, statements of work, acceptance test plans, delivery and implementation schedules, payment terms, maintenance and support provisions, additions to or modifications of the Software License Agreement, hosting terms, and modifications to the acceptance and warranty provisions.

Section 4 SERVICES

4.1. If Customer desires and Motorola agrees to continue Services beyond the Term, Customer’s issuance and Motorola’s acceptance of a purchase order for Services will serve as an automatic extension of the Agreement for purposes of the continuing Services. Only the terms and conditions applicable to the performance of Services will apply to the extended Agreement.

4.2. During the Warranty Period, in addition to warranty services, Motorola will provide maintenance Services for the Equipment and support for the Motorola Software pursuant to the applicable maintenance and support Statements of Work. Support for the Motorola Software will be in accordance with Motorola’s established Software Support Policy. Copies of the SwSP can be found at <http://www.motorolasolutions.com/softwarepolicy> and will be sent by mail, email or fax to Customer upon written request. Maintenance Services and support during the Warranty Period are included in the Contract Price. Unless already included in the Contract Price, if Customer wishes to purchase 1) additional maintenance or software support services during the Warranty Period; or 2) continue or expand maintenance, software support, installation, and/or SUA services after the Warranty Period, Motorola will provide the description of and pricing for such services in a separate proposal document. Unless otherwise agreed by the parties in writing, the terms and conditions in this Agreement applicable to maintenance, support, installation, and/or SUA Services, will be included in the Maintenance and Support Addendum, SUA Addendum, the applicable Statements of Work, and the proposal, (if applicable). These collective terms will govern the provision of such Services.

To obtain any such additional Services, Customer will issue a purchase order referring to this Agreement and the separate proposal document. Omission of reference to this Agreement in Customer’s purchase order will not affect the applicability of this Agreement. Motorola’s proposal may include a cover page entitled “Service Agreement” or “Installation Agreement”, as applicable, and other attachments. These cover pages and other attachments are

incorporated into this Agreement by this reference

4.3. **PROFESSIONAL AND SUBSCRIPTION SERVICES.** If Customer purchases professional or subscription Services as part of the Solution, additional or different terms specific to such Service will be included in the applicable Addendum and will apply to those Services. Customer may purchase additional professional or subscription services by issuing a purchase order referencing this Agreement and Motorola's proposal for such additional services.

4.4. Any information in the form of specifications, drawings, reprints, technical information or otherwise furnished to Customer in providing Services under this Agreement or Motorola data viewed, accessed, will remain Motorola's property, will be deemed proprietary, Confidential Information. This Confidential Information will be promptly returned at Motorola's request.

4.5. **TOOLS.** All tools, equipment, dies, gauges, models, drawings or other materials paid for or furnished by Motorola for the purpose of providing Services under this Agreement will be and remain the sole property of Motorola. Customer will safeguard all such property while it is in Customer's custody or control, be liable for any loss or damage to this property, and return it to Motorola upon request. This property will be held by Customer for Motorola's use without charge and may be removed from Customer's premises by Motorola at any time without restriction. Upon termination of the contract for any reason, Customer shall return to Motorola all equipment delivered to Customer.

4.6. **COVENANT NOT TO EMPLOY.** During the term of this Agreement and continuing for a period of two (2) years thereafter, Customer will not hire, engage on contract, solicit the employment of, or recommend employment to any third party of any employee of Motorola or its subcontractors without the prior written authorization of Motorola. This provision applies only to those employees of Motorola or its subcontractors who are responsible for rendering Services under this Agreement. If this provision is found to be overly broad under applicable law, it will be modified as necessary to conform to applicable law.

4.7. **CUSTOMER OBLIGATIONS.** If the applicable Statement of Work or Addendum contains assumptions that affect the Services or Deliverables, Customer will verify that they are accurate and complete. Any information that Customer provides to Motorola concerning the Services or Deliverables will be accurate and complete in all material respects. Customer will make timely decisions and obtain any required management approvals that are reasonably necessary for Motorola to perform the Services and its other duties under this Agreement. Unless the Statement of Work states the contrary, Motorola may rely upon and is not required to evaluate, confirm, reject, modify, or provide advice concerning any assumptions and Customer-provided information, decisions and approvals described in this paragraph.

4.8. **ASSUMPTIONS.** If any assumptions or conditions contained in this Agreement, applicable Addenda or Statements of Work prove to be incorrect or if Customer's obligations are not performed, Motorola's ability to perform under this Agreement may be impacted and changes to the Contract Price, subscription fees, project schedule, Deliverables, or other changes may be necessary.

4.9. **NON-PRECLUSION.** If, as a result of the Services performed under this Agreement, Motorola recommends that Customer purchase products or other services, nothing in this Agreement precludes Motorola from participating in a future competitive bidding process or otherwise offering or selling the recommended products or other services to Customer. Customer represents that this paragraph does not violate its procurement or other laws, regulations, or policies.

4.10. **PROPRIETARY MATERIALS.** Customer acknowledges that Motorola may use and/or provide Customer with access to Proprietary Materials and Derivative Proprietary Materials. The Proprietary Materials and the Derivative Proprietary Materials are the sole and exclusive property of Motorola and Motorola retains all right, title and interest in and to the Proprietary Materials and Derivative Proprietary Materials.

4.11. **ADDITIONAL SERVICES.** Any services performed by Motorola outside the scope of this Agreement at the direction of Customer will be considered to be additional Services which are subject to additional charges. Any agreement to perform additional Services will be reflected in a written and executed change order, Addendum or amendment to this Agreement.



Section 5 PERFORMANCE SCHEDULE

The Parties will perform their respective responsibilities in accordance with the Performance Schedule. By executing this Agreement, Customer authorizes Motorola to proceed with contract performance.

Section 6 CONTRACT PRICE, PAYMENT AND INVOICING

6.1. Customer affirms that a purchase order or notice to proceed is not required for contract performance or for subsequent years of service, if any, and that sufficient funds have been appropriated in accordance with applicable law. The Customer will pay all invoices as received from Motorola and any changes in scope will be subject to the change order process as described in this Agreement. At the time of execution of this Agreement, the Customer will provide all necessary reference information to include on invoices for payment in accordance with this Agreement.

6.2. **CONTRACT PRICE.** The Contract Price in U.S. dollars is \$_____. If applicable, a pricing summary is included with the Payment schedule in Exhibit B. Motorola has priced the Services, Software, and Equipment as an integrated System. A change in Software or Equipment quantities, or Services, may affect the overall Contract Price, including discounts if applicable. Fees for professional, System Upgrade Assurance (SUA), and/or subscription services which are not included in the Contract Price may be listed in Exhibit B, the pricing pages of the proposal, or the applicable Addendum.

6.3. **INVOICING AND PAYMENT.** Motorola will submit invoices to Customer according to the Payment schedule in Exhibit B. Invoices will be mailed or emailed to Customer pursuant to Section 6.5, Invoicing and Shipping Addresses. Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within thirty (30) days after the date of each invoice. Customer will make payments when due in the form of a wire transfer, check, or cashier's check from a U.S. financial institution. Overdue invoices will bear simple interest at the maximum allowable rate. For reference, the Federal Tax Identification Number for Motorola is 36-1115800.

6.4. **FREIGHT, TITLE, AND RISK OF LOSS.** Motorola will pre-pay and add all freight charges to the invoices. Title and risk of loss to the Equipment will pass to Customer upon shipment. Title to Software will not pass to Customer at any time. Motorola will pack and ship all Equipment in accordance with good commercial practices.

6.5. **INVOICING AND SHIPPING ADDRESSES.** Invoices will be sent to the Customer at the following address:
Name: _____
Address: _____
Phone: _____

E-INVOICE. To receive invoices via email:
Customer Account Number: _____
Customer Accounts Payable Email: _____
Customer CC(optional) Email: _____

The address which is the ultimate destination where the Equipment will be delivered to Customer is:
Name: _____
Address: _____

The Equipment will be shipped to the Customer at the following address (insert if this information is known):
Name: _____
Address: _____
Phone: _____

Customer may change this information by giving written notice to Motorola.

Section 7 SITES AND SITE CONDITIONS

7.1. **ACCESS TO SITES.** In addition to its responsibilities described elsewhere in this Agreement, Customer will provide a designated project manager; all necessary construction and building permits, zoning variances, licenses, and any other approvals that are necessary to develop or use the sites and mounting locations; and access to the worksites or vehicles identified in the Technical and Implementation Documents as reasonably requested by Motorola so that it may perform its duties in accordance with the Performance Schedule and Statement of Work. If the Statement of Work so indicates, Motorola may assist Customer in the local building permit process.

7.2. **SITE CONDITIONS.** Customer will ensure that all work sites it provides will be safe, secure, and in compliance with all applicable industry and OSHA standards. To the extent applicable and unless the Statement of Work states to the contrary, Customer will ensure that these work sites have adequate: physical space; air conditioning and other environmental conditions; adequate and appropriate electrical power outlets, distribution, equipment and connections; and adequate telephone or other communication lines (including modem access and adequate interfacing networking capabilities), all for the installation, use and maintenance of the System. Before installing the Equipment or Software at a work site, Motorola may inspect the work site and advise Customer of any apparent deficiencies or non-conformities with the requirements of this Section. This Agreement is predicated upon normal soil conditions as defined by the version of E.I.A. standard RS-222 in effect on the Effective Date.

7.3. **SITE ISSUES.** If a Party determines that the sites identified in the Technical and Implementation Documents are no longer available or desired, or if subsurface, structural, adverse environmental or latent conditions at any site differ from those indicated in the Technical and Implementation Documents, the Parties will promptly investigate the conditions and will select replacement sites or adjust the installation plans and specifications as necessary. If change in sites or adjustment to the installation plans and specifications causes a change in the cost or time to perform, the Parties will equitably amend the Contract Price, Performance Schedule, or both, by a change order.

Section 8 TRAINING

Any training to be provided by Motorola to Customer will be described in the applicable Statement of Work. Customer will notify Motorola immediately if a date change for a scheduled training program is required. If Motorola incurs additional costs because Customer reschedules a training program less than thirty (30) days before its scheduled start date, Motorola may recover these additional costs.

Section 9 SYSTEM ACCEPTANCE

9.1. **COMMENCEMENT OF ACCEPTANCE TESTING.** Motorola will provide to Customer at least ten (10) days notice before the Acceptance Tests commence. System testing will occur only in accordance with the Acceptance Test Plan.

9.2. **SYSTEM ACCEPTANCE.** System Acceptance will occur upon successful completion of the Acceptance Tests. Upon System Acceptance, the Parties will memorialize this event by promptly executing a System Acceptance Certificate. If the Acceptance Test Plan includes separate tests for individual Subsystems or phases of the System, acceptance of the individual Subsystem or phase will occur upon the successful completion of the Acceptance Tests for the Subsystem or phase, and the Parties will promptly execute an acceptance certificate for the Subsystem or phase. If Customer believes the System has failed the completed Acceptance Tests, Customer will provide to Motorola a written notice that includes the specific details of the failure. If Customer does not provide to Motorola a failure notice within thirty (30) days after completion of the Acceptance Tests, System Acceptance will be deemed to have occurred as of the completion of the Acceptance Tests. Minor omissions or variances in the System that do not materially impair the operation of the System as a whole will not postpone System Acceptance or Subsystem acceptance, but will be corrected according to a mutually agreed schedule.

9.3. **BENEFICIAL USE.** Customer acknowledges that Motorola's ability to perform its implementation and testing responsibilities may be impeded if Customer begins using the System before System Acceptance. Therefore, Customer will not commence Beneficial Use before System Acceptance without Motorola's prior written authorization, which will not be unreasonably withheld. Motorola is not responsible for System performance deficiencies that occur during unauthorized Beneficial Use. Upon commencement of Beneficial Use, Customer assumes responsibility for the use and operation of the System.



9.4. **FINAL PROJECT ACCEPTANCE.** Final Project Acceptance will occur after System Acceptance when all deliverables and other work have been completed. When Final Project Acceptance occurs, the parties will promptly memorialize this final event by so indicating on the System Acceptance Certificate.

Section 10 REPRESENTATIONS AND WARRANTIES

10.1. **SYSTEM FUNCTIONALITY.** Motorola represents that the System will perform in accordance with the Specifications in all material respects. Upon System Acceptance or Beneficial Use, whichever occurs first, this System functionality representation is fulfilled. Motorola is not responsible for System performance deficiencies that are caused by ancillary equipment not furnished by Motorola which is attached to or used in connection with the System or for reasons or parties beyond Motorola's control, such as natural causes; the construction of a building that adversely affects the microwave path reliability or radio frequency (RF) coverage; the addition of frequencies at System sites that cause RF interference or intermodulation; or Customer changes to load usage or configuration outside the Specifications.

10.2. **EQUIPMENT WARRANTY.** During the Warranty Period, Motorola warrants that the Equipment under normal use and service will be free from material defects in materials and workmanship. If System Acceptance is delayed beyond six (6) months after shipment of the Equipment by events or causes beyond Motorola's control, this warranty expires eighteen (18) months after the shipment of the Equipment.

10.3. **SOFTWARE WARRANTY.** Except as described in the SwSP and unless otherwise stated in the Software License Agreement, during the Warranty Period, Motorola warrants the Software in accordance with the warranty terms set forth in the Software License Agreement and the provisions of this Section that are applicable to the Software. If System Acceptance is delayed beyond six (6) months after shipment of the Motorola Software by events or causes beyond Motorola's control, this warranty expires eighteen (18) months after the shipment of the Motorola Software. Nothing in this Warranty provision is intended to conflict or modify the Software Support Policy. In the event of an ambiguity or conflict between the Software Warranty and Software Support Policy, the Software Support Policy governs.

10.4. **EXCLUSIONS TO EQUIPMENT AND SOFTWARE WARRANTIES.** These warranties do not apply to: (i) defects or damage resulting from: use of the Equipment or Software in other than its normal, customary, and authorized manner; accident, liquids, neglect, or acts of God; testing, maintenance, disassembly, repair, installation, alteration, modification, or adjustment not provided or authorized in writing by Motorola; Customer's failure to comply with all applicable industry and OSHA standards; (ii) breakage of or damage to antennas unless caused directly by defects in material or workmanship; (iii) Equipment that has had the serial number removed or made illegible; (iv) batteries (because they carry their own separate limited warranty) or consumables; (v) freight costs to ship Equipment to the repair depot; (vi) scratches or other cosmetic damage to Equipment surfaces that does not affect the operation of the Equipment; and (vii) normal or customary wear and tear.

10.5. **SERVICE WARRANTY.** During the Warranty Period, Motorola warrants that the Services will be provided in a good and workmanlike manner and will conform in all material respects to the applicable Statement of Work. Services will be free of defects in materials and workmanship for a period of ninety (90) days from the date the performance of the Services are completed. Customer acknowledges that the Deliverables may contain recommendations, suggestions or advice from Motorola to Customer (collectively, "recommendations"). Motorola makes no warranties concerning those recommendations, and Customer alone accepts responsibility for choosing whether and how to implement the recommendations and the results to be realized from implementing them.

10.6. **WARRANTY CLAIMS.** To assert a warranty claim, Customer must notify Motorola in writing of the claim before the expiration of the Warranty Period. Upon receipt of this notice, Motorola will investigate the warranty claim. If this investigation confirms a valid Equipment or Software warranty claim, Motorola will (at its option and at no additional charge to Customer) repair the defective Equipment or Motorola Software, replace it with the same or equivalent product, or refund the price of the defective Equipment or Motorola Software. These actions will be the full extent of Motorola's liability for the warranty claim. In the event of a valid Services warranty claim, Customer's sole remedy is to require Motorola to re-perform the non-conforming Service or to refund, on a pro-rata basis, the fees paid for the non-conforming Service. If this investigation indicates the warranty claim is not valid, then Motorola may invoice Customer for responding to the claim on a time and materials basis using Motorola's then current labor rates. Repaired or replaced product is warranted for the balance of the original applicable warranty period. All



replaced products or parts will become the property of Motorola.

10.7. ORIGINAL END USER IS COVERED. These express limited warranties are extended by Motorola to the original user purchasing the System or Services for commercial, industrial, or governmental use only, and are not assignable or transferable.

10.8. DISCLAIMER OF OTHER WARRANTIES. THESE WARRANTIES ARE THE COMPLETE WARRANTIES FOR THE EQUIPMENT AND MOTOROLA SOFTWARE PROVIDED UNDER THIS AGREEMENT AND ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES. MOTOROLA DISCLAIMS ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

Section 11 DELAYS

11.1. FORCE MAJEURE. Neither Party will be liable for its non-performance or delayed performance if caused by a Force Majeure. A Party that becomes aware of a Force Majeure that will significantly delay performance will notify the other Party promptly (but in no event later than fifteen days) after it discovers the Force Majeure. If a Force Majeure occurs, the Parties will execute a change order to extend the Performance Schedule or applicable Addenda for a time period that is reasonable under the circumstances.

11.2. PERFORMANCE SCHEDULE DELAYS CAUSED BY CUSTOMER. If Customer (including its other contractors) delays the Performance Schedule, it will make the promised payments according to the Payment schedule as if no delay occurred; and the Parties will execute a change order to extend the Performance Schedule and, if requested, compensate Motorola for all reasonable charges incurred because of the delay. Delay charges may include costs incurred by Motorola or its subcontractors for additional freight, warehousing and handling of Equipment; extension of the warranties; travel; suspending and re-mobilizing the work; additional engineering, project management, and standby time calculated at then current rates; and preparing and implementing an alternative implementation plan.

Section 12 DISPUTES

The Parties will use the following procedure to address any dispute arising under this Agreement (a "Dispute").

12.1. GOVERNING LAW. This Agreement will be governed by and construed in accordance with the laws of the State of North Carolina.

12.2. NEGOTIATION. Either Party may initiate the Dispute resolution procedures by sending a notice of Dispute ("Notice of Dispute"). The Parties will attempt to resolve the Dispute promptly through good faith negotiations including 1) timely escalation of the Dispute to executives who have authority to settle the Dispute and who are at a higher level of management than the persons with direct responsibility for the matter and 2) direct communication between the executives. If the Dispute has not been resolved within ten (10) days from the Notice of Dispute, the Parties will proceed to mediation.

12.3. MEDIATION. The Parties will choose an independent mediator within thirty (30) days of a notice to mediate from either Party ("Notice of Mediation"). Neither Party may unreasonably withhold consent to the selection of a mediator. If the Parties are unable to agree upon a mediator, either Party may request that American Arbitration Association nominate a mediator. Each Party will bear its own costs of mediation, but the Parties will share the cost of the mediator equally. Each Party will participate in the mediation in good faith and will be represented at the mediation by a business executive with authority to settle the Dispute.

12.4. LITIGATION, VENUE and JURISDICTION. If a Dispute remains unresolved for sixty (60) days after receipt of the Notice of Mediation, either Party may then submit the Dispute to a court of competent jurisdiction in the State of North Carolina. Each Party irrevocably agrees to submit to the exclusive jurisdiction of the courts in such state over any claim or matter arising under or in connection with this Agreement.

12.5. CONFIDENTIALITY. All communications pursuant to subsections 12.2 and 12.3 will be treated as compromise and settlement negotiations for purposes of applicable rules of evidence and any additional



confidentiality protections provided by applicable law. The use of these Dispute resolution procedures will not be construed under the doctrines of laches, waiver or estoppel to affect adversely the rights of either Party.

Section 13 DEFAULT AND TERMINATION

13.1. **DEFAULT BY A PARTY.** If either Party fails to perform a material obligation under this Agreement, the other Party may consider the non-performing Party to be in default (unless a Force Majeure causes the failure) and may assert a default claim by giving the non-performing Party a written and detailed notice of default. Except for a default by Customer for failing to pay any amount when due under this Agreement which must be cured immediately, the defaulting Party will have thirty (30) days after receipt of the notice of default to either cure the default or, if the default is not curable within thirty (30) days, provide a written cure plan. The defaulting Party will begin implementing the cure plan immediately after receipt of notice by the other Party that it approves the plan. If Customer is the defaulting Party, Motorola may stop work on the project until it approves the Customer's cure plan.

13.2. **FAILURE TO CURE.** If a defaulting Party fails to cure the default as provided above in Section 13.1, unless otherwise agreed in writing, the non-defaulting Party may terminate any unfulfilled portion of this Agreement. In the event of termination for default, the defaulting Party will promptly return to the non-defaulting Party any of its Confidential Information. If Customer is the non-defaulting Party, terminates this Agreement as permitted by this Section, and completes the System through a third Party, Customer may as its exclusive remedy recover from Motorola reasonable costs incurred to complete the System to a capability not exceeding that specified in this Agreement less the unpaid portion of the Contract Price. Customer will mitigate damages and provide Motorola with detailed invoices substantiating the charges. In the event Customer elects to terminate this Agreement for any reason other than default, Customer shall pay Motorola for the conforming Equipment and/or Software delivered and all services performed.

Section 14 INDEMNIFICATION

14.1. **GENERAL INDEMNITY BY Motorola.** Motorola will indemnify and hold Customer harmless from any and all liability, expense, judgment, suit, cause of action, or demand for personal injury, death, or direct damage to tangible property which may accrue against Customer to the extent it is caused by the negligence of Motorola, its subcontractors, or their employees or agents, while performing their duties under this Agreement, if Customer gives Motorola prompt, written notice of any claim or suit. Customer will cooperate with Motorola in its defense or settlement of the claim or suit. This Section sets forth the full extent of Motorola's general indemnification of Customer from liabilities that are in any way related to Motorola's performance under this Agreement.

14.2. **GENERAL INDEMNITY BY CUSTOMER.** To the extent allowed by law, Customer will indemnify and hold Motorola harmless from any and all liability, expense, judgment, suit, cause of action, or demand for personal injury, death, or direct damage to tangible property which may accrue against Motorola to the extent it is caused by the negligence of Customer, its other contractors, or their employees or agents, while performing their duties under this Agreement, if Motorola gives Customer prompt, written notice of any the claim or suit. Motorola will cooperate with Customer in its defense or settlement of the claim or suit. This Section sets forth the full extent of Customer's general indemnification of Motorola from liabilities that are in any way related to Customer's performance under this Agreement.

14.3. PATENT AND COPYRIGHT INFRINGEMENT.

14.3.1. Motorola will defend at its expense any suit brought against Customer to the extent it is based on a third-party claim alleging that the Equipment manufactured by Motorola or the Motorola Software ("Motorola Product") directly infringes a United States patent or copyright ("Infringement Claim"). Motorola's duties to defend and indemnify are conditioned upon: Customer promptly notifying Motorola in writing of the Infringement Claim; Motorola having sole control of the defense of the suit and all negotiations for its settlement or compromise; and Customer providing to Motorola cooperation and, if requested by Motorola, reasonable assistance in the defense of the Infringement Claim. In addition to Motorola's obligation to defend, and subject to the same conditions, Motorola will pay all damages finally awarded against Customer by a court of competent jurisdiction for an Infringement Claim or agreed to, in writing, by Motorola in settlement of an Infringement Claim.

14.3.2 If an Infringement Claim occurs, or in Motorola's opinion is likely to occur, Motorola may at its option and

expense: (a) procure for Customer the right to continue using the Motorola Product; (b) replace or modify the Motorola Product so that it becomes non-infringing while providing functionally equivalent performance; or (c) accept the return of the Motorola Product and grant Customer a credit for the Motorola Product, less a reasonable charge for depreciation. The depreciation amount will be calculated based upon generally accepted accounting standards.

14.3.3 Motorola will have no duty to defend or indemnify for any Infringement Claim that is based upon: (a) the combination of the Motorola Product with any software, apparatus or device not furnished by Motorola; (b) the use of ancillary equipment or software not furnished by Motorola and that is attached to or used in connection with the Motorola Product; (c) Motorola Product designed or manufactured in accordance with Customer's designs, specifications, guidelines or instructions, if the alleged infringement would not have occurred without such designs, specifications, guidelines or instructions; (d) a modification of the Motorola Product by a party other than Motorola; (e) use of the Motorola Product in a manner for which the Motorola Product was not designed or that is inconsistent with the terms of this Agreement; or (f) the failure by Customer to install an enhancement release to the Motorola Software that is intended to correct the claimed infringement. In no event will Motorola's liability resulting from its indemnity obligation to Customer extend in any way to royalties payable on a per use basis or the Customer's revenues, or any royalty basis other than a reasonable royalty based upon revenue derived by Motorola from Customer from sales or license of the infringing Motorola Product.

14.3.4. This Section 14 provides Customer's sole and exclusive remedies and Motorola's entire liability in the event of an Infringement Claim. Customer has no right to recover and Motorola has no obligation to provide any other or further remedies, whether under another provision of this Agreement or any other legal theory or principle, in connection with an Infringement Claim. In addition, the rights and remedies provided in this Section 14 are subject to and limited by the restrictions set forth in Section 15.

Section 15 LIMITATION OF LIABILITY

Except for personal injury or death, Motorola's total liability, whether for breach of contract, warranty, negligence, strict liability in tort, indemnification, or otherwise, will be limited to the direct damages recoverable under law, but not to exceed the price of the Equipment, Software, or implementation and other one-time Services with respect to which losses or damages are claimed. With respect to all subscription or other ongoing Services and unless as otherwise provided under the applicable Addenda, Motorola's total liability will be limited to the direct damages recoverable under law, but not to exceed the price of twelve (12) months of Services preceding the incident giving rise to the claim. **ALTHOUGH THE PARTIES ACKNOWLEDGE THE POSSIBILITY OF SUCH LOSSES OR DAMAGES, THEY AGREE THAT MOTOROLA WILL NOT BE LIABLE FOR ANY COMMERCIAL LOSS, INCONVENIENCE, LOSS OF USE, LOSS TIME, DATA, GOODWILL, REVENUES, PROFITS OR SAVINGS; OR OTHER SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO OR ARISING FROM THIS AGREEMENT, THE SALE OR USE OF THE EQUIPMENT OR SOFTWARE, OR THE PERFORMANCE OF SERVICES BY MOTOROLA PURSUANT TO THIS AGREEMENT.** This limitation of liability provision survives the expiration or termination of the Agreement and applies notwithstanding any contrary provision. No action for contract breach or otherwise relating to the transactions contemplated by this Agreement may be brought more than one (1) year after the accrual of the cause of action, except for money due upon an open account.

Section 16 CONFIDENTIALITY AND PROPRIETARY RIGHTS

16.1. CONFIDENTIAL INFORMATION.

16.1.1. Each party is a disclosing party ("Discloser") and a receiving party ("Recipient") under this Agreement. All Deliverables will be deemed to be Motorola's Confidential Information. During the term of this Agreement and for a period of three (3) years from the expiration or termination of this Agreement, Recipient will (i) not disclose Confidential Information to any third party; (ii) restrict disclosure of Confidential Information to only those employees (including, but not limited to, employees of any wholly owned subsidiary, a parent company, any other wholly owned subsidiaries of the same parent company), agents or consultants who must be directly involved with the Confidential Information for the purpose and who are bound by confidentiality terms substantially similar to those in this Agreement; (iii) not copy, reproduce, reverse engineer, decompile, or disassemble any Confidential Information; (iv) use the same degree of care as for its own information of like importance, but at least use reasonable care, in safeguarding against disclosure of Confidential Information; (v) promptly notify Discloser upon discovery of any



unauthorized use or disclosure of the Confidential Information and take reasonable steps to regain possession of the Confidential Information and prevent further unauthorized actions or other breach of this Agreement; and (vi) only use the Confidential Information as needed to fulfill this Agreement.

16.1.2. Recipient is not obligated to maintain as confidential, Confidential Information that Recipient can demonstrate by documentation (i) is now available or becomes available to the public without breach of this agreement; (ii) is explicitly approved for release by written authorization of Discloser; (iii) is lawfully obtained from a third party or parties without a duty of confidentiality; (iv) is known to the Recipient prior to such disclosure; or (v) is independently developed by Recipient without the use of any of Discloser's Confidential Information or any breach of this Agreement.

16.1.3. All Confidential Information remains the property of the Discloser and will not be copied or reproduced without the express written permission of the Discloser, except for copies that are absolutely necessary in order to fulfill this Agreement. Within ten (10) days of receipt of Discloser's written request, Recipient will return all Confidential Information to Discloser along with all copies and portions thereof, or certify in writing that all such Confidential Information has been destroyed. However, Recipient may retain one (1) archival copy of the Confidential Information that it may use only in case of a dispute concerning this Agreement. No license, express or implied, in the Confidential Information is granted other than to use the Confidential Information in the manner and to the extent authorized by this Agreement. The Discloser warrants that it is authorized to disclose any Confidential Information it discloses pursuant to this Agreement.

16.2. PRESERVATION OF MOTOROLA'S PROPRIETARY RIGHTS. Motorola, the third party manufacturer of any Equipment, and the copyright owner of any Non-Motorola Software own and retain all of their respective Proprietary Rights in the Equipment and Software, and nothing in this Agreement is intended to restrict their Proprietary Rights. All intellectual property developed, originated, or prepared by Motorola in connection with providing to Customer the Equipment, Software, or related services remain vested exclusively in Motorola, and this Agreement does not grant to Customer any shared development rights of intellectual property. Except as explicitly provided in the Software License Agreement, Motorola does not grant to Customer, either directly or by implication, estoppel, or otherwise, any right, title or interest in Motorola's Proprietary Rights. Customer will not modify, disassemble, peel components, decompile, otherwise reverse engineer or attempt to reverse engineer, derive source code or create derivative works from, adapt, translate, merge with other software, reproduce, distribute, sublicense, sell or export the Software, or permit or encourage any third party to do so. The preceding sentence does not apply to Open Source Software which is governed by the standard license of the copyright owner.

16.3 VOLUNTARY DISCLOSURE. Except as required to fulfill its obligations under this Agreement, Motorola will have no obligation to provide Customer with access to its Confidential Information and/or proprietary information. Under no circumstances will Motorola be required to provide any data related to cost and pricing.

16.4 DATA AND FEEDBACK.

16.4.1 To the extent permitted by law, Customer owns all right, title and interest in System Data created solely by it or its agents (hereafter, "Customer Data"), and grants to Motorola the right to use, host, cache, store, reproduce, copy, modify, combine, analyze, create derivatives from, communicate, transmit, publish, display, and distribute such Customer Data.

16.4.2 Motorola owns all right, title and interest in data resulting from System Data that is or has been transformed, altered, processed, aggregated, correlated or operated on (hereafter, "Derivative Data").

16.4.3 Any Feedback given by Customer is and will be entirely voluntary and, even if designated as confidential, will not create any confidentiality obligation for Motorola. Motorola will be free to use, reproduce, license or otherwise distribute and exploit the Feedback without any obligation to Customer. Customer acknowledges that Motorola's receipt of the Feedback does not imply or create recognition by Motorola of either the novelty or originality of any idea. The parties further agree that all fixes, modifications and improvements made to Motorola products or services conceived of or made by Motorola that are based, either in whole or in part, on the Feedback are the exclusive property of Motorola and all right, title and interest in and to such fixes, modifications or improvements to the Motorola product or service will vest solely in Motorola.

Section 17 GENERAL

17.1. **TAXES.** The Contract Price does not include any excise, sales, lease, use, property, or other taxes, assessments or duties, all of which will be paid by Customer except as exempt by law. If Motorola is required to pay any of these taxes, Motorola will send an invoice to Customer and Customer will pay to Motorola the amount of the taxes (including any interest and penalties) within thirty (30) days after the date of the invoice. Customer will be solely responsible for reporting the Equipment for personal property tax purposes, and Motorola will be solely responsible for reporting taxes on its income or net worth.

17.2. **ASSIGNABILITY AND SUBCONTRACTING.** Except as provided herein, neither Party may assign this Agreement or any of its rights or obligations hereunder without the prior written consent of the other Party, which consent will not be unreasonably withheld. Any attempted assignment, delegation, or transfer without the necessary consent will be void. Notwithstanding the foregoing, Motorola may assign this Agreement to any of its affiliates or its right to receive payment without the prior consent of Customer. In addition, in the event Motorola separates one or more of its businesses (each a "Separated Business"), whether by way of a sale, establishment of a joint venture, spin-off or otherwise (each a "Separation Event"), Motorola may, without the prior written consent of the other Party and at no additional cost to Motorola, assign this Agreement such that it will continue to benefit the Separated Business and its affiliates (and Motorola and its affiliates, to the extent applicable) following the Separation Event. Motorola may subcontract any of the work, but subcontracting will not relieve Motorola of its duties under this Agreement.

17.3. **WAIVER.** Failure or delay by either Party to exercise a right or power under this Agreement will not be a waiver of the right or power. For a waiver of a right or power to be effective, it must be in a writing signed by the waiving Party. An effective waiver of a right or power will not be construed as either a future or continuing waiver of that same right or power, or the waiver of any other right or power.

17.4. **SEVERABILITY.** If a court of competent jurisdiction renders any part of this Agreement invalid or unenforceable, that part will be severed and the remainder of this Agreement will continue in full force and effect.

17.5. **INDEPENDENT CONTRACTORS.** Each Party will perform its duties under this Agreement as an independent contractor. The Parties and their personnel will not be considered to be employees or agents of the other Party. Nothing in this Agreement will be interpreted as granting either Party the right or authority to make commitments of any kind for the other. This Agreement will not constitute, create, or be interpreted as a joint venture, partnership or formal business organization of any kind.

17.6. **HEADINGS AND SECTION REFERENCES.** The section headings in this Agreement are inserted only for convenience and are not to be construed as part of this Agreement or as a limitation of the scope of the particular section to which the heading refers. This Agreement will be fairly interpreted in accordance with its terms and conditions and not for or against either Party.

17.7. **NOTICES.** Notices required under this Agreement to be given by one Party to the other must be in writing and either personally delivered or sent to the address provided by the other Party by certified mail, return receipt requested and postage prepaid (or by a recognized courier service, such as Federal Express, UPS, or DHL), or by facsimile with correct answerback received, and will be effective upon receipt.

17.8. **COMPLIANCE WITH APPLICABLE LAWS.** Each Party will comply with all applicable federal, state, and local laws, regulations and rules concerning the performance of this Agreement or use of the System. Customer will obtain and comply with all Federal Communications Commission ("FCC") licenses and authorizations required for the installation, operation and use of the System before the scheduled installation of the Equipment. Although Motorola might assist Customer in the preparation of its FCC license applications, neither Motorola nor any of its employees is an agent or representative of Customer in FCC or other matters.

17.9 **FUTURE REGULATORY REQUIREMENTS.** The Parties acknowledge and agree that this is an evolving technological area and therefore, laws and regulations regarding Services and use of Solution may change. Changes to existing Services or the Solution required to achieve regulatory compliance may be available for an additional fee. Any required changes may also impact the price for Services.



17.10. **AUTHORITY TO EXECUTE AGREEMENT.** Each Party represents that it has obtained all necessary approvals, consents and authorizations to enter into this Agreement and to perform its duties under this Agreement; the person executing this Agreement on its behalf has the authority to do so; upon execution and delivery of this Agreement by the Parties, it is a valid and binding contract, enforceable in accordance with its terms; and the execution, delivery, and performance of this Agreement does not violate any bylaw, charter, regulation, law or any other governing authority of the Party.

17.11. **ADMINISTRATOR LEVEL ACCOUNT ACCESS.** If applicable to the type of System purchased by Customer, Motorola will provide Customer with Administrative User Credentials. Customer agrees to only grant access to the Administrative User Credentials to those personnel with the training and experience to correctly use them. Customer is responsible for protecting Administrative User Credentials from disclosure and maintaining Credential validity by, among other things, updating passwords when required. Customer may be asked to provide valid Administrative User Credentials when in contact with Motorola System support personnel. Customer understands that changes made as the Administrative User can significantly impact the performance of the System. Customer agrees that it will be solely responsible for any negative impact on the System or its users by any such changes. System issues occurring as a result of changes made using the Administrative User Credentials may impact Motorola's ability to perform Services or other obligations under the Agreement. In such cases, a revision to the appropriate provisions of the Agreement, including the Statement of Work, may be necessary. To the extent Motorola provides assistance to correct any issues caused by or arising out of the use of or failure to maintain Administrative User Credentials, Motorola will be entitled to bill Customer and Customer will pay Motorola on a time and materials basis for resolving the issue.

17.12. **SURVIVAL OF TERMS.** The following provisions will survive the expiration or termination of this Agreement for any reason: Section 3.5 (Motorola Software); Section 3.6 (Non-Motorola Software); if any payment obligations exist, Sections 6.2 and 6.3 (Contract Price and Invoicing and Payment); Subsection 10.8 (Disclaimer of Implied Warranties); Section 12 (Disputes); Section 15 (Limitation of Liability); and Section 16 (Confidentiality and Proprietary Rights); and all of the General provisions in Section 17.

17.13. **ENTIRE AGREEMENT.** This Agreement, including all Exhibits, constitutes the entire agreement of the Parties regarding the subject matter of the Agreement and supersedes all previous agreements, proposals, and understandings, whether written or oral, relating to this subject matter. This Agreement may be executed in multiple counterparts, and shall have the same legal force and effect as if the Parties had executed it as a single document. The Parties may sign in writing, or by electronic signature, including by email. An electronic signature, or a facsimile copy or computer image, such as a PDF or tiff image, of a signature, shall be treated as and shall have the same effect as an original signature. In addition, an electronic signature, a true and correct facsimile copy or computer image of this Agreement shall be treated as and shall have the same effect as an original signed copy of this document. This Agreement may be amended or modified only by a written instrument signed by authorized representatives of both Parties. The preprinted terms and conditions found on any Customer purchase or purchase order, acknowledgment or other form will not be considered an amendment or modification of this Agreement, even if a representative of each Party signs that document.

The Parties hereby enter into this Agreement as of the Effective Date.

Motorola Solutions, Inc.

Go Triangle

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Exhibit A
MOTOROLA SOFTWARE LICENSE AGREEMENT

This Exhibit A Motorola Software License Agreement ("Agreement") is between Motorola Solutions, Inc. ("Motorola") and Go Triangle, North Carolina ("Licensee"). For good and valuable consideration, the parties agree as follows:

Section 1 DEFINITIONS

1.1 "Designated Products" means products provided by Motorola to Licensee with which or for which the Software and Documentation is licensed for use.

1.2 "Documentation" means product and software documentation that specifies technical and performance features and capabilities, and the user, operation and training manuals for the Software (including all physical or electronic media upon which such information is provided).

1.3 "Open Source Software" means software with either freely obtainable source code, license for modification, or permission for free distribution.

1.4 "Open Source Software License" means the terms or conditions under which the Open Source Software is licensed.

1.5 "Primary Agreement" means the agreement to which this exhibit is attached.

1.6 "Security Vulnerability" means a flaw or weakness in system security procedures, design, implementation, or internal controls that could be exercised (accidentally triggered or intentionally exploited) and result in a security breach such that data is compromised, manipulated or stolen or the system damaged.

1.7 "Software" (i) means proprietary software in object code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, enhancements, new versions and new releases of the software provided by Motorola; and (iii) may contain one or more items of software owned by a third party supplier. The term "Software" does not include any third party software provided under separate license or third party software not licensable under the terms of this Agreement.

Section 2 SCOPE

Motorola and Licensee enter into this Agreement in connection with Motorola's delivery of certain proprietary software or products containing embedded or pre-loaded proprietary software, or both. This Agreement contains the terms and conditions of the license Motorola is providing to Licensee, and Licensee's use of the proprietary software and affiliated documentation.

Section 3 GRANT OF LICENSE

3.1. Subject to the provisions of this Agreement and the payment of applicable license fees, Motorola grants to Licensee a personal, limited, non-transferable (except as permitted in Section 7) and non-exclusive license under Motorola's copyrights and Confidential Information (as defined in the Primary Agreement) embodied in the Software to use the Software, in object code form, and the Documentation solely in connection with Licensee's use of the Designated Products. This Agreement does not grant any rights to source code.

3.2. If the Software licensed under this Agreement contains or is derived from Open Source Software, the terms and conditions governing the use of such Open Source Software are in the Open Source Software Licenses of the copyright owner and not this Agreement. If there is a conflict between the terms and conditions of this Agreement and the terms and conditions of the Open Source Software Licenses governing Licensee's use of the Open Source Software, the terms and conditions of the license grant of the applicable Open Source Software Licenses will take precedence over the license grants in this Agreement. If requested by Licensee, Motorola will use commercially reasonable efforts to: (i) determine whether any Open Source Software is provided under this Agreement; and (ii) identify the Open Source Software (or specify where that license may be found).

3.3 TO THE EXTENT, IF ANY, THAT THERE IS A SEPARATE LICENSE AGREEMENT PACKAGED WITH, OR PROVIDED ELECTRONICALLY WITH, A PARTICULAR PRODUCT THAT BECOMES EFFECTIVE ON AN ACT OF ACCEPTANCE BY THE END USER, THEN THAT AGREEMENT SUPERSEDES THE SOFTWARE LICENSE AGREEMENT AS TO THE END USER OF EACH SUCH PRODUCT.

Section 4 LIMITATIONS ON USE

4.1. Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation. Any other use of the Software is strictly prohibited. Without limiting the general nature of these restrictions, Licensee will not make the Software available for use by third parties on a "time sharing," "application service provider," or "service bureau" basis or for any other similar commercial rental or sharing arrangement.

4.2. Licensee will not, and will not allow or enable any third party to: (i) reverse engineer, disassemble, peel components, decompile, reprogram or otherwise reduce the Software or any portion to a human perceptible form or otherwise attempt to recreate the source code; (ii) modify, adapt, create derivative works of, or merge the Software; (iii) copy, reproduce, distribute, lend, or lease the Software or Documentation to any third party, grant any sublicense or other rights in the Software or Documentation to any third party, or take any action that would cause the Software or Documentation to be placed in the public domain; (iv) remove, or in any way alter or obscure, any copyright notice or other notice of Motorola's proprietary rights; (v) provide, copy, transmit, disclose, divulge or make the Software or Documentation available to, or permit the use of the Software by any third party or on any machine except as expressly authorized by this Agreement; or (vi) use, or permit the use of, the Software in a manner that would result in the production of a copy of the Software solely by activating a machine containing the Software. Licensee may make one copy of Software to be used solely for archival, back-up, or disaster recovery purposes; *provided* that Licensee may not operate that copy of the Software at the same time as the original Software is being operated. Licensee may make as many copies of the Documentation as it may reasonably require for the internal use of the Software.

4.3. Unless otherwise authorized by Motorola in writing, Licensee will not, and will not enable or allow any third party to: (i) install a licensed copy of the Software on more than one unit of a Designated Product; or (ii) copy onto or transfer Software installed in one unit of a Designated Product onto one other device. Licensee may temporarily transfer Software installed on a Designated Product to another device if the Designated Product is inoperable or malfunctioning, if Licensee provides written notice to Motorola of the temporary transfer and identifies the device on which the Software is transferred. Temporary transfer of the Software to another device must be discontinued when the original Designated Product is returned to operation and the Software must be removed from the other device. Licensee must provide prompt written notice to Motorola at the time temporary transfer is discontinued.

4.4 Licensee will maintain, during the term of this Agreement and for a period of two years thereafter, accurate records relating to this license grant to verify compliance with this Agreement. Motorola or an independent third party ("Auditor") may inspect Licensee's premises, books and records, upon reasonable prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations. Motorola is responsible for the payment of all expenses and costs of the Auditor. Any information obtained by Motorola and the Auditor will be kept in strict confidence by Motorola and the Auditor and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.



Section 5 OWNERSHIP AND TITLE

Motorola, its licensors, and its suppliers retain all of their proprietary rights in any form in and to the Software and Documentation, including, but not limited to, all rights in patents, patent applications, inventions, copyrights, trademarks, trade secrets, trade names, and other proprietary rights in or relating to the Software and Documentation (including any corrections, bug fixes, enhancements, updates, modifications, adaptations, translations, de-compilations, disassembles, emulations to or derivative works from the Software or Documentation, whether made by Motorola or another party, or any improvements that result from Motorola's processes or, provision of information services). No rights are granted to Licensee under this Agreement by implication, estoppel or otherwise, except for those rights which are expressly granted to Licensee in this Agreement. All intellectual property developed, originated, or prepared by Motorola in connection with providing the Software, Designated Products, Documentation or related services, remains vested exclusively in Motorola, and Licensee will not have any shared development or other intellectual property rights.

Section 6 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

6.1. Unless otherwise stated in the Primary Agreement, the commencement date and the term of the Software warranty will be a period of ninety (90) days from Motorola's shipment of the Software (the "Warranty Period"). If Licensee is not in breach of any of its obligations under this Agreement, Motorola warrants that the unmodified Software, when used properly and in accordance with the Documentation and this Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether a defect occurs will be determined by Motorola solely with reference to the Documentation. Motorola does not warrant that Licensee's use of the Software or the Designated Products will be uninterrupted, error-free, completely free of Security Vulnerabilities, or that the Software or the Designated Products will meet Licensee's particular requirements. Motorola makes no representations or warranties with respect to any third party software included in the Software. Notwithstanding, any warranty provided by a copyright owner in its standard license terms will flow through to Licensee for third party software provided by Motorola.

6.2 Motorola's sole obligation to Licensee and Licensee's exclusive remedy under this warranty is to use reasonable efforts to remedy any material Software defect covered by this warranty. These efforts will involve either replacing the media or attempting to correct significant, demonstrable program or documentation errors or Security Vulnerabilities. If Motorola cannot correct the defect within a reasonable time, then at Motorola's option, Motorola will replace the defective Software with functionally-equivalent Software, license to Licensee substitute Software which will accomplish the same objective, or terminate the license and refund the Licensee's paid license fee.

6.3. Warranty claims are described in the Primary Agreement.

6.4. The express warranties set forth in this Section 6 are in lieu of, and Motorola disclaims, any and all other warranties (express or implied, oral or written) with respect to the Software or Documentation, including, without limitation, any and all implied warranties of condition, title, non-infringement, merchantability, or fitness for a particular purpose or use by Licensee (whether or not Motorola knows, has reason to know, has been advised, or is otherwise aware of any such purpose or use), whether arising by law, by reason of custom or usage of trade, or by course of dealing. In addition, Motorola disclaims any warranty to any person other than Licensee with respect to the Software or Documentation.

Section 7 TRANSFERS

Licensee will not transfer the Software or Documentation to any third party without Motorola's prior written consent. Motorola's consent may be withheld at its discretion and may be conditioned upon transferee paying all applicable license fees and agreeing to be bound by this Agreement. If the Designated Products are Motorola's radio products and Licensee transfers ownership of the Motorola radio products to a third party, Licensee may assign its right to use the Software (other than CPS and Motorola's FLASHport® software) which is embedded in or furnished for use with the radio products and the related Documentation; *provided* that Licensee transfers all copies of the Software and Documentation to the transferee, and Licensee and the transferee sign a transfer form to be provided by Motorola upon request, obligating the transferee to be bound by this Agreement.



Section 8 TERM AND TERMINATION

8.1 Licensee's right to use the Software and Documentation will begin when the Primary Agreement is signed by both parties and will continue for the life of the Designated Products with which or for which the Software and Documentation have been provided by Motorola, unless Licensee breaches this Agreement, in which case this Agreement and Licensee's right to use the Software and Documentation may be terminated immediately upon notice by Motorola.

8.2 Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Motorola that all copies of the Software have been removed or deleted from the Designated Products and that all copies of the Software and Documentation have been returned to Motorola or destroyed by Licensee and are no longer in use by Licensee.

8.3 Licensee acknowledges that Motorola made a considerable investment of resources in the development, marketing, and distribution of the Software and Documentation and that Licensee's breach of this Agreement will result in irreparable harm to Motorola for which monetary damages would be inadequate. If Licensee breaches this Agreement, Motorola may terminate this Agreement and be entitled to all available remedies at law or in equity (including immediate injunctive relief and repossession of all non-embedded Software and associated Documentation unless Licensee is a Federal agency of the United States Government).

Section 9 COMMERCIAL COMPUTER SOFTWARE

9.1 *This Section 9 only applies to U.S. Government end users.* The Software, Documentation and updates are commercial items as that term is defined at 48 C.F.R. Part 2.101, consisting of "commercial computer software" and "computer software documentation" as such terms are defined in 48 C.F.R. Part 252.227-7014(a)(1) and 48 C.F.R. Part 252.227-7014(a)(5), and used in 48 C.F.R. Part 12.212 and 48 C.F.R. Part 227.7202, as applicable. Consistent with 48 C.F.R. Part 12.212, 48 C.F.R. Part 252.227-7015, 48 C.F.R. Part 227.7202-1 through 227.7202-4, 48 C.F.R. Part 52.227-19, and other relevant sections of the Code of Federal Regulations, as applicable, the Software, Documentation and Updates are distributed and licensed to U.S. Government end users: (i) only as commercial items, and (ii) with only those rights as are granted to all other end users pursuant to the terms and conditions contained herein.

9.2 If Licensee is licensing Software for end use by the United States Government or a United States Government agency, Licensee may transfer such Software license, but only if: (i) Licensee transfers all copies of such Software and Documentation to such United States Government entity or interim transferee, and (ii) Licensee has first obtained from the transferee (if applicable) and ultimate end user an enforceable end user license agreement containing restrictions substantially identical to the ones contained in this Agreement. Except as stated in the foregoing, Licensee and any transferee(s) authorized by this subsection 9.2 may not otherwise use or transfer or make available any Motorola software to any third party nor permit any party to do so.

Section 10 CONFIDENTIALITY

Licensee acknowledges that the Software and Documentation contain Motorola's valuable proprietary and Confidential Information and are Motorola's trade secrets, and that the provisions in the Primary Agreement concerning Confidential Information apply.

Section 11 LIMITATION OF LIABILITY

The Limitation of Liability provision is described in the Primary Agreement.

Section 12 NOTICES

Notices are described in the Primary Agreement.

Section 13 GENERAL

13.1. COPYRIGHT NOTICES. The existence of a copyright notice on the Software will not be construed as an



admission or presumption of publication of the Software or public disclosure of any trade secrets associated with the Software.

13.2. **COMPLIANCE WITH LAWS.** Licensee acknowledges that the Software is subject to the laws and regulations of the United States and Licensee will comply with all applicable laws and regulations, including export laws and regulations of the United States. Licensee will not, without the prior authorization of Motorola and the appropriate governmental authority of the United States, in any form export or re-export, sell or resell, ship or reship, or divert, through direct or indirect means, any item or technical data or direct or indirect products sold or otherwise furnished to any person within any territory for which the United States Government or any of its agencies at the time of the action, requires an export license or other governmental approval. Violation of this provision is a material breach of this Agreement.

13.3 **FUTURE REGULATORY REQUIREMENTS.** The Parties acknowledge and agree that this is an evolving technological area and therefore, laws and regulations regarding Services and use of Solution may change. Changes to existing Services or the Solution required to achieve regulatory compliance may be available for an additional fee. Any required changes may also impact the price for Services.

13.4. **ASSIGNMENTS AND SUBCONTRACTING.** Motorola may assign its rights or subcontract its obligations under this Agreement, or encumber or sell its rights in any Software, without prior notice to or consent of Licensee.

13.5. **GOVERNING LAW.** This Agreement is governed by the laws of the United States to the extent that they apply and otherwise by the internal substantive laws of the State of North Carolina. The terms of the U.N. Convention on Contracts for the International Sale of Goods do not apply. In the event that the Uniform Computer Information Transaction Act, any version of this Act, or a substantially similar law (collectively "UCITA") becomes applicable to a party's performance under this Agreement, UCITA does not govern any aspect of this Agreement or any license granted under this Agreement, or any of the parties' rights or obligations under this Agreement. The governing law will be that in effect prior to the applicability of UCITA.

13.6. **THIRD PARTY BENEFICIARIES.** This Agreement is entered into solely for the benefit of Motorola and Licensee. No third party has the right to make any claim or assert any right under this Agreement, and no third party is deemed a beneficiary of this Agreement. Notwithstanding the foregoing, any licensor or supplier of third party software included in the Software will be a direct and intended third party beneficiary of this Agreement.

13.7. **SURVIVAL.** Sections 4, 5, 6.4, 7, 8, 9, 10, 11 and 13 survive the termination of this Agreement.

13.8. **ORDER OF PRECEDENCE.** In the event of inconsistencies between this Exhibit and the Primary Agreement, the parties agree that this Exhibit prevails, only with respect to the specific subject matter of this Exhibit, and not the Primary Agreement or any other exhibit as it applies to any other subject matter.

13.9. **SECURITY.** Motorola uses reasonable means in the design and writing of its own Software and the acquisition of third party Software to limit Security Vulnerabilities. While no software can be guaranteed to be free from Security Vulnerabilities, if a Security Vulnerability is discovered, Motorola will take the steps set forth in Section 6 of this Agreement.

Exhibit B PAYMENT

Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within thirty (30) days after the date of each invoice. Customer will make payments when due in the form of a check, cashier's check, or wire transfer drawn on a U.S. financial institution. If Customer has purchased additional Professional or Subscription services, payment will be in accordance with the applicable addenda. Payment for the System purchase will be in accordance with the following milestones.

System Purchase (excluding Subscribers, if applicable)

1. 25% of the Contract Price due upon contract execution (due upon effective date);

2. 60% of the Contract Price due upon shipment of equipment from Staging;
3. 10% of the Contract Price due upon installation of equipment; and
4. 5% of the Contract Price due upon Final Acceptance.

If Subscribers are purchased, 100% of the Subscriber Contract Price will be invoiced upon shipment (as shipped).

Motorola shall make partial shipments of equipment and will request payment upon shipment of such equipment. In addition, Motorola shall invoice for installations completed on a site-by-site basis or when professional services are completed, when applicable. The value of the equipment shipped/services performed will be determined by the value shipped/services performed as a percentage of the total milestone value. Unless otherwise specified, contract discounts are based upon all items proposed and overall system package. For invoicing purposes only, discounts will be applied proportionately to the FNE and Subscriber equipment values to total contract price. Overdue invoices will bear simple interest at the maximum allowable rate by state law.

For Lifecycle Support Plan and Subscription Based Services:

Motorola will invoice Customer annually in advance of each year of the plan.

The chart below outlines the hourly labor rates for Motorola System Integration resources to be used. The staffing requirements shall be multiplied by the appropriate rate per resource in the table below. The hourly labor rates are fully burdened. The hourly rates per resource type and level are listed in Table 1.

	Resource Types			
Levels	Project Management	System Engineering	System Technologist	Project Administration
4	\$ 290.00	\$ 300.00	\$ 280.00	\$ 200.00
3	\$ 240.00	\$ 250.00	\$ 240.00	\$ 180.00
2	\$ 220.00	\$ 220.00	\$ 220.00	\$ 170.00
1	\$ 190.00	\$ 210.00	\$ 210.00	\$ 160.00

Table 1 - Hourly Rates

These rates apply to ordinary days and times (Monday to Friday during the hours 8am to 5pm). Additional surcharges may apply to work done outside these timeframes. The minimum charge for any resource will be 4 hours. Travel expenses are not included in these rates and may be charged separately. The qualifications of each type and level of resource are defined in the tables found at <https://www.motorolasolutions.com/content/dam/msi/secure/services/labor-rates-exhibit-160408.pdf>. All Motorola System Integration personnel assigned to this project will be classified according these levels. Project Administrative roles are varied and their specific duties and qualifications will be determined by the complexity and requirements of each project.

EXHIBIT C

Exhibit C refers to the proposal document provided to Go Triangle for the Console and RF Subscribers

Motorola's Proposal dated February 7, 2022

EXHIBIT D

System Acceptance Certificate

Customer Name: _____

Project Name: _____

This System Acceptance Certificate memorializes the occurrence of System Acceptance. Motorola and Customer acknowledge that:

- 1. The Acceptance Tests set forth in the Acceptance Test Plan have been successfully completed.
- 2. The System is accepted.

Customer Representative:

Motorola Representative:

Signature: _____

Signature: _____

Print Name: _____

Print Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

FINAL PROJECT ACCEPTANCE:

Motorola has provided and Customer has received all deliverables, and Motorola has performed all other work required for Final Project Acceptance.

Customer Representative:

Motorola Representative:

Signature: _____

Signature: _____

Print Name: _____

Print Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

MEMORANDUM

TO: GoTriangle Board of Trustees
FROM: Planning and Capital Development
DATE: March 16, 2022
SUBJECT: **Durham County Transit Plan Update**

Strategic Objective or Initiative Supported

1.2 Pursue service improvements and expansion opportunities

Action Requested

None.

Background and Purpose

GoTriangle is participating with DCHC MPO and Durham County in development of updates to the Durham County Transit Plan. The project manager for the Durham County plan will provide an update of current plan development status and upcoming activities to the committee.

Financial Impact

None.

Attachments

- Memo from Durham
- Presentation

Staff Contacts

- Katharine Eggleston, kegglestion@gotriangle.org
- Meg Scully, mscully@gotriangle.org





Transportation

To: Durham County Board of Commissioners, Durham City Council, DCHC MPO Board, and GoTriangle Board of Trustees

From: Ellen Beckmann, Durham County Transportation Manager
Aaron Cain, DCHC MPO Planning Manager

Date: March 16, 2022

Subject: Durham Transit Plan Update

Background

The Durham County Transit Plan is required by state legislation that enabled the local option half-cent sales tax for public transit improvements. The plan must be adopted by the Durham County Board of Commissioners, the GoTriangle Board of Trustees, and the Durham-Chapel Hill-Carrboro Metropolitan Transportation Organization (DCHC MPO) Board. The ½ cent sales tax approved by Durham County voters in 2011 is the primary funding source, but the plan also incorporates funding from vehicle registration fees and the rental car tax that are managed together in a Triangle Tax District. Durham County funding sources generate approximately \$35 million annually. The plan was first adopted in 2011, with an update in 2017, and was centered around the Durham-Orange Light Rail Transit project. In 2019, GoTriangle discontinued the light rail project, and there is now a need for a new Durham County Transit Plan.

The plan update is being managed by Ellen Beckmann, Durham County Transportation Manager, and Aaron Cain, Planning Manager at the DCHC MPO. There is a multi-agency Durham Transit Team guiding the plan development. The public engagement process is following the City of Durham's Equitable Engagement Blueprint. Outreach for the plan was initiated in coordination with the Durham Comprehensive Plan from October 2019 to February 2020 through the Listening and Learning sessions. In 2020, the MPO contracted with Kimley-Horn and Associates to provide consultant support for the transit plan. Kimley-Horn is using several subconsultants on the plan, including a local Durham small business for Engagement Ambassador management and public outreach.

Phase 1 outreach occurred in fall 2020 focused on identifying high-level goals and objectives and seeking feedback on the universe of projects and services that residents would like to see included in the plan. The Durham Transit Team directly used the results of the Phase 1 outreach to develop three representative transit options for how the funding could be used through 2040, making sure to address the needs identified by current transit riders, low-income residents, and People of Color. Phase 2 outreach occurred in summer 2021 focused on the three options. The results of the Phase 2 outreach were presented to boards in fall of 2021. The key takeaways from the Phase 2 outreach were:

- Regular Transit Riders and People of Color consistently identified later/weekend bus service, more bus frequency, and more reliable bus service as their highest priorities.
- All respondents supported getting more improvements more quickly.
- All respondents supported bus rapid transit or the elements of bus rapid transit such as 15-minute service, bus-only lanes, and traffic signal priority.
- The commuter rail project has support, but it is not the highest priority for any group. The commuter rail project has less support from People of Color and Daily Transit Riders.

Issues & Analysis

Staff will provide an update on current activities related to the plan. The Durham Transit Team is currently working towards the creation of a recommended plan, with the goal of having that complete in Spring 2022. The recommended plan is expected to include elements that were deemed of highest importance from the public engagement process with consideration of equity, technical, funding, and scheduling issues. The recommended plan will be compatible with the DCHC MPO 2050 Metropolitan Transportation Plan (MTP), approved in February 2022. However, the MTP will include additional projects not contained in the recommended plan due to the MTP going out to 2050 and anticipating additional funding outside of the Transit Plan. The recommended Durham Transit Plan will include projects through 2040 based on a financially constrained model using existing funding sources.

Much of the recent activity for developing the Durham Transit Plan has been centered around the financial analysis and modeling that serves as the basis for determining what can be afforded over the next 20 years. As the Tax District Administrator, GoTriangle develops and runs the financial model. GoTriangle regularly provides updates to boards and staff on the tax district's financial status, but there is no adopted Financial Policy. Durham County and the DCHC MPO staff do not have a defined role in financial management of the plan according to the existing Interlocal Implementation Agreement (ILA).

Durham County staff initiated a review of the financial model in fall 2021. The County has sought feedback from its financial advisor and has had many productive coordination meetings with GoTriangle in the development of a series of recommendations. These recommendations are:

- Sales Tax Revenue Growth – use the Moody’s baseline forecast
 - This is consistent with past modeling and does not represent a change. It averages a 4.5%+ growth rate over the 20 years. As a comparison, Wake County uses a 4% growth rate.
- Debt Service Coverage Ratio – use 1.25
 - This is consistent with the current model and does not represent a change. This is necessary to achieve an A or higher rating and is consistent with Wake County.
- Reserves
 - Operating Reserve – use three months of operating costs
 - This is consistent with past modeling and does not represent a change.
 - Capital Reserve – use 5% of the 10-Year CIP
 - This is an increase from past modeling that used a 2.5% reserve. 5% is consistent with Wake County, which is necessary for potential borrowing for commuter rail.
 - Revenue Reserve – set a \$10M minimum fund balance
 - A revenue reserve, or minimum fund balance, has not been used for past modeling. This is recommended to mitigate for potential recessions that may occur and negatively impact future sales tax revenue growth.

The total effect of these changes is to decrease the available revenue by \$26.2 million through 2040.

In addition, transit agencies in Durham are experiencing unprecedented staff shortages and increases in operating costs during the pandemic. GoTriangle and GoDurham have both reduced service due to a shortage of bus drivers. Both agencies are raising wages and offering incentives to attract more drivers. Fuel, supplies, and equipment have also increased in cost. As a result, the Durham Transit Team has had to re-evaluate the modeled increase in operating costs. Previously, the financial model assumed a consistent 2.5% annual average increase in bus operating costs. GoTriangle has requested a 7.4% increase from FY22 to FY23, and GoDurham has requested a 20.5% increase from FY22 to FY23. Incorporating these operating costs results in a \$23 million increase in costs in order to continue the previously approved bus operating projects, and at least a \$50 million decrease in the ability to borrow funds while maintaining the 1.25 Debt Service Coverage Ratio. These increases in bus operating costs will result in less funding being available to potentially fund other projects.

An Operating Cost Policy is currently being evaluated by the Durham Staff Working Group to provide documentation of what is reimbursable by the Transit Plan and the reimbursement process. The intention of this policy is to make sure that GoTriangle and GoDurham are

following consistent practices in defining operating costs and that Transit Plan funding is not being used to displace existing funding or resources utilized by transit agencies to support services. The expectation is that the Transit Plan would only fund the increase in operating costs for services supported by the Plan, and the City of Durham and GoTriangle would fund a corresponding increase in operating costs for all other services.

The Durham Transit Team has also made assumptions for administrative costs. Existing administrative costs are assumed to remain and grow at a 2.5% annual increase. The approved FY2022 work program includes:

- \$2,023,300 for GoTriangle for Tax District Administration, Transit Plan Administration, and Project Implementation
- \$58,200 for the DCHC MPO for Transit Plan Administration
- \$205,900 for Durham County for Transit Plan Administration

The Staff Working Group has recently received requests for additional administrative costs from the City of Durham and GoTriangle. While the Staff Working Group has not made any recommendations on these staff requests, the Durham Transit Team is modeling a placeholder for up to 4.5 new positions funded through 2040. The decision on how to evaluate and what to approve for the continuance of existing and new administrative costs will be made through the annual work program approval process.

Lastly, for purposes of developing the recommended plan, the Durham Transit Team has remained consistent about the assumed cost of commuter rail and Durham's share of the non-federal funding. The project is modeled at a \$1.95 billion capital cost and \$41 million annual operating cost starting in mid-2030. The project would be 50 percent federally funded and 50 percent non-federal. Of the 50 percent non-federal, Durham County's adopted plan has assumed that it would pay 20 percent of the cost (or 10 percent of the total cost) and Wake County's adopted plan has assumed that it would pay 67 percent (or 33 percent of the total cost). Thus, the two adopted county plans leave 13 percent of the non-federal cost (or 7 percent of the total cost) undetermined. Increasing Durham County's cost-share from 20 to 33 percent of the non-federal share would result in an increase in the cost to Durham from \$387.8 million to \$649 million and would result in a reduction of about half of the new projects and services in the recommended plan.

GoTriangle has developed several options for Durham and Wake to share costs. These include variations in the shares for capital and operating costs, variations in how the federal funding grant is credited back to the counties, variations in the timing of each County's contributions, no interest "loans" from Wake to Durham, etc. Durham County has reviewed these options but continues to recommend that we follow a consistent 20 percent cost-share. While we appreciate GoTriangle's and Wake County's creative efforts, all of the options would decrease Durham County's available resources to address other transit needs of our residents today and decrease our flexibility to address future transit needs as our community grows and changes.

This estimated cost of the commuter rail may change as a result of the GoTriangle Greater Commuter Rail Study currently underway. One of the primary purposes of the study is to develop an updated cost estimate that corresponds with the railroad infrastructure requirements and community expectations. The Durham Transit Team will revise and incorporate updated costs as they are available. However, despite these efforts, all information may not be known at the time of the adoption of the Durham Transit Plan, and there will likely be some uncertainty about the cost of the project.

The Durham Transit Team is proceeding with developing the recommended plan with the above financial assumptions. The current schedule would result in the release of the recommended plan in May 2022. Phase 3 outreach would occur over the summer, and adoption of the plan is expected in fall 2022. The Phase 3 outreach will employ the same equitable engagement practices as in Phases 1 and 2. The Durham Transit Team has received feedback from stakeholder groups on the analysis and format of equity and performance metrics used in the Phase 2 outreach process. We are committed to addressing these concerns in Phase 3. We expect to work with our consultants and stakeholder groups in the design of our Phase 3 outreach materials.

While the Transit Plan schedule is delayed from previous communications, the Durham Transit Team wants to allow new priority projects to be implemented in FY23 to address the needs of our residents and to be responsive to the expressed desire to have more improvements more quickly. This means that new projects need to be identified in early 2022 and adopted in the plan and annual work program by June 2022. These new projects will focus on the needs of current bus riders. The schedule for implementing these new projects is dependent on the transit agencies' ability to hire adequate staff.

Concurrent with adoption of the Durham County Transit Plan, the Board of Commissioners, GoTriangle Board of Trustees, and DCHC MPO Board will also need to adopt an updated Interlocal Implementation Agreement (ILA). The ILA was approved in 2013 and outlines the roles and responsibilities of each agency for the administration of the funding, the process for adoption of the annual work plan by the GoTriangle Board, the definition of a material change that requires approval by all three boards, the membership, voting procedures, and administration of the Staff Working Group, and other issues. The current agreement references the discontinued light rail project and is oriented towards the funding and delivery of a Federal Transit Administration (FTA) New Starts regional transit project by GoTriangle.

The new agreement should be tailored to the delivery of projects funded in the updated final Transit Plan. It is also an opportunity to add stronger plan oversight and accountability processes and re-define the role of County, MPO, GoTriangle, and City staff in the implementation of projects. The financial review described in this memo is an example of a process and policy that should be specified in the new ILA. Durham County staff have initiated a Transit Plan Governance Study in coordination with Orange County to develop new ILAs in each county and update policies and procedures for plan implementation. Interviews with key staff and elected officials occurred in September, a workshop among elected officials was held in early November, and a staff workshop was held in early March. The Transit Plan Governance

Study will proceed in parallel with the Durham Transit Plan and is a critical opportunity to address the plan's goal of increasing community trust related to the delivery of transit projects and use of the county taxes and fees.



Durham
Transit Plan

Durham County Transit Plan Financial Metrics and Development of the Recommended Plan


March 2022




Development of the Recommended Transit Plan

- 1 Analyze Outreach Results
- 2 Outreach Results and Technical Analysis used by Technical Team in Development of Financially Constrained Recommended Plan
- 3 Public Comments on Recommended Plan
- 4 Final Transit Plan Adoption

Development of the Recommended Transit Plan

- Understanding the sensitivity of the financial model to changes and agreement on key assumptions of the Financial Model
 - Understanding the impact of current increases in bus operating costs in the Financial Model
 - Understanding the impact of future additional administrative costs
 - Understanding the implications of the cost-share for Commuter Rail and confirmation of the cost to Durham in the recommended plan
- 

Current Status of Durham Transit Plan Financial Policies and Modeling

- Current Interlocal Implementation Agreement (ILA) does not specify a role for the County or MPO in financial management of the plan.
 - There is no adopted policy for financial management.
 - The Financial Model is developed and run by GoTriangle as the Tax District Administrator
 - The Durham County Board of Commissioners, DCHC MPO Board, and GoTriangle Board approve the Financial Plan through their approval of the Durham Transit Plan every 4 years.
 - The Staff Working Group recommends the annual work program. The annual work program is only approved by GoTriangle Board.
- 

Underway - Transit Plan Governance Study

- Durham and Orange Counties need new Interlocal Implementation Agreements and new policies and procedures to reflect the priorities of the new transit plans
- Core Principle: Increase Community Trust
- New ILA to be recommended with the final Transit Plan
- New policies to be recommended and adopted
- Recommendation:
 - Include a stronger role for the County in financial management of the plan
 - Develop and adopt a Financial Policy consistent with the new plan



Key Assumptions of the Financial Model

Recommendations from Durham County (change):

- Sales Tax Revenue Growth – Moody’s Baseline forecast, average 4.5%+ growth.
 - Wake uses 4% growth.
- Debt Service Coverage – 1.25
 - Net operating revenues to debt service (lowest coverage to achieve an A or higher rating).
- Reserves
 - Operating Reserve – 3 months
 - Capital Reserve – increase to 5% of the 10-Year CIP (\$16.2M)
 - Consistent with Wake County for Commuter Rail borrowing
 - Revenue Reserve – increase to \$10M (\$10M)
 - Mitigate for potential recessions and lower sales tax revenue growth
- Total Change (\$26.2M)

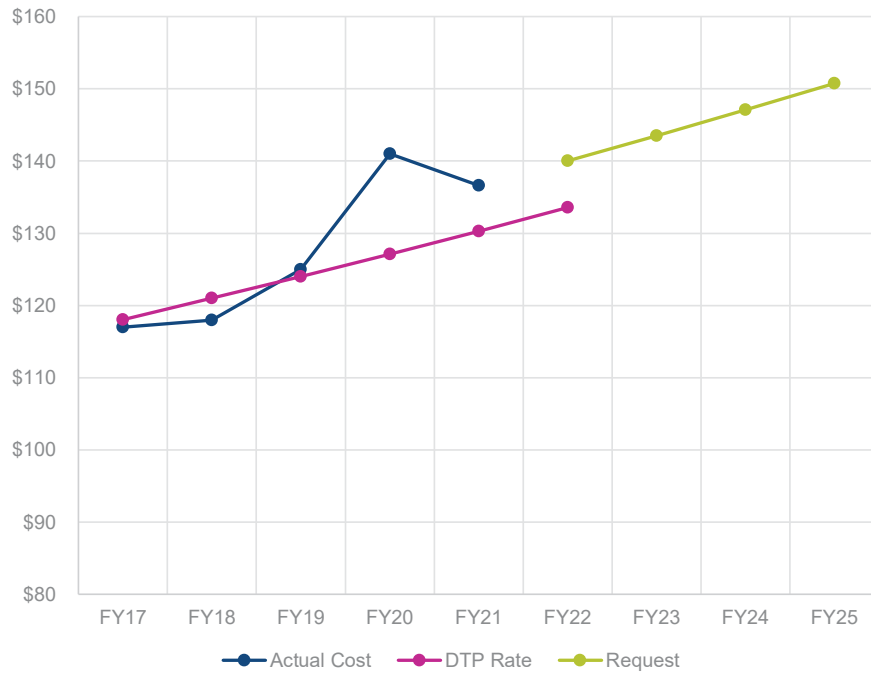
Key Assumptions of the Financial Model

Recommendations from transit operators (change):

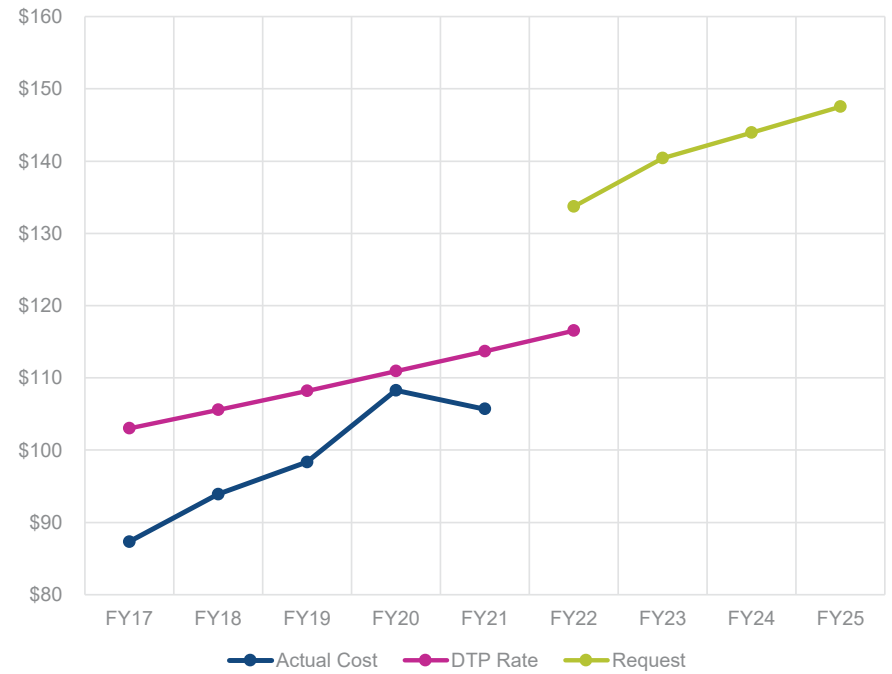
- Cost Escalation
 - Operating Projects – 7.4-20.5% from budgeted FY22 to FY23, 2.5% onward
 - FY23 cost increase reflects the wage increase for bus drivers, fuel costs, etc.
 - Capital Projects – 4%
- Total Change (\$23M) for committed projects
(at least \$50M) for future projects

Bus Operating Costs

GoTriangle Cost Per Hour



GoDurham Cost Per Hour



GoDurham operating costs are under review and subject to change

Administrative Costs

FY22 Approved Work Program	GoTriangle	DCHC MPO	Durham County	City of Durham
Tax District Administration	\$415,800			
Transit Plan Administration	\$1,130,500	\$58,200	\$205,900	
Project Implementation	\$477,000			
Total	\$2,023,300	\$58,200	\$205,900	\$0

- FY23 Requests
 - City of Durham – 3 positions for Project Implementation
 - GoTriangle – 0.25 positions for Tax District Administration
 - Durham County – TBD based on Governance Study
 - DCHC MPO – No new positions or costs anticipated
- Placeholder: Continuation of existing administrative costs + 4.5 additional positions

Commuter Rail Cost-Share

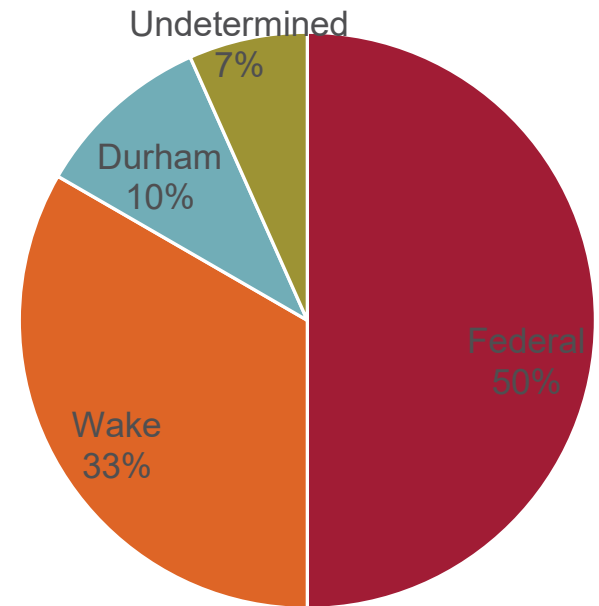
Project Capital Cost \$1.95B
Annual Operating Cost \$41M starting mid-2030

Increasing Durham County’s cost-share from 20 to 33% of the non-federal share would result in an increase from \$387.8M to \$649M, and a cut to ~50% of the new services and projects in the Durham Transit Plan.

Recommendation:

- Durham Transit Plan – remain at \$387.8M (20% of the non-federal share)
- Do not support Wake upfront advance scenarios


Current Adopted Transit Plans



Development of the Recommended Plan

- Release in spring, engagement in summer, and approval in fall.
- Desire coordination with engagement and decision-making on Commuter Rail.

FY 2023 Work Program & Transit Plan Amendment

- “All respondents support getting more improvements more quickly.”
 - Focus expected to be on bus operations improvements subject to current capacity to expand bus service.
 - Likely will require an amendment to the current Transit Plan.
- 

Schedule

	Durham Transit Plan	Commuter Rail Study	FY23 Work Program & DTP Amendment
March	Financial Metrics Update to Boards	Downtown Durham Update & Engagement	Staff Develop Draft Work Program & DTP Amendment
April		Engagement	Release Draft Work Program & DTP Amendment for public comment
May	Release Recommended Plan		Update & Approval of DTP Amendment by BoCC and MPO, Finalization of Work Program
June	Engagement		Approval of Work Program & DTP Amendment by GoTriangle
July	Engagement		
August	Approval of Final Plan	Resolutions of Support Cost-Share Agreement	

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Connecting all points of the Triangle

MEMORANDUM

TO: GoTriangle Board of Trustees
FROM: Katharine Eggleston, Chief Development Officer
DATE: March 22, 2022
SUBJECT: RUS Bus Predevelopment MOU Addendum

Strategic Objective or Initiative Supported

Action Requested

Staff requests that the Board of Trustees authorize the President/CEO to execute an addendum to the Predevelopment MOU with RB Infrastructure LLC, a special purpose entity owned and controlled by Hoffman & Associates, for an amount not to exceed \$3,255,962 to continue advancing development of the RUS Bus Transit Facilities.

Staff also anticipates an opportunity to discuss negotiation strategy and legal terms during Closed Session. In addition to the recommended action stated above, further strategic options for advancing the project may emerge from attorney-client consultation in Closed Session and then be considered in conjunction with this Agenda Item during Open Session.

Background and Purpose

In November 2019, the Board of Trustees authorized staff to commence negotiations with Hoffman & Associates for agreements related to the RUS Bus project.

In February 2020, GoTriangle entered into a Predevelopment Memorandum of Understanding (MOU) with the preferred Developer, which provided a framework for design activities on the RUS Bus Transit Facilities to begin in parallel with agreement negotiations. In March 2020, the Board of Trustees authorized the Predevelopment MOU addendum providing an initial allocation of funding for schematic design services. In February 2021, the Board of Trustees authorized an amendment providing funding for continued design and preparation of submittals for the City of Raleigh Administrative Site Review Process.

Subsequent to the Board actions described above in March 2020 and February 2021, GoTriangle previously authorized a total of \$1,537,467.18 for design services managed by the Developer.

In October 2021, the Board of Trustees authorized the President/CEO to execute the Joint Development Services Agreement including allocation of \$30,648,121.82 to the Developer-

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managed components of the public project, in addition to the previously-authorized amounts. This results in a total budget of \$32,185,589 for the Developer-managed components.

In December 2021, the Board of Trustees authorized the President/CEO to execute the Joint Development Agreement. Prior to formal execution of the agreements, GoTriangle staff is seeking FTA concurrence on the joint development project request form as required by FTA Circular 7050.1B. As of this date, FTA review of the joint development application is still underway.

The BUILD grant agreement between USDOT and GoTriangle includes certain schedule milestone commitments and there is a statutory sunset date of September 30, 2025 for federal funding availability through the grant. It is therefore critical for certain design and early construction activities to continue to progress ahead of execution of the agreements, to meet the obligations for start of construction and to minimize risk of the construction schedule ultimately extending beyond the sunset date resulting in loss of access to a portion of the \$20M federal grant.

At this time, staff recommends the following schedule mitigation strategies:

Early Construction Activities

In order to meet the construction start milestone of April 2022 in the RUS Bus BUILD grant agreement with USDOT, it is necessary to facilitate the Developer authorizing its contractor to begin work on the Phase 1 construction effort ahead of execution of the agreements described above because the joint development application remains under review by FTA. Activities included in the Phase 1 construction effort are asbestos abatement, demolition, mass grading, and erosion/sediment control. The Developer plans to authorize the contractor to begin asbestos abatement and other early construction activities in April, and to proceed with the subsequent Phase 1 construction activities in the following months provided that the effort to execution of the agreements is continuing to advance.

At this time, staff recommends authorizing the Developer to proceed with Phase 1 early construction activities for an amount not to exceed \$2,436,826 including contingency.

Public Facility Design

In November 2021, the Board of Trustees approved an additional \$400,000 allocation of funds budgeted for Developer-managed activities on top of the previously-approved \$1,537,467.18 for design services managed by the Developer. Since that time, the Developer team has continued progressing the project through the Administrative Site Review and related processes with the City of Raleigh.

At this time, staff recommends providing the Developer with authorization to complete the design development phase for the publicly funded improvements, requiring an additional authorization of \$819,126 ahead of execution of the agreements.



Financial Impact

The Board of Trustees has authorized at total budget of \$32,185,589 for the Developer-managed components of the publicly funded improvements. This action would assign an additional \$3,255,962 of that total to the Predevelopment MOU; it would have no net financial impact.

In the event that the agreements are not signed in the coming months and the project ultimately does not move forward resulting in loss of access to the BUILD grant funds, the at-risk costs include the previously-authorized of \$1,937,467.18, and an additional \$3,255,962 to advance development of the public improvements.

Attachments

- None

Staff Contact

- Katharine Eggleston, CDO, keggleston@gotriangle.org, 919.485.7564





**BOARD OF TRUSTEES
OPERATIONS & FINANCE COMMITTEE
MEETING MINUTES**

4600 Emperor Boulevard
Suite 100
Durham, NC 27703

Thursday, March 3, 2022

8:30 a.m.

Remote | Microsoft Teams

Committee members present | Corey Branch [left 9:11 a.m.], Sig Hutchinson, Renée Price, Jennifer Robinson, Stelfanie Williams

Committee members absent | Valerie Jordan

Committee Chair Renée Price officially called the meeting to order at 8:32 a.m. A quorum was present.

I. Adoption of Agenda

Action: A motion was made by Hutchinson and seconded by Robinson to adopt the agenda and approve the minutes of February 3, 2022. Upon vote by roll call, the motion was carried unanimously.

II. Approval of Minutes

Action: A motion was made by Branch and seconded by Hutchinson to adopt the agenda and approve the minutes of February 3, 2022. Upon vote by roll call, the motion was carried unanimously.

III. Durham Transit FY2022 Q3 Work Plan & Budget Amendment

Steven Schlossberg's presentation is attached and hereby made a part of these minutes. He stated that the DCHC MPO has requested an increase the transit plan development project of \$225,000 due to additional meetings and community outreach. The additional cost will be offset by funds originally allocated for fare collection improvements. This increase brings the total project budget to \$1,004,000. Schlossberg added that the timeline for fall approval of the plan has not changed.

Action: A motion was made by Hutchinson and seconded by Robinson to recommend that the Board of Trustees approve the FY2022 Q3 Durham Transit Work Plan and budget ordinance amendments. Upon vote by roll call, the motion was carried unanimously.

IV. Contract for Purchase of Replacement Radios and Communication Equipment

Patrick Stephens explained that GoTriangle has been using the Cary/Wake County 800 MHz radio system since the early 2000s. He stated that current radios are no longer supported by Motorola. This purchase is a piggyback off the North Carolina State contract and will be funded from an 80/20 federal grant.

Branch asked if the radios will be compatible with other agencies. Patrick Stephens responded that GoTriangle has only one frequency to communicate with the City of Raleigh.

Action: A motion was made by Robinson and seconded by Williams to recommend that the Board of Trustees authorize the President/CEO to execute a contract with Motorola Solutions Inc. for the purchase of replacement radios and associated communication system equipment for an amount not to exceed \$1,394,468. Upon vote by roll call, the motion was carried unanimously.

V. **FY2022 Mid-Year Financial Results**

Jennifer Hayden presented financial results as of December 31, 2021, for GoTriangle and the three county transit plans.

GoTriangle revenues

- Total revenues \$13.3 million, down \$10.7 million from FY2021 year-to-date
- Bus service revenue \$1.5 million [awaiting approval of expense reimbursement from Wake Transit]
- Paratransit service revenue \$43,000
- \$5 vehicle registration tax \$3.3 million
- Vehicle rental tax \$3.1 million
- Grant funds \$2.9 million [awaiting reimbursement of \$15.8 million in Covid-19 reimbursements]
- Other reimbursements \$887,000 [\$320,000 operating, \$567,000 capital]

GoTriangle expenses

- Total expenses \$15.3 million, down \$4 million from FY2021 year-to-date
- Transit operations expenses \$11.5 million
- Administration expenses \$2.2 million
- Capital expenses \$1.6 million, down \$3.1 million from FY2021 year-to-date

Branch left.

Durham Tax District

- Total revenues \$20.6 million, up \$1.8 million from FY2021 year-to-date
- ½ cent sales tax revenues \$18.4 million
- \$3 and \$7 vehicle registration tax \$1.2 million
- Vehicle rental tax \$659,000
- Total expenses \$3.3 million, down \$4.4 million from FY2021 year-to-date

Orange Tax District

- Total revenues \$5.7 million, up \$400,000 from FY2021 year-to-date
- ½ cent sales tax revenues \$4.8 million
- \$3 and \$7 vehicle registration tax \$580,000
- Vehicle rental tax \$322,000
- Total expenses \$2.1 million, down \$600,000 from FY2021 year-to-date

Wake Tax District

- Total revenues \$65.7 million, up \$7.4 million from FY2021 year-to-date
- ½ cent sales tax revenues \$58.9 million
- \$3 and \$7 vehicle registration tax \$4.7 million
- Vehicle rental tax \$2.1 million
- Total expenses \$14 million, up \$1.2 million from FY2021 year-to-date

Hayden also provided a new chart breaking down all capital projects for the fiscal year.

VI. Adjournment

Action: On motion by Hutchinson the meeting was adjourned at 9:33 a.m.

Prepared by:

Michelle C. Dawson, CMC
Clerk to the Board of Trustees

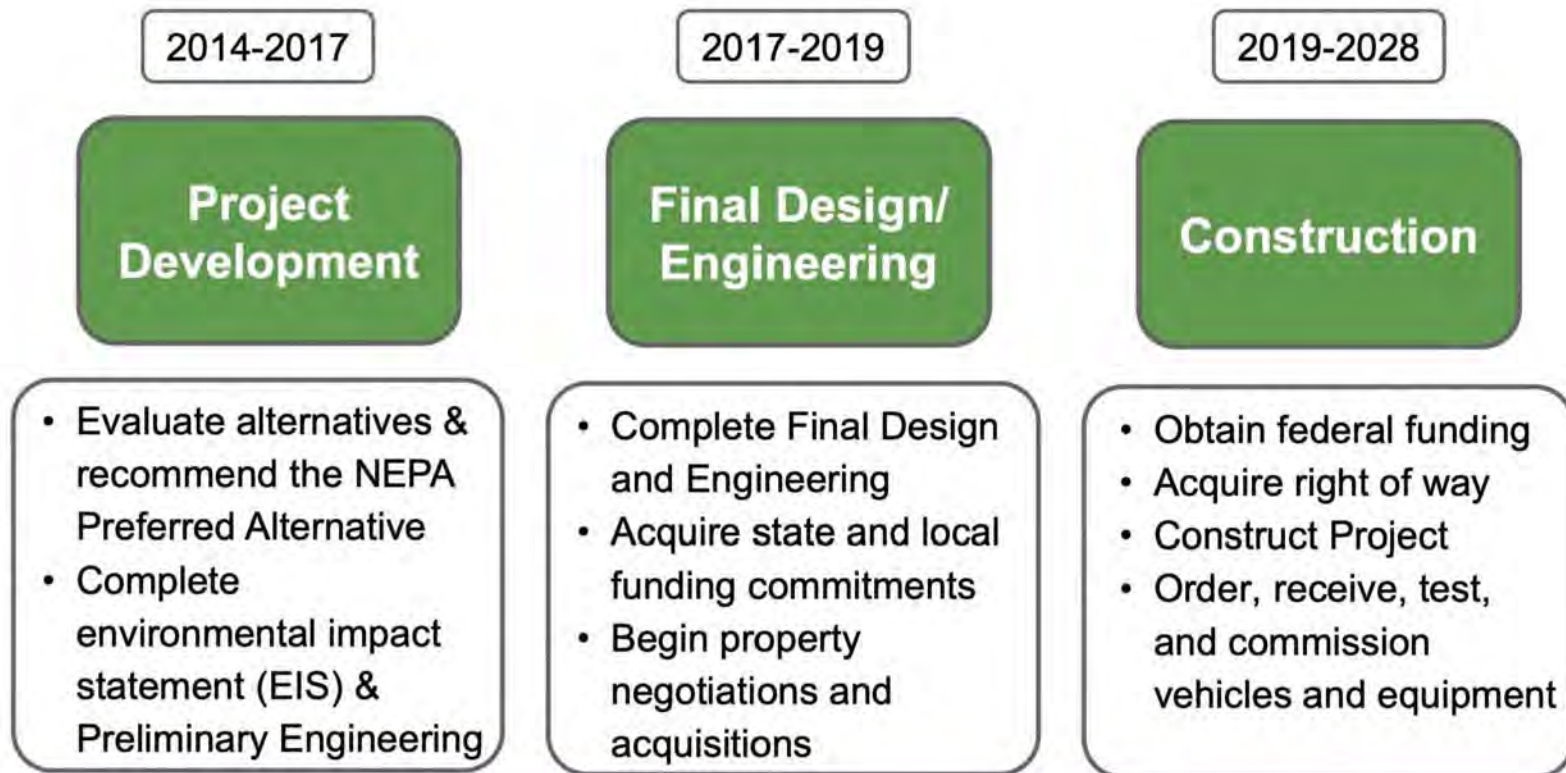


Durham-Orange Light Rail Transit Project Expenses

MARCH 2022

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D-O LRT Project Timeline



Background and Timeline

The Durham-Orange Light Rail Transit project would have been an infrastructure investment of over \$2 billion connecting NCCU, Downtown Durham, Duke University, and UNC Chapel Hill through over 17 miles of fast, reliable, and congestion-free light rail transit.

May 2008 – Special Transit Advisory Commission recommends Light Rail between Durham and Chapel Hill.

June 2009 – Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) includes Light Rail in the 2035 Long Range Transportation Plan.

2011 – Durham County voters pass a one-half-cent transit sales tax, and Durham County Commissioners approve Light Rail as part of the Bus and Rail Investment Plan.

2012 – Orange County voters pass a one-half-cent transit sales tax, and Orange County Commissioners approve Light Rail as part of the Bus and Rail Investment Plan.

May 2012 – Durham County and Orange County negotiate an initial cost-sharing agreement for the capital cost of the Light Rail project.

Background and Timeline

June 2013 – DCHC MPO includes Durham-Orange Light Rail (D-O LRT) in the 2040 Metropolitan Transportation Plan.

February 2014 – The Federal Transit Administration (FTA) approves the project for entry into Project Development, the first phase of the federal funding pipeline.

Fall 2015 – DCHC MPO, Durham County, City of Durham, Town of Chapel Hill, and Orange County unanimously endorse a preferred alternative from UNC Hospital to Alston Avenue.

February 2016 – FTA issues a Final Environmental Impact Statement and Record of Decision for the D-O LRT project.

November 2016 – DCHC MPO unanimously recommends including the NCCU station refinement in the D-O LRT project.

Background and Timeline

December 2016 – FTA approves an amended Record of Decision including the NCCU station refinement in the D-O LRT project.

April 2017 – Durham County, Orange County, DCHC MPO, and GoTriangle boards vote to commit additional dedicated transit funds for the D-O LRT projects in the updated County Transit Plans and cost-sharing agreement.

July 2017 – FTA approves the D-O LRT project for entry into Engineering, the second phase of the federal funding pipeline.

January 2018 – GoTriangle Board of Trustees authorizes the acquisition of property for the project's Rail Operations and Maintenance Facility.

December 2018 – Durham City Council unanimously approves rezoning and annexation for the project's Rail Operations and Maintenance Facility.

March 2019 – GoTriangle board votes to cancel the D-O LRT project.

D-O LRT Project Costs (FY14 - FY21)	YTD - June 30, 2021	
Management and Design		
General Engineering Consultant (HDR)	\$	86,775,632
Project Development Consultant (URS/AECOM)	\$	26,722,828
Project Management Consultant (HNTB)	\$	12,065,515
Construction Management Consultant (Gannett-Fleming/WSP)	\$	3,278,526
Financial Advisor (PFM)	\$	1,061,455
E-Builder Project Management Software	\$	615,000
Design Review Reimbursements	\$	403,176
Management and Design Total	\$	130,922,132
Administration and Staff		
Staff/Admin Support	\$	14,936,603
Project Office	\$	1,202,569
Administration Total	\$	16,139,172
Real Estate		
Property Acquisition and Maintenance	\$	4,702,888
Legal Consultants	\$	66,458
Other Real Estate Expenses	\$	1,389,119
Real Estate Total	\$	6,158,465
Other Professional Services and Operations		
Professional Services	\$	2,964,083
Operations	\$	859,761
Other Professional Services and Operations Total	\$	3,823,844
Management and Design Total	\$	130,922,132
General and Administrative Total	\$	16,139,172
Real Estate Total	\$	6,158,465
Other Professional Services and Operations Total	\$	3,823,844
Total Expenses	\$	157,043,612

Totals reflect rounding to the nearest dollar.

Total Expenses

Approximately \$157 million was spent on the Durham-Orange Light Rail Transit project beginning in the fiscal year 2014 and ending June 30, 2021.

Average cost-share for the project was 80% Durham County and 20% Orange County. Initial cost-share was 77% Durham County, 23% Orange County. In April 2017, cost-share was renegotiated to 81.5% Durham County, 18.5% Orange County.

Of the total:

- \$130,922,132 was spent on Management and Design (83%)
- \$16,139,172 was spent on Administration and Staff (10%)
- \$6,158,465 was spent on Real Estate (4%)
- \$3,823,844 was spent on Professional Services and Operations (3%)

Management and Design

\$130,922,132 of total expenses were spent on project management, design, and other consulting services needed to prepare the project for federal funding and construction.

The majority of these expenses were related to four major consulting contracts, as approved by the GoTriangle Board of Trustees:

- URS/AECOM was the Project Development Consultant (PDC). PDC expenses totaled \$26,722,828.
- HDR was the General Engineering Consultant (GEC). GEC expenses totaled \$86,775,632.
- HNTB was the Program Management Consultant (PMC). PMC expenses totaled \$12,065,515.
- Gannett-Fleming/WSP joint venture was the Construction Management Consultant (CMC). CMC expenses totaled \$3,278,526.
- PFM was the Financial Advisor. Financial Advisor expenses totaled \$1,061,455.
- Expenses for E-builder project management software totaled \$615,000.
- Engineering review reimbursements totaled \$403,176.

- URS/AECOM was contracted for services related to the project development phase of work.
- During project development, potential project impacts were assessed and required environmental analysis was completed. Environmental analysis culminated in an Environmental Impact Statement and a Supplemental Environmental Assessment containing over 700 pages of documentation.
- URS/AECOM completed a 30 percent level of engineering drawings and plans that were needed to design the project, as it was anticipated at that time.

Management and Design
Project Development Consultant
URS/AECOM
\$26,722,828

- HDR was contracted for final design services related to the engineering phase of work.
- This work included:
 - Field surveys and investigations, including exploration for subsurface utility engineering, inspections for hydraulic/drainage design, geotechnical borings, and seismic response tests.
 - Engineering plans and specifications, including the design of multiple bridges, aerial structures, and stations.
 - Environmental management, including mitigation monitoring plans and the evaluation of proposed changes to the design of the project.
 - Value engineering, which was required to mitigate potential project cost increases.

Management and Design
General Engineering Consultant
HDR
\$86,775,632

- HNTB was contracted for program management services related to the engineering phase of work.
- This work included:
 - Preparation of materials required for federal evaluation
 - Detailed plan review and management of light rail program elements including:
 - Cost and schedule
 - Real estate
 - Safety and security
 - Quality assurance
 - Rail operations

Management and Design
Program Management Consultant
HNTB
\$12,065,515

- A joint venture between Gannett-Fleming and WSP was contracted for construction management services related to construction preparation during the engineering phase of work.
- This work included:
 - Cost estimating
 - Construction scheduling
 - Constructability assessments
 - Workforce development planning

Management and Design
Construction Management Consultant
Gannett-Fleming/WSP
\$3,278,526

- \$1,061,455 was spent on financial consulting to conduct financial modeling and assist with financial risk management.
- \$615,000 was spent on E-builder project management software.
- \$403,176 was spent on design review reimbursements.

Other Management and Design Expenses

Subcontractors and DBE Participation

Larger prime consultants partner with subcontractors to complete their work. GoTriangle sets goals for the participation of disadvantaged business enterprises (DBE subcontractors) in work completed by subcontractors.

DBEs are for-profit small businesses where socially and economically disadvantaged individuals own at least a 51% interest and also control management and daily business operations.

GoTriangle's DBE participation in capital projects has have regularly exceeded federal guidelines.

- The DBE participation goal for the GEC (HDR) was 14%.
- The DBE participation goal for the PMC (HNTB) was 14%.
- The DBE participation goal for the CMC (GF/WSP JV) was 15%.
- The DBE participation goal for the PDC (URS/AECOM) was 8.8%.

DBE Subcontractors

General Engineering Consultant
(HDR)

DBE Participation – 10.7%

Program Management Consultant
(HNTB)

DBE Participation – 11.3%

Construction Management Consultant
(Gannett-Fleming/WSP Joint Venture)

DBE Participation – 18.5%

Project Development Consultant
(URS/AECOM)

DBE Participation – 13.2%

Team	DBE Firm Name	Approved for Payment through Final Invoice	Race/Ethnicity	Gender	Location
GEC (HDR)	Dovetail Consulting	\$ 4,215.60	Black	Female	Riverdale, GA
GEC (HDR)	CH Engineering	\$ 20,607.45	White	Female	Raleigh, NC
GEC (HDR)	New South Associates	\$ 31,992.35	White	Female	Greensboro, NC
GEC (HDR)	Wetherill Engineering	\$ 66,634.05	White	Female	Raleigh, NC
GEC (HDR)	EVOKE	\$ 121,516.48	Black	Female	Durham, NC
GEC (HDR)	MI Eng	\$ 148,628.51	Other	Male	Raleigh, NC
GEC (HDR)	Morton & Morton	\$ 179,417.24	White	Female	Raleigh, NC
GEC (HDR)	Cross Spectrum	\$ 232,646.08	Black	Male	Springfield, MA
GEC (HDR)	Cooper & Associates	\$ 271,833.37	White	Female	Cary, NC
GEC (HDR)	Simpson Engineering	\$ 381,720.96	Black	Male	Cary, NC
GEC (HDR)	Engineered Design	\$ 486,781.76	White	Female	Cary, NC
GEC (HDR)	Susan Hatchell	\$ 922,695.14	White	Female	Raleigh, NC
GEC (HDR)	Mid-Atlantic	\$ 952,996.10	White	Female	Wilmington, NC
GEC (HDR)	CALYX Engineers	\$ 2,213,825.19	White	Female	Cary, NC
GEC (HDR)	Davenport Engineering	\$ 3,289,600.49	Black	Male	Raleigh, NC
PMC (HNTB)	CH Engineering	\$ -	White	Female	Raleigh, NC
PMC (HNTB)	Neighboring Concepts	\$ 124,201.25	Black	Male	Charlotte, NC
PMC (HNTB)	A1 Consulting	\$ 273,697.23	Asian	Male	Morrisville, NC
PMC (HNTB)	Keville Enterprises	\$ 469,127.56	White	Female	Herndon, VA
PMC (HNTB)	LKG-CMC	\$ 495,507.01	White	Female	Glendale, CA
CMC (GF/WSP JV)	The Collaborative Firm	\$ -	Black	Male	East Point, GA
CMC (GF/WSP JV)	Cincar Consulting Group (C2G)	\$ 10,877.47	Black	Male	Atlanta, GA
CMC (GF/WSP JV)	BBFoster	\$ 13,473.06	Black	Female	Durham, NC
CMC (GF/WSP JV)	BREE & Associates	\$ 15,787.59	Black	Male	Durham, NC
CMC (GF/WSP JV)	CES Consulting	\$ 565,272.17	Asian	Male	Dulles, VA
PDC (URS/AECOM)	LKG-CMC	\$ 50,806.80	White	Female	Glendale, CA
PDC (URS/AECOM)	BREE & Associates	\$ 120,244.56	Black	Male	Durham, NC
PDC (URS/AECOM)	Planning Communities	\$ 176,829.05	White	Female	Raleigh, NC
PDC (URS/AECOM)	Connetics Transportation Group	\$ 198,623.55	White	Female	Atlanta, GA
PDC (URS/AECOM)	Neighboring Concepts	\$ 359,797.48	Black	Male	Charlotte, NC
PDC (URS/AECOM)	Wetherill Engineering	\$ 735,904.05	White	Female	Raleigh, NC
PDC (URS/AECOM)	CH Engineering	\$ 1,885,323.22	White	Female	Raleigh, NC

Non-DBE Subcontractors

General Engineering Consultant
(HDR)

Program Management Consultant
(HNTB)

Construction Management Consultant
(Gannett-Fleming/WSP Joint Venture)

Team	Firm Name	Approved for Payment through Final Invoice	Location
GEC (HDR)	Stantec Consulting (formerly RNL)	\$ 2,306.66	Arlington, VA
GEC (HDR)	Tanner Consulting Group	\$ 3,451.00	Valley Springs, CA
GEC (HDR)	Aston Carter	\$ 8,049.60	Raleigh, NC
GEC (HDR)	Thomas E. Frawley Consulting	\$ 24,660.00	Berwyn, PA
GEC (HDR)	West Ridge Construction	\$ 30,155.00	Matthews, NC
GEC (HDR)	Billings Jackson	\$ 31,765.00	New York, NY
GEC (HDR)	Fire & Risk Alliance, LLC	\$ 33,870.00	Derwood, MD
GEC (HDR)	Gilmore Consulting	\$ 34,872.50	West Chester, PA
GEC (HDR)	Carl Walker (Wantman Group)	\$ 36,855.09	Charlotte, NC
GEC (HDR)	Aerotek	\$ 66,643.40	Raleigh, NC
GEC (HDR)	James Carpenter Design	\$ 86,047.50	New York, NY
GEC (HDR)	RMF Engineering	\$ 148,769.35	Raleigh, NC
GEC (HDR)	DRMP	\$ 168,325.29	Cary, NC
GEC (HDR)	Clarion	\$ 190,157.68	Chapel Hill, NC
GEC (HDR)	RNL	\$ 473,538.57	Arlington, VA
GEC (HDR)	ECS Southeast	\$ 522,587.45	Raleigh, NC
GEC (HDR)	Maintenance Design Group	\$ 769,878.70	Denver, CO
GEC (HDR)	McKim & Creed	\$ 1,827,241.91	Wilmington, NC
GEC (HDR)	LTK	\$ 6,415,624.33	Ambler, PA
GEC (HDR)	Jacobs Engineering	\$ 7,853,044.90	Arlington, VA
PMC (HNTB)	McCracken	\$ -	Chapel Hill, NC
PMC (HNTB)	Rohadfox	\$ 53,781.01	Atlanta, GA
PMC (HNTB)	SNC Lavalin	\$ 119,782.32	Pittsburgh, PA
PMC (HNTB)	Cambridge Systematics	\$ 190,320.40	Medford, MA
PMC (HNTB)	Dewberry	\$ 295,497.11	Raleigh, NC
PMC (HNTB)	SRBTransit	\$ 304,255.78	Phoenix, AZ
PMC (HNTB)	Atkins	\$ 592,147.52	Tampa, FL
PMC (HNTB)	PPS	\$ 1,237,928.79	Kansas City, MO
CMC (GF/WSP JV)	SEPI	\$ 9,391.64	Raleigh, NC
CMC (GF/WSP JV)	Holt Brothers	\$ 14,755.75	Raleigh, NC
CMC (GF/WSP JV)	Summit	\$ 84,760.65	Hillsborough, NC
PDC (URS/AECOM)	Martin/Alexiou/Bryson	\$ -	Raleigh, NC
PDC (URS/AECOM)	Baglie Baumann & Prost (BBP)	\$ -	Washington, D.C.
PDC (URS/AECOM)	Springboard Eydo	\$ -	Cary, NC
PDC (URS/AECOM)	Infraconsult	\$ -	Scottsdale, AZ
PDC (URS/AECOM)	Shook Kelley	\$ 25,411.17	Charlotte, NC
PDC (URS/AECOM)	Russell Corrosion Consultants	\$ 41,923.01	Columbia, MD
PDC (URS/AECOM)	Vantage Point Development Advisors	\$ 180,694.28	Baltimore, MD
PDC (URS/AECOM)	VHB Engineering	\$ 659,818.18	Raleigh, NC
PDC (URS/AECOM)	Cambridge Systematics	\$ 1,142,432.49	Medford, MA
PDC (URS/AECOM)	Mulkey Engineering	\$ 1,740,835.09	Columbia, SC
PDC (URS/AECOM)	STV Inc.	\$ 2,057,245.99	New York, NY
PDC (URS/AECOM)	STV/Ralph Whitehead Associates	\$ 4,016,747.55	New York, NY

Administration and Staff

In accordance with Federal Transit Administration requirements for maintaining adequate technical capacity and capability to manage the project, GoTriangle employed a dedicated staff team responsible for overseeing the engineering and management consultants.

Administration and Staff

\$16,139,172 of total expenses for the Durham-Orange Light Rail Transit Project was spent on staff, administrative support, and the project office.

- Of this total, \$14,936,603 was spent on staff and administrative support.
- \$1,202,569 was spent on a project office.

Work completed by GoTriangle staff included work related to:

- The design and engineering plans for the project
- Compliance with the FTA's New Starts program requirements
- Project coordination with local government partners
- Project real estate acquisition activities
- Land use entitlement approvals and support for local planning efforts in station areas
- Property owner communications
- Public involvement and marketing
- Financial modeling, budgeting, procurement and administration
- Legal matters related to the project, including the development and execution of project-related agreements.

Other Professional Services and Operations

\$3,823,844 of total expenses were spent on other project-related professional services and operational costs. These expenses included:

- Redesign of an impacted facility at the University of North Carolina in Chapel Hill
- Non-profit fundraising management
- Outside legal counsel
- Financial services during the project development phase of work

Real Estate

\$6,158,465 of total expenses were spent on real estate, legal consultants, and other property-related costs.

- \$4,702,888 was spent to acquire and maintain 23.71 acres for the project's Rail Operations and Maintenance Facility.
- \$1,389,119 was spent on other property-related expenses including:
 - Appraisals
 - Site review
 - Site preparation
 - Relocation payments
 - Outreach and communications to property owners

Rail Operations and Maintenance Facility Properties (Durham County)

- 5003 Farrington Road
- 4919 Farrington Road
- 5009 Farrington Road
- 5013 Farrington Road
- 4925 Farrington Road
- 5015 Farrington Road
- 5103 Farrington Road
- 5017 Farrington Road
- 4825 Farrington Road
- 4815 Farrington Road
- 4817 Farrington Road
- 4809 Farrington Road
- 4901 Farrington Road

Total: 23.71 Acres





Discussion

Contract Work Orders – February 2022 (< \$100K)

Contract #	Contractor (or subject if no contractor listed)	Contract Amount	Subject	Comments	Pres/CEO Date Executed
22-005	My Daddy's Working Solutions	\$36,400	Recruitment Services	The term of this agreement shall be for 90 days from execution.	02/01/2022
19-028	Delerrok Inc.	\$6,700	Amendment One Mobile Ticketing	The addendum allows for ongoing system hosting, maintenance, and upgrades until a determination is made on collecting fares in FY 2024 and beyond. GoTriangle will pay a reduced monthly minimum fee of \$300, from Oct 1, 2021 until either 1) Apr 1, 2023 or 2) 3 months prior to resuming fare collection (whichever occurs first). The cost in FY2022 is \$2,700 and the cost in FY2023 is \$3,600.	02/07/2022
22-002	Grace Federal Solutions, LLC	\$20,313	Recruitment Services	The term of this agreement shall be for one year and renew automatically unless terminated.	02/07/2022
22-006	Allied Trailers Sales & Rentals	\$4,500	Lease Agreement	This Lease Agreement provides for a rental of a 8x20 metal Connex trailer to be used as a recruitment center, co-shared between GoTriangle and GoDurham. The monthly lease amount is \$375. The Term of the agreement is for seven months and shall automatically convert to month-to-month.	02/11/2022
22-007	Siemens Automation Technical Services Program	\$56,080	HVAC System	This Agreement provides for automation controls for the HVAC system at Bus Operations. This is a five (5) year term for the total amount of \$56,080.	02/11/2022
19-107	TELICS	\$36,850	Task Order 10	The cost of this project will be paid with local funds.	02/11/2022
19-107	TELICS	\$4,666	Task Order 11	The cost of this project will be paid with local funds.	02/16/2022
18-076	Town of Cary	\$0	General Capital Funding Agreement	For Bus Infrastructure with the Town of Cary. The term of this Agreement shall be from the Effective Date until Sep 30, 2022.	02/16/2022
18-083	CAMPO / Town of Cary	\$0	Special Capital Funding Agreement	F for Bus Infrastructure with CAMPO and the Town of Cary. The term of this Agreement shall be from the Effective Date until Sep 30, 2023.	02/16/2022
20-008	RB Infrastructure, LLC	\$400,000	Amendment to Memorandum of Understanding	Increase of \$400,000 and extension to Apr 22, 2022. The project currently has a not-to-exceed of \$1,937,467.19.	02/17/2022
21-069	CAMPO / Town of Knightdale	\$0	Capital Funding Agreement	For Bus Infrastructure Community Funding Area Program with CAMPO and the Town of Knightdale. The term of this Agreement shall be from the Effective Date until Sep 30, 2024.	02/28/2022

HR Board Report – March 2022

NEW HIRES

Nikola Milenkovic – Public Engagement Specialist
Jose Soto Rivera – Paratransit Operator I
Shanda Fleming - Paratransit Operator I
Christopher Bullock – Paratransit Operator I
Charlene Herbert – Bus Operator I
Evangeline Ingram – Bus Operator I
Chase Rivers – Bus Operator I
Kianna Grimes – Bus Operator I
Laquana Davis – Bus Operator I

PROMOTIONS

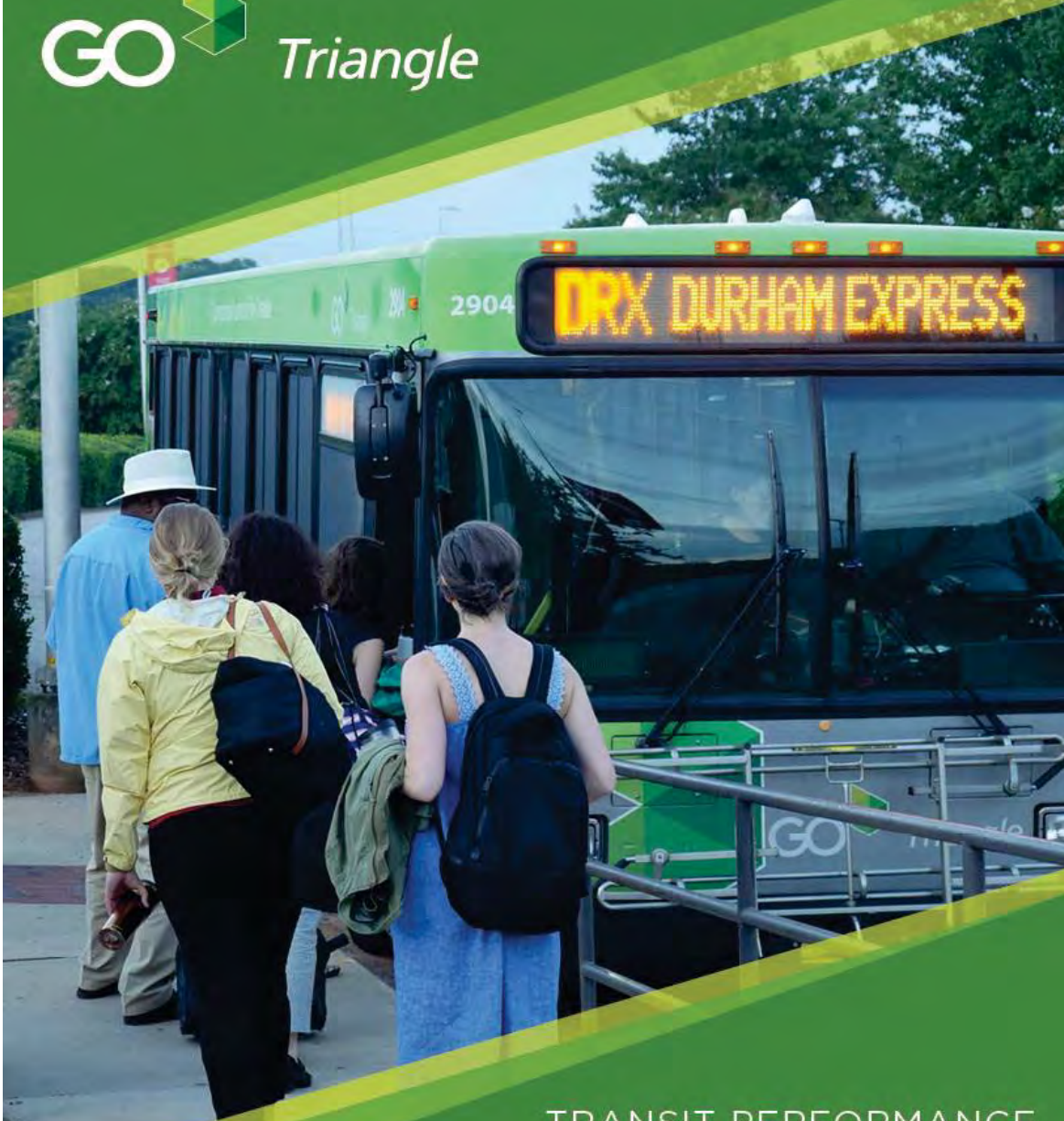
Liz Raskopf - Public Engagement Supervisor to Public Engagement Manager
Aaren Landrum - Regional Information Center Supervisor to Regional Information Center Manager
Tamika Wilson - Bus Operator III to Training Specialist

SERVICE AWARDS

20 Years, Robin Leonard
15 Years, Vinson Hines
10 Years, Cynthia Hawkins and Eric Young

RECRUITING

Bus Operator I
Capital Projects Engineering Intern
Compliance Specialist - EEO/DBE/Title VI
Customer Information Specialist - Part Time Weekend
Diesel Mechanic
Paratransit Operator I
Senior Customer Information Specialist - Bilingual Spanish
Senior Financial Analyst
Senior Project Controls Administrator
Service Attendant
Transit Service Planner



February
2022

TRANSIT PERFORMANCE
REPORT



Fixed Route

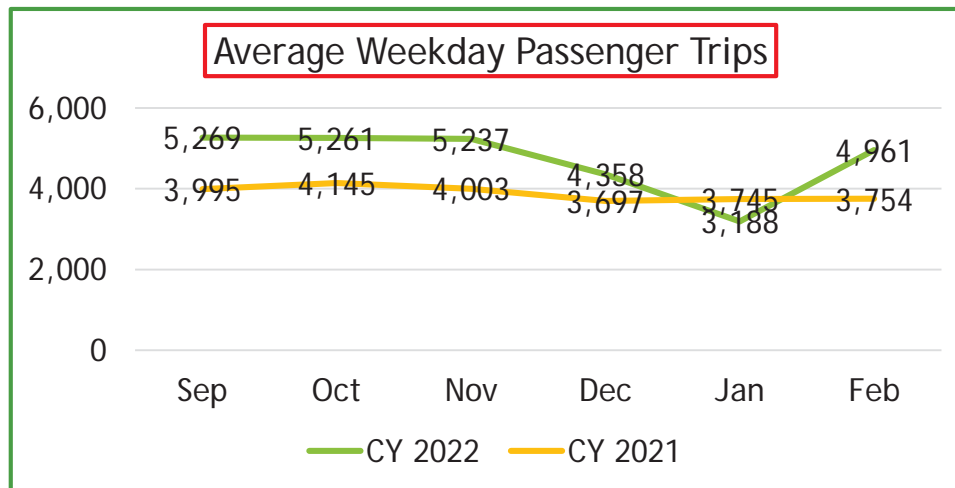
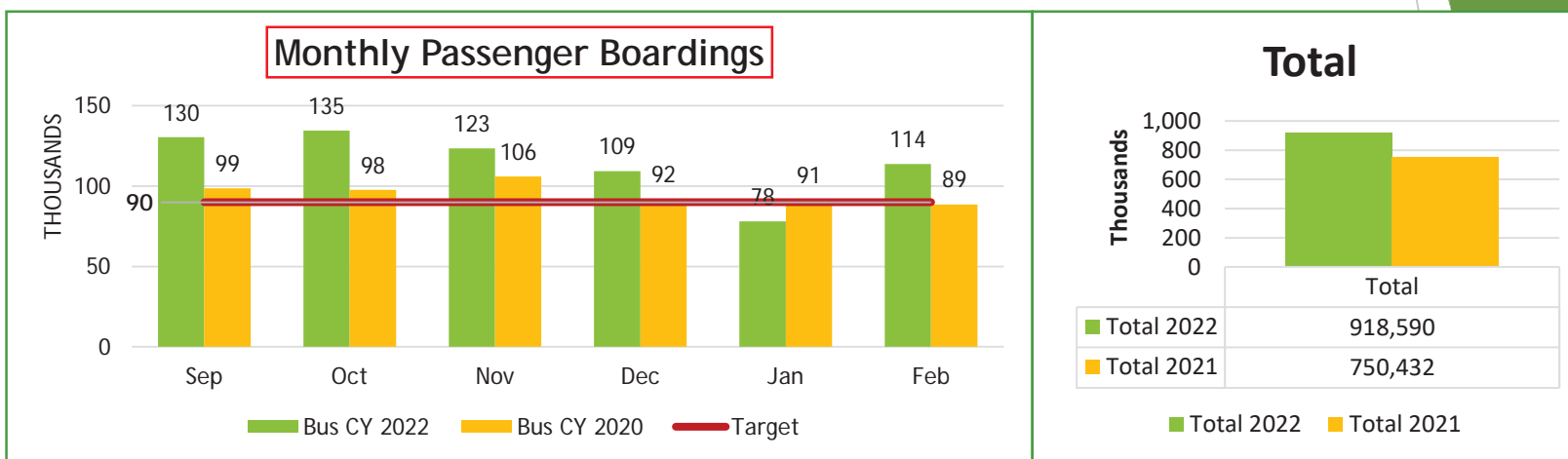
Consists of vehicles operating along a defined route on a consistent schedule

Fixed Route Year-to-Year Summary

	YTD 2022	YTD 2021	Feb 2022	Feb 2021
Passenger Boardings	918,590	750,432	113,827	88,463
Passengers/Revenue Hour	12.5	7.6	13.6	8.4
On-Time Performance	86.2%	92.3%	86.0%	91.9%
Total Mechanical Failures	133	210	15	27
Mean Distance Between Failures	55,561	48,051	99,521	47,871
Bus Total Miles	1,555,707	2,114,262	199,041	239,356
Collisions per 100,000 Revenue Miles	0.87	0.47	0.65	0.53
Verified Complaints per 100,000 Passengers	2.0	0.9	2.6	2.3

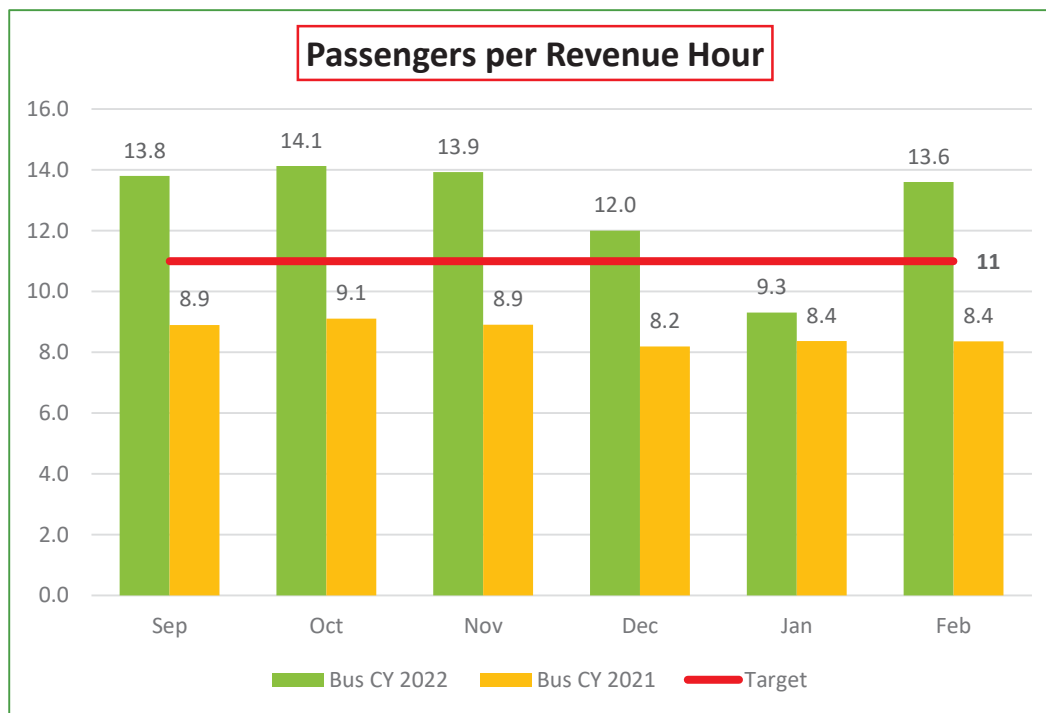
Passenger Boardings

- ▶ Defined as the number of times passengers board public transportation vehicles
- ▶ All years shown are the fiscal year of the latest month



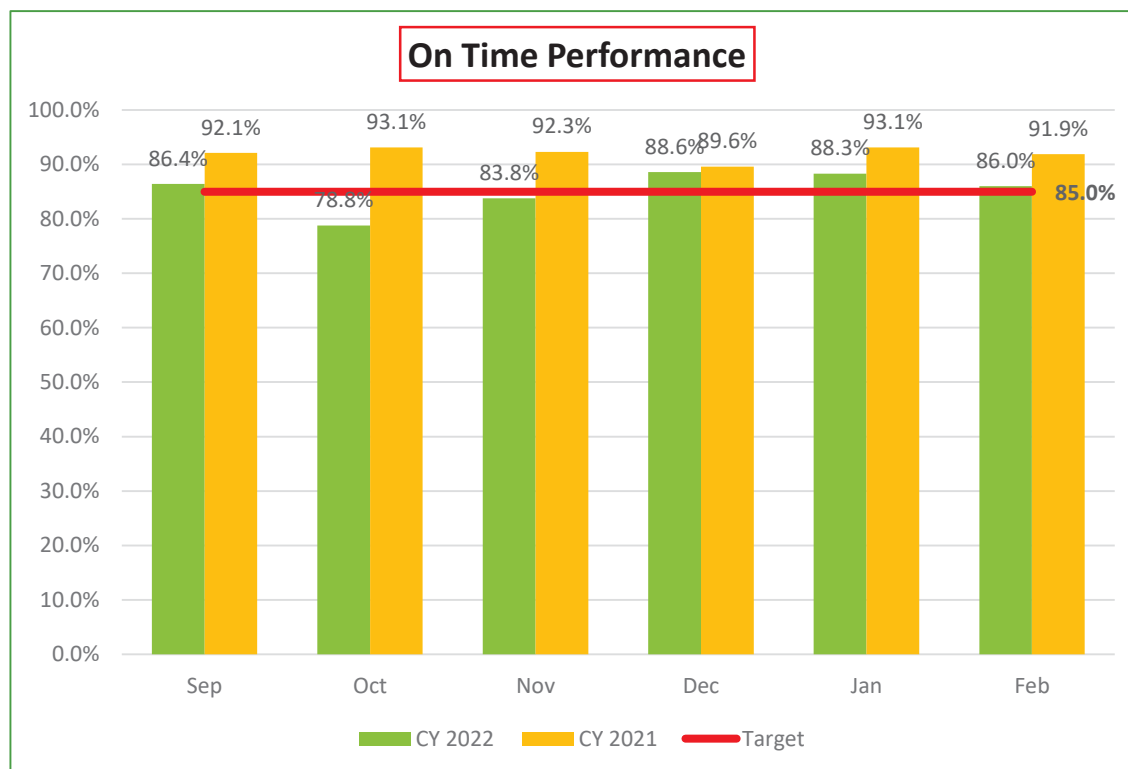
Passengers per Revenue Hour

Measures total fixed route bus ridership, divided by total fixed route bus revenue service hours



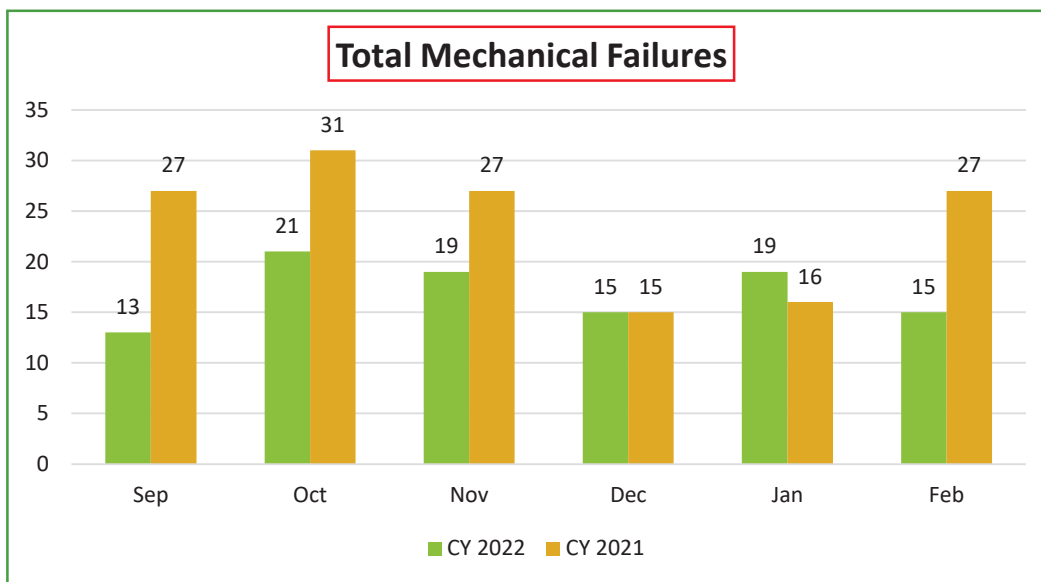
On-Time Performance

Measures on-time performance of fixed route bus service. On-time is defined as bus arrival at the stop between one minute early and five minutes late.



Mechanical Failures

Measures the total number of mechanical failures, major and other, of the bus fleet.

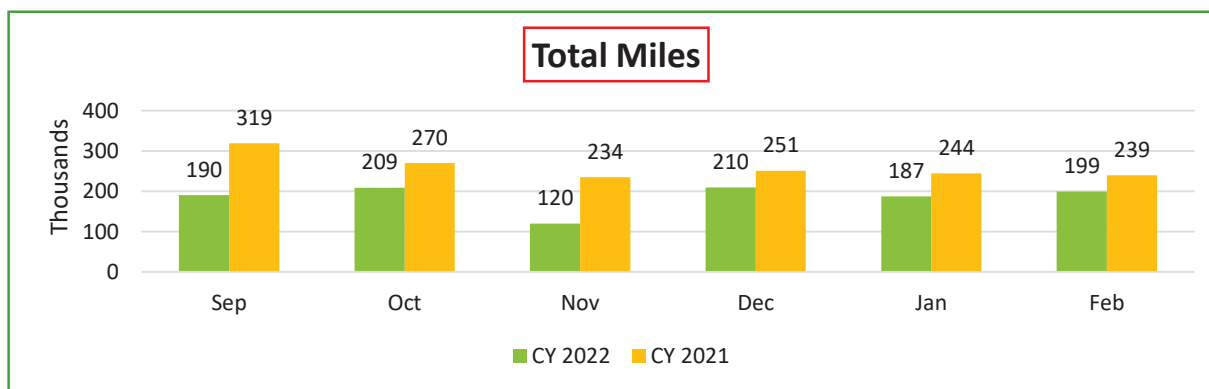
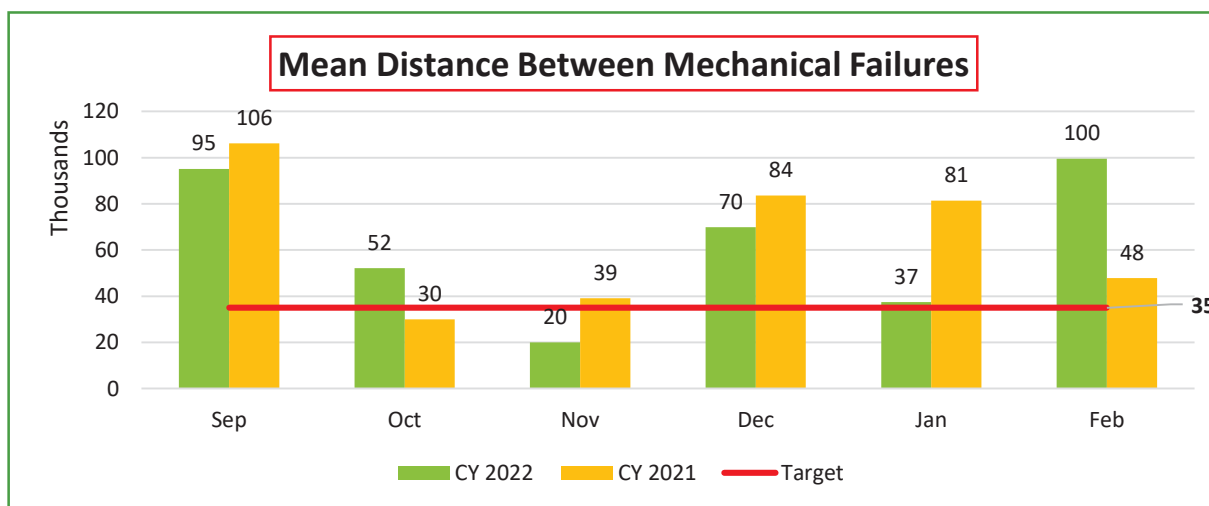


CY 2022						
	Sep	Oct	Nov	Dec	Jan	Feb
Major	2	4	6	3	5	2
Other	11	17	13	12	14	13
Total	13	21	19	15	19	15

CY 2021						
	Sep	Oct	Nov	Dec	Jan	Feb
Major	3	9	6	3	3	5
Other	24	22	21	12	13	22
Total	27	31	27	15	16	27

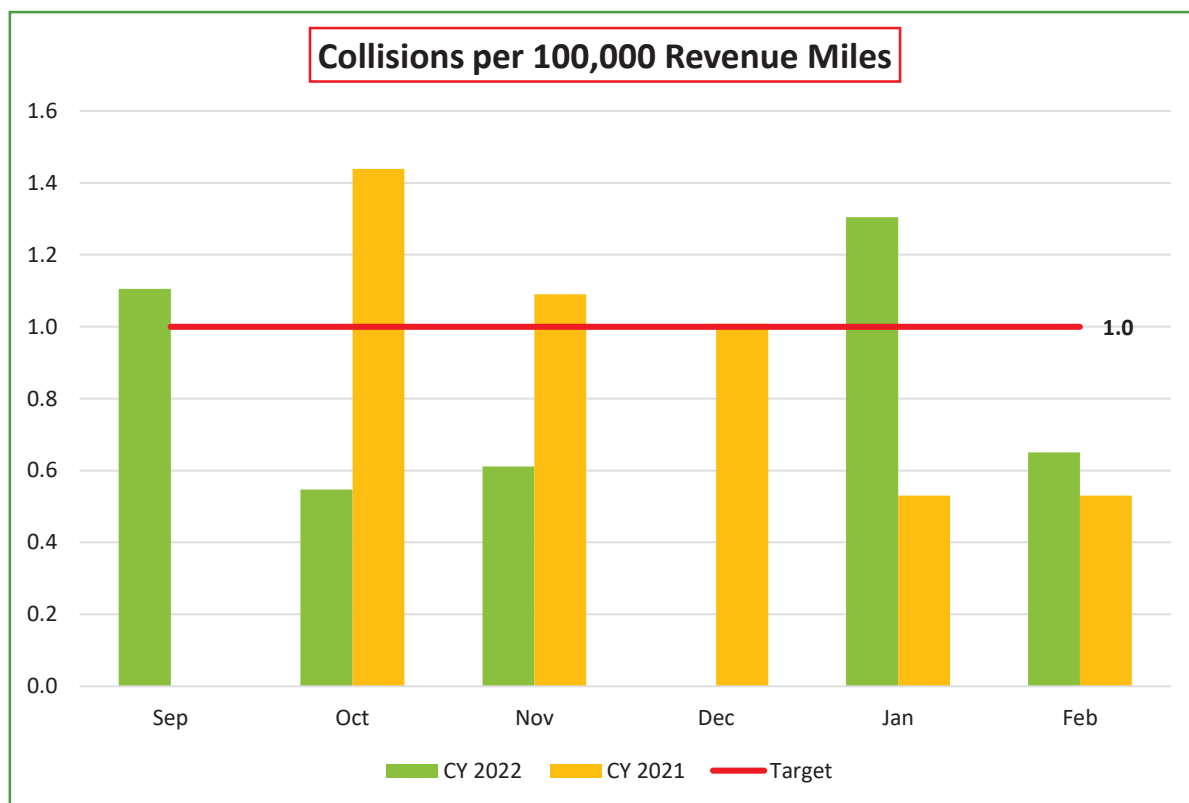
Mean Distance Between Failures

Measures the miles between major mechanical failures on the fixed route fleet (Note: Higher Bus Mean Distance Between Failures is better.)



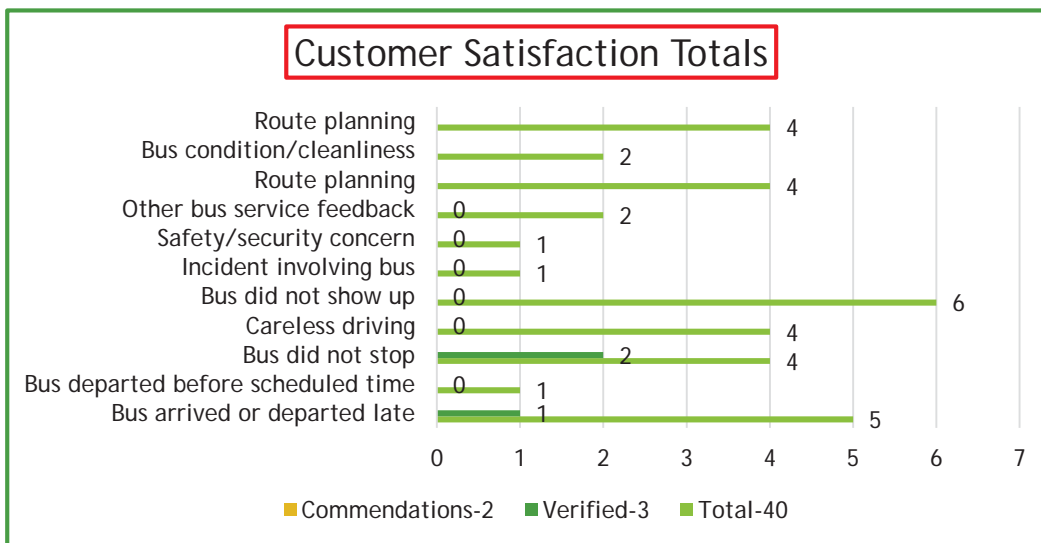
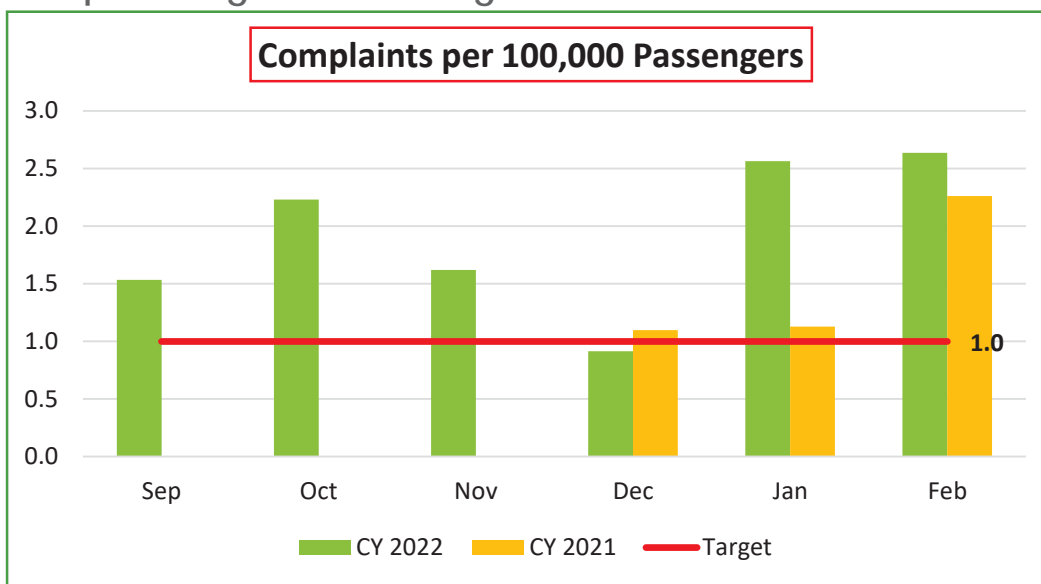
Collisions per 100,000 Revenue Miles

Measures the number of preventable collisions involving bus service per 100,000 miles.



Customer Satisfaction

Measures verified customer complaints about bus service per 100,000 bus passenger boardings.





Paratransit

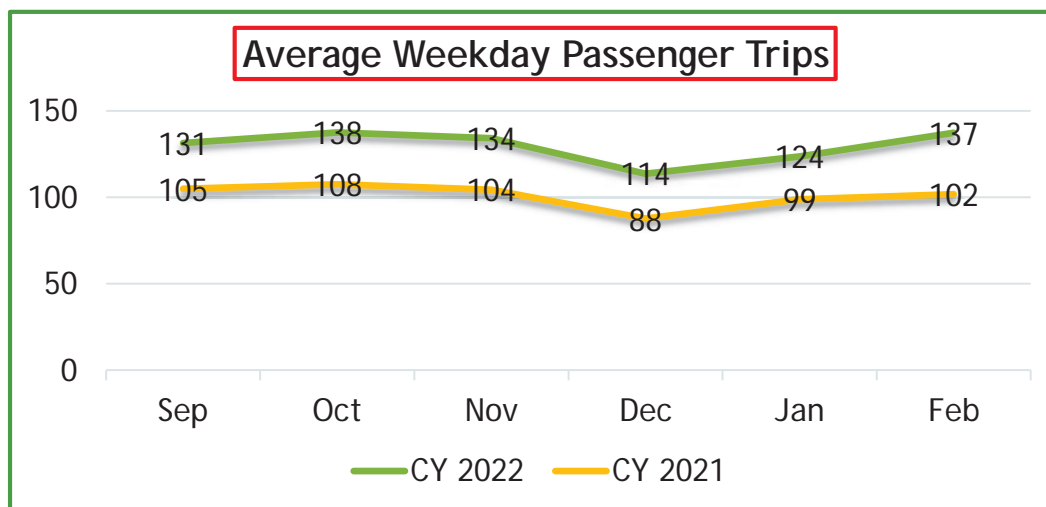
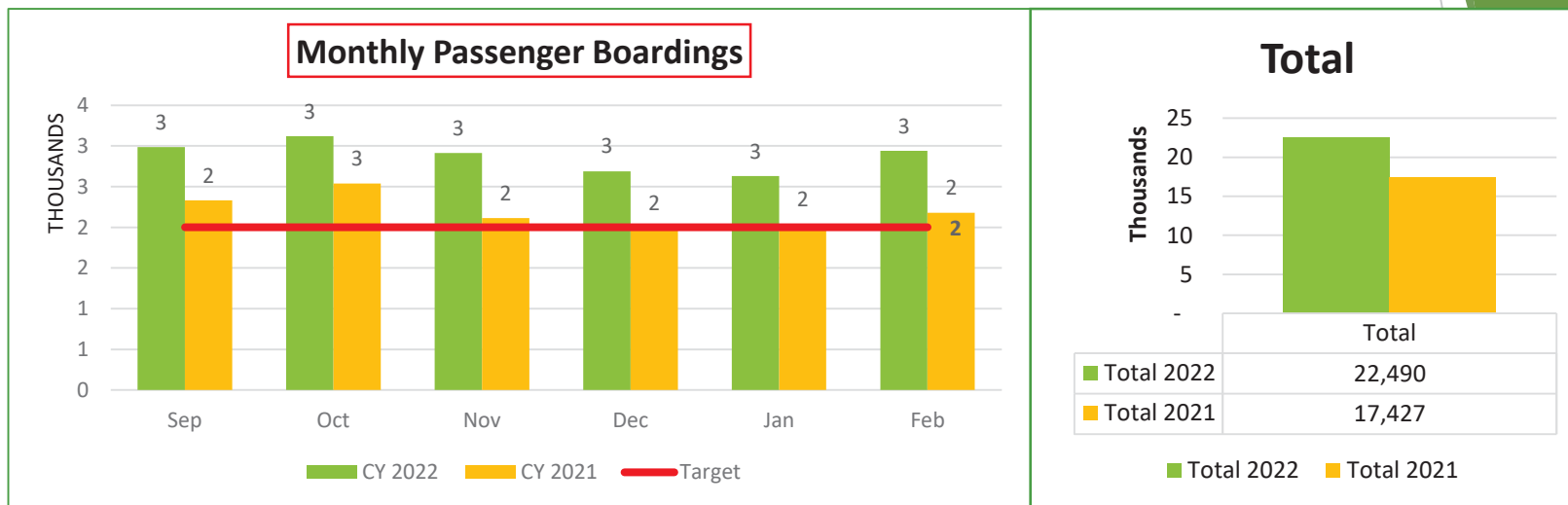
ADA service where passengers request trips and vehicles respond to the request.

Paratransit Year-to-Year Summary

	Feb 2022	Feb 2021	YTD 2022	YTD 2021
Passenger Boardings	2,938	2,180	22,490	17,427
Passengers/Revenue Hour	2.0	2.2	2.1	2.2
On-Time Performance	89.8%	88.7%	88.8%	93.7%
Total Mechanical Failures	0	0	1	0
Mean Distance Between Failures	No failures	No failures	No failures	No failures
ACCESS Total Miles	54,237	35,319	382,584	350,718
Collisions per 10,000 Revenue Miles	0.3	0.0	0.1	0.00
Verified Complaints per 10,000 Passengers	0.0	0.0	0.1	0.00

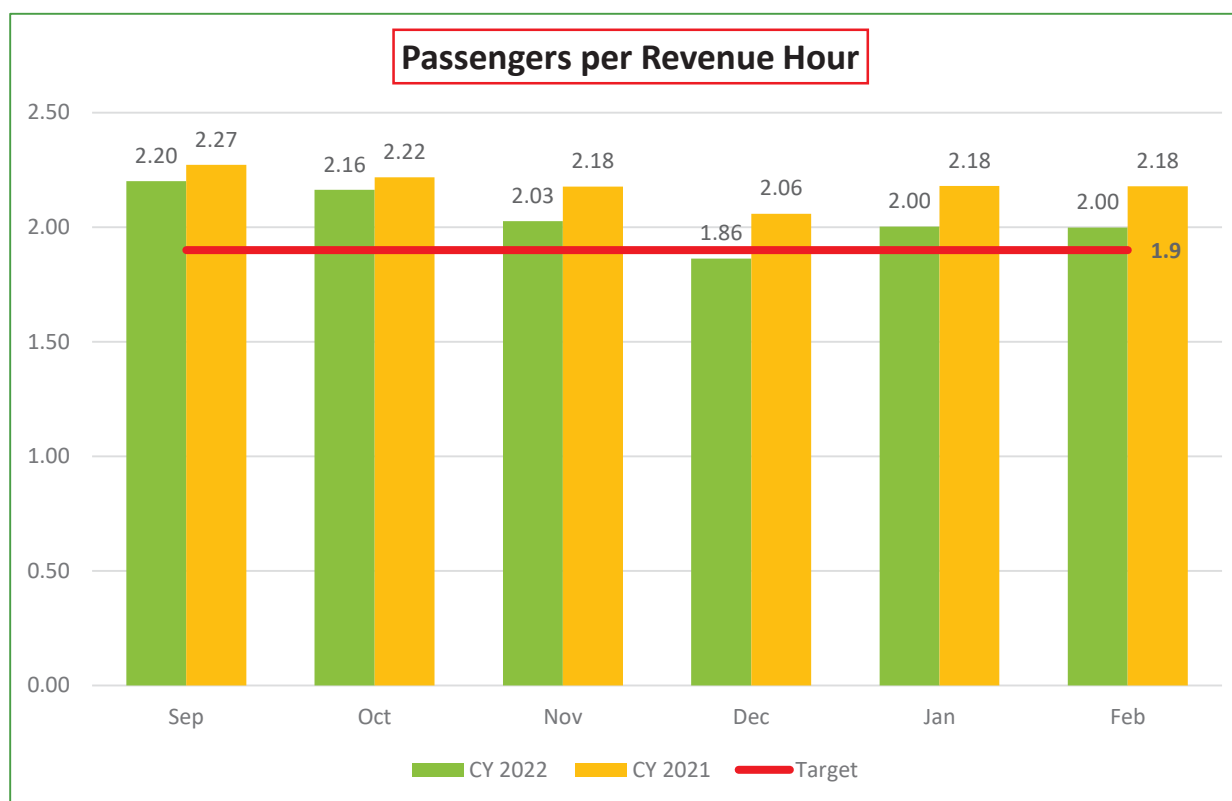
Passenger Boardings

Defined as the number of times passengers board public transportation vehicles



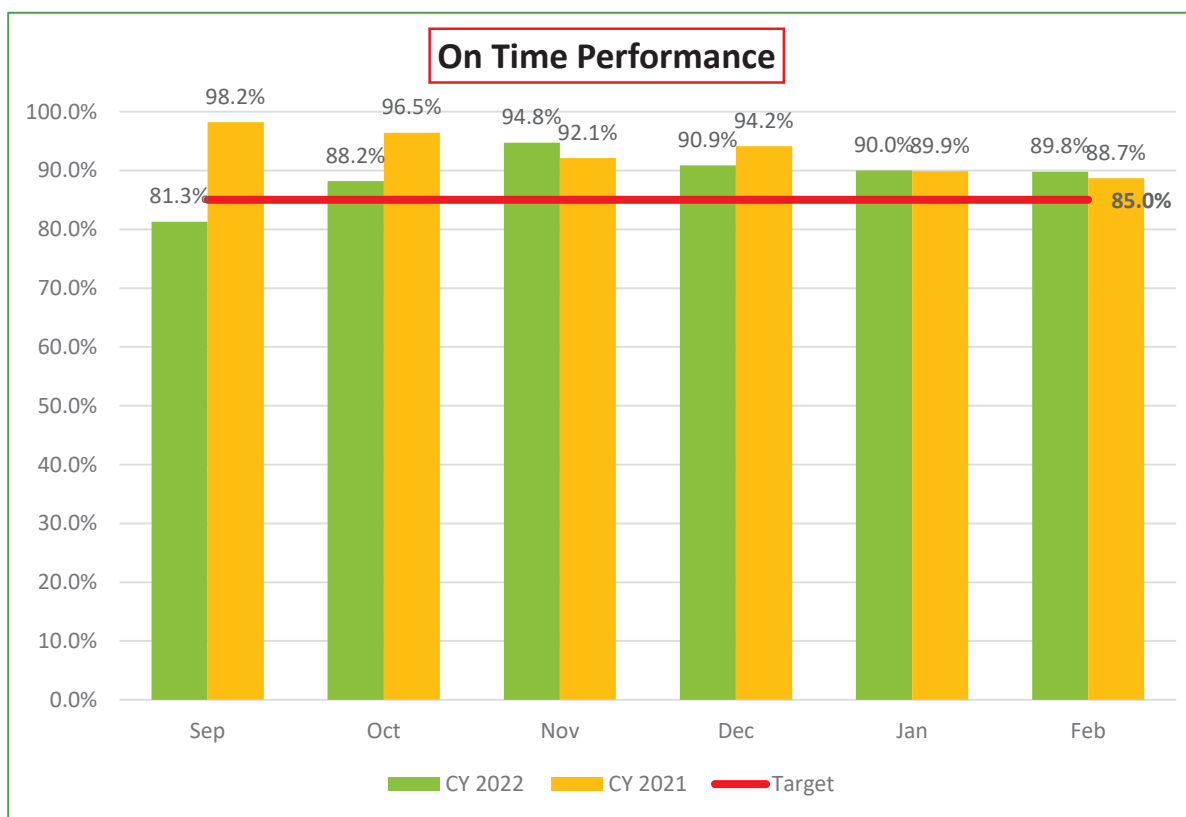
Passengers per Revenue Hour

Measures total ridership, divided by total service hours.



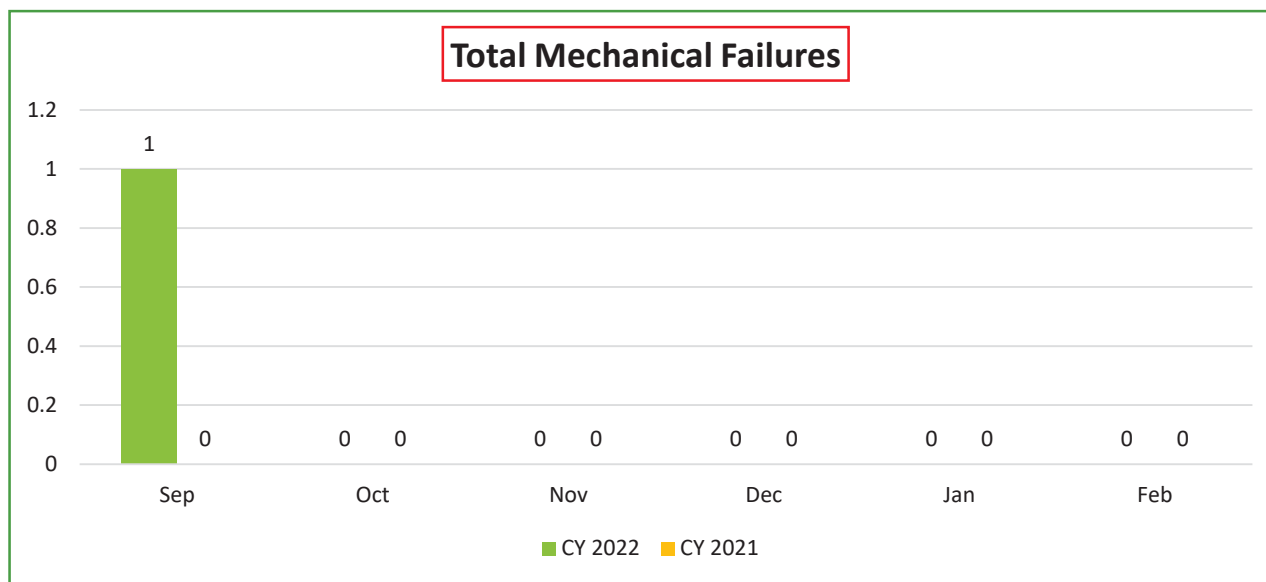
On-Time Performance

Define as being picked up within 30 minutes of requested pickup time.



Mechanical Failures

Measures the total number of mechanical failures, major and other, of the paratransit fleet.

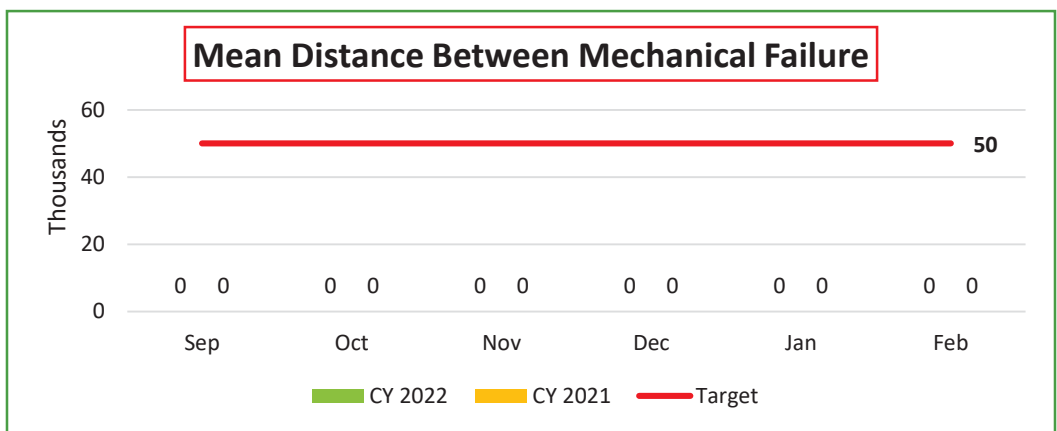


CY 2022						
	Sep	Oct	Nov	Dec	Jan	Feb
Major	0	0	0	0	0	0
Other	1	0	0	0	0	0
Total	0	0	0	0	0	0

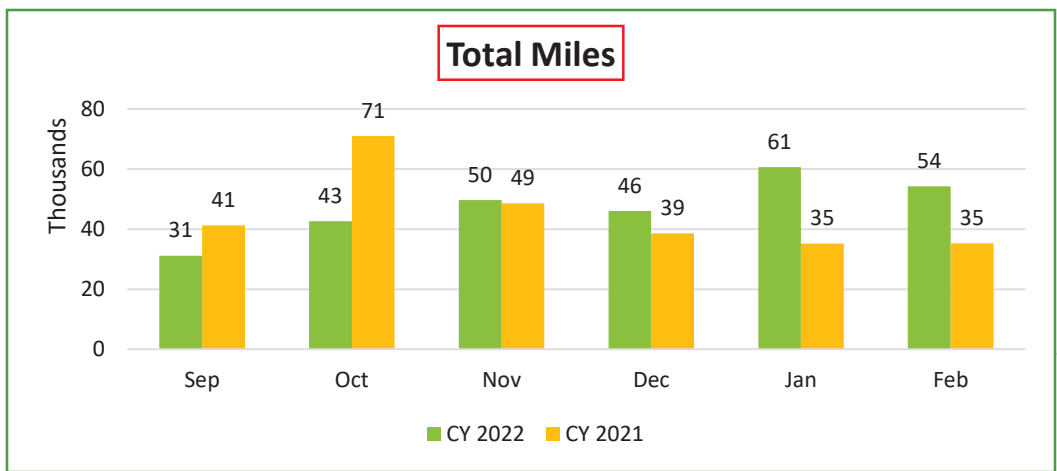
CY 2021						
	Sep	Oct	Nov	Dec	Jan	Feb
Major	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total	0	0	0	0	0	0

Mean Distance Between Failures

Measures the miles between major mechanical failures on the Paratransit fleet. (Note: Higher Mean Distance Between Failures is better.)

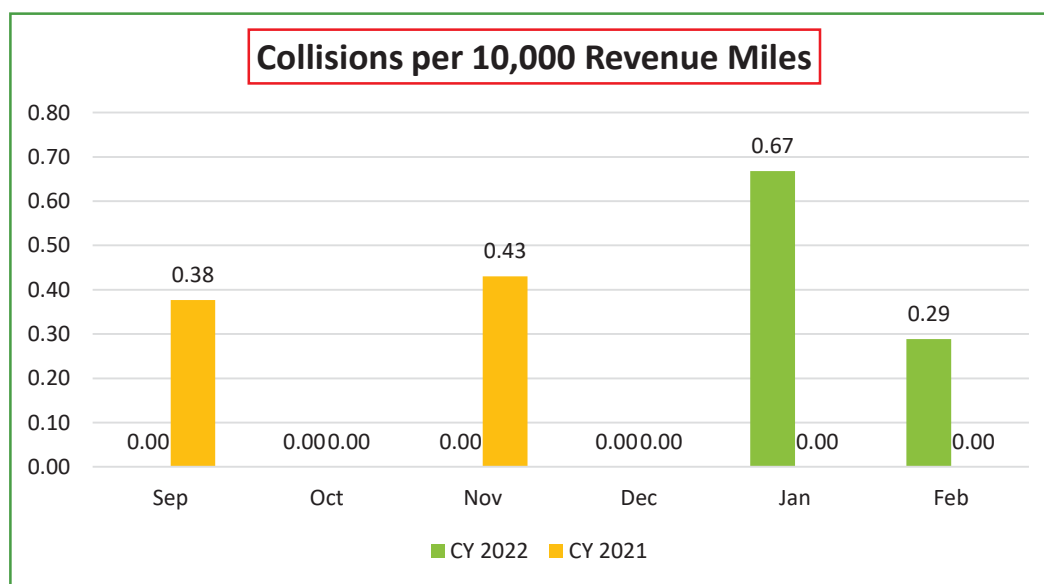


(0 indicates no mechanical failures for the month. There were no failures for November.)



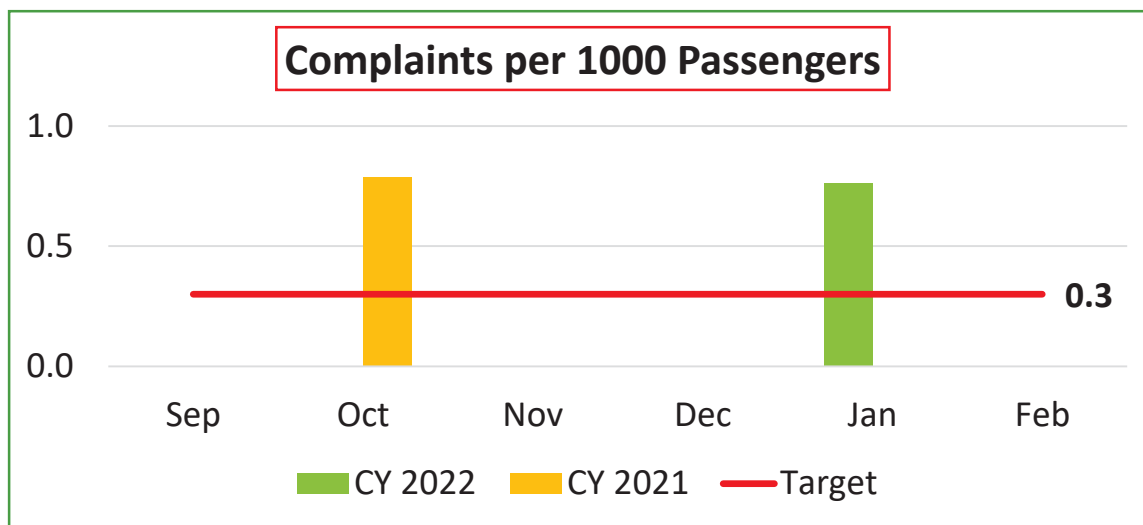
Collisions per 10,000 Revenue Miles

Measures the number of preventable collisions involving paratransit service per 10,000 miles.



Customer Satisfaction

Measures verified customer complaints about paratransit service per 1,000 passenger boardings.



MEMORANDUM

TO: GoTriangle Board of Trustees
FROM: Planning and Capital Development
DATE: March 16, 2022
SUBJECT: **Capital Projects Status Report**

Strategic Objective or Initiative Supported

2.4 Ensure an attractive and accessible transit environment

Action Requested

None

Background and Purpose

The Wake, Durham, and Orange transit plans and the GoTriangle Capital Improvement Program include funds to support planning, development, and delivery of transit capital infrastructure projects ranging from bus stop amenities to commuter rail infrastructure. This report includes a brief snapshot of the status, upcoming activities, and notable risks to on-time/on-budget delivery for active capital projects. The report is organized into the following sections:

- Bus Passenger Facilities
- Bus Operations and Maintenance Facilities
- Rail Transit Infrastructure Development

This report is updated monthly. New/updated information from the previous month's report is shown in underlined green text.

Financial Impact

None

Attachments

- None

Staff Contact(s)

- Katharine Eggleston, 919-485-7564, keggleston@gotriangle.org



Bus Passenger Facilities

Projects Under Construction

Bus Stop Improvements in Durham County (various)

Description – This project includes site selection, design, and construction of passenger amenities at GoDurham and GoTriangle bus stops in Durham County. The current pipeline of funding provides for construction of 50-75 stops per year.

Status – Since the start of FY20, GoTriangle has completed construction of improvements at 57 stops, and is proceeding with design, permitting, and construction of an additional 96. Feasibility analysis for prioritization is underway for a further 41 candidate locations, with candidate locations being evaluated on a rolling basis.

Upcoming Activities – Prioritization, design, plan approval, right-of-way acquisition, and construction activities will continue. Staff is evaluating opportunities for further process streamlining to accelerate delivery.

Bus Stop Improvements In Wake County (various)

Description – The Wake Transit Plan includes funding for improvements at existing and new GoTriangle bus stops throughout Wake County. GoTriangle has also secured supplemental federal funding through CAMPO's Locally Administered Projects Program for this project.

Status – In Wake County, since the start of FY20, GoTriangle has completed construction of improvements at 9 stops, and is proceeding with design, permitting, and construction of an additional 18. Feasibility analysis and environmental review is underway for a further 37 candidate locations.

Upcoming Activities – Prioritization, design, plan approval, right-of-way acquisition, and construction activities will continue. Staff is evaluating opportunities for further process streamlining to accelerate delivery.

Projects in Design

Patterson Place Improvements (18GOT_CD4)

Description – Nearly 200 riders per day board buses at the existing transfer point and park-and-ride served by GoTriangle route 400 and GoDurham routes 10 and 10A. This project includes new and additional concrete shelter pads and shelters at Witherspoon Boulevard and McFarland Drive. Improvements include: landscaping, curb-radius improvement to allow buses to turn right from southbound Witherspoon Boulevard onto westbound McFarland Drive to reduce bus travel time and serve additional future park-and-ride spaces.

Status – Signed plans have been obtained from the City of Durham. Real estate acquisition activities are [underway](#). Staff is preparing the construction bid package.

Upcoming Activities – GoTriangle will complete necessary right-of-way acquisition activities and schedule the project for construction.



Hillsborough Park-and-Ride (18GOT_CD8)

Description – This project includes site selection, real estate acquisition, design, and construction of a permanent park-and-ride for GoTriangle route ODX in Hillsborough. Park-and-ride utilization at the current leased lot for the ODX in Hillsborough is approximately 15 spaces per day. The original plan for the new lot included 35-50 spaces across two parcels of land; right-of-way for the full facility was acquired, however due to increased construction cost estimates, the scope was reduced to 31 spaces to allow for some growth in utilization while deferring full build-out to a future phase.

Status – Staff and outside counsel have identified the need for additional real estate agreements related to use of property that had previously been identified as an existing undeveloped right-of-way within the site. Orange county staff has concurred with GoTriangle’s procedural steps to resolve. The design is currently awaiting to advance through the plan approval process with Orange County once the property issue resolution is complete. The Real Estate consultant is engaged in acquisition of necessary easements and resolution of property issues with the undeveloped right-of-way.

Upcoming Activities – The design consultant is preparing to develop necessary property acquisition exhibits and update site design to align with real estate modifications.

Schedule Risks – As noted above, a need for additional real estate agreements was identified during site plan review. Coordination with Orange County to resolve this is ongoing. The schedule for plan approval and turnover of the project to Orange County for construction is dependent on resolution of the real estate issue.

GoTriangle Bus Stop Improvements in Orange County (18GOT_CD12)

Description – This project includes site selection, design, and construction of passenger amenities at up to 10 bus stops in the GoTriangle system within Orange County.

Status – Designs for four stops are complete and have been turned over to Orange County for construction, which is now underway. Design of additional stops is under review by Town of Chapel Hill, UNC and NCDOT, [and GoTriangle is preparing for construction of three locations.](#)

Upcoming Activities – Orange County will complete construction on the initial group of four. GoTriangle expects to complete design and permitting for at least four of the additional six stops in the coming months.

Park-and-Ride Improvements in Wake County (Short-Term) (TC002-K)

Description – The Wake Transit Plan includes funding for short-term improvements to existing park-and-ride locations, in anticipation of more substantive investments that may be identified through the park-and-ride feasibility study.

Status – Permitting of the Bent Tree Plaza Park and Ride is underway; site plan has been submitted to the City [and is under review.](#)

Upcoming Activities – Formal plan approval by City of Raleigh for the Bent Tree location is anticipated in the coming months; following plan approval real estate activities will commence.

Raleigh Union Station Bus Facility (TC002-A)

Description – This project includes publicly-funded design and construction of an eight-bay off-street bus facility and related transit access improvements adjacent to Raleigh Union Station in downtown Raleigh, in conjunction with a privately-funded mixed-use development above the bus facility. The project was awarded a \$20 million BUILD grant from the US Department of Transportation (USDOT).

Status – GoTriangle and the preferred developer are progressing in the Interim Design/Administrative Site Review process. The initial ASR package was submitted to the City on August 2, the second package was submitted on October 19. The NEPA/Section 106 process is complete. The developer agreements are progressing and are nearing completion [with FTA review ongoing.](#) Coordination with FTA, City of Raleigh, SHPO, NCDOT and other stakeholders is ongoing to confirm third-party requirements affecting the project definition. GoTriangle submitted a draft white paper to submit to FTA describing proposed



modifications to the grant scope, schedule, and budget breakdown. Monthly federal oversight meetings are continuing with the PMOC assigned to the project, and the first quarterly meeting with FTA was held on November 1, 2021. A draft Environmental Management Plan is under review by NCDEQ and a brownfields agreement is being developed. Weekly preconstruction meetings are ongoing with the developer team. Permit applications for Phase 1 construction were submitted to the City of Raleigh in January.

Upcoming Activities – Completion of the developer agreements, design progression and additional submittals to the City of Raleigh, coordination activities, management meetings, and agreement negotiations will continue on the project. Formal request for grant agreement modification will be submitted to FTA. The project schedule and cost estimates continue to be evaluated and updated. Phase 1 construction is scheduled to begin by April 2022.

Schedule Risks – The structure of the delivery approach for the project is complex, and will require coordination and partnership with FTA region IV and headquarters staff to ensure grant requirements are appropriately met and documented as the contracting process with the development partner progresses. Finalization and execution of the development agreements are critical.

Cost Risks – Continued design advancement is critical to begin advancing design to obtain a more detailed basis to refine cost estimates and obtain a clear cost risk profile for the project. Key cost risk areas include unknown geotechnical conditions, joint development project structure and negotiations, design details, and materials and labor price fluctuations.

I-540 Bus On Shoulder (TC002-BC)

Description – This project will design, purchase, and install signage along the northwest leg of I-540 to facilitate Bus on Shoulder implementation. GoTriangle's NRX route would benefit by the ability to use the shoulder during times of heavy traffic.

Status – [Sign installation is complete, and the work has been inspected and approved.](#)

Upcoming Activities – The initial scope of the project was completed under budget; GoTriangle staff will identify other eligible uses for remaining grant funds.

Priority Bus Stop Safety Improvements in Durham (21GOT_CD02)

Description – This project provides funding for design and construction of improvements to GoTriangle bus stops serving a high volume of passengers located on high-speed NCDOT roadways. Improvements could include, but are not limited to, construction of bus stop ADA pads, shelters, benches, bus pullouts and appropriate tapers, sidewalk, curb and gutter, curb ramps, crosswalks, pedestrian median refuge islands, appropriate safety signage, pedestrian signal heads and complimentary traffic signal modifications, and other complimentary or supporting roadway modifications. An initial pilot location has been identified on NC 54 west of the I-40 interchange.

Status – GoTriangle staff is coordinating with NCDOT on design of adjacent project. Consultant is proceeding with alternatives analysis and design activities.

Upcoming Activities – Consultant will continue to coordinate with NCDOT and GoTriangle and advance design.



Projects in the Planning Phase

Downtown Apex Transfer Point Improvements (TC002-AK)

Description – This enhanced transfer point in downtown Apex will facilitate regional connections and will serve multiple routes and agencies (GoTriangle 305, GoTriangle 311, and GoApex Route 1). It will also provide amenities such as large shelters, passenger information systems, benches, trash cans, and bike racks. The proposed location for the transfer point will be near the intersection of N Mason Street and Old Mill Village Drive, in downtown Apex. The project includes pedestrian access improvements in the vicinity of the transfer point by completing sidewalk gaps on the east side of Mason Street between Center Street and Old Raleigh Road. In addition, a pedestrian study will be completed and crossing improvements will be made if warranted and not already completed by the Town.

Status – A kickoff meeting to confirm project scope [was held](#) in February with Town of Apex staff.

Upcoming Activities – GoTriangle staff will be undertaking a NEPA evaluation and coordinating with FTA. Following scope discussions with Town of Apex, task order for design will be issued.

Priority Transit Access Improvement, US 15-501 at Eastowne (22GOTCD01)

Description – This project aims to provide transit access improvements at the intersection of US 15-501 & Eastowne Drive in Chapel Hill, Orange County. This location will serve three developments, a new Wegman's grocery which will soon be open to the public; UNC Healthcare facilities under construction; and the newly renovated State Employees Credit Union (SECU) building (formerly the Blue Cross Blue Shield building). Together, these destinations will employ over 2,500 people along a core GoTriangle regional route (400), which provides all day, every day transit connections to Durham, Patterson Place/New Hope Commons, and Downtown Chapel Hill/UNC. This location will also be served by route 405, which provides direct connections to Durham and Carrboro during peak periods.

Status – Project kickoff with external stakeholders (NCDOT, Chapel Hill Transit, Town of Chapel Hill, PART) [was held](#) in February.

Upcoming Activities – [Scope will be finalized and](#) project will move forward to a design task order.

Park-and-Ride Improvements in Wake County (Short-Term) (TC002-K)

Description – The Wake Transit Plan includes funding for short-term improvements to existing park-and-ride locations, in anticipation of more substantive investments that may be identified through the park-and-ride feasibility study. One such improvement is currently in the planning phase; this project includes signs, markings, and passenger amenities at a new/replacement leased park-and-ride for GoTriangle route WRX at a new location to be determined.

Status – A kickoff meeting for a study to identify a new location in Wake Forest was held November 19, 2021 and the study is underway. A stakeholder meeting was held on January 13, 2022.

Schedule Risks – The nature of short-term leased/licensed park-and-rides and associated property owner coordination contributes to obstacles for scoping and delivering improvements. Efficient and timely development of high-quality facilities for short-term use requires strong partnerships with host property owners.



Regional Transit Center Feasibility Study (TC002-N)

Description – The Regional Transit Center (RTC) is the primary hub for GoTriangle regional bus services connecting Wake, Durham, and Orange Counties. The current location of the RTC on Slater Road in Durham creates overlapping routes leading to inefficiency. This feasibility study is evaluating location options that improve route efficiency and improve passenger amenities.

Status – The consultant [completed drafts](#) of documentation necessary for FTA environmental review and the Wake Transit Concurrence process. Property owner engagement is being scheduled. GoTriangle staff is preparing for potential additional grant-seeking activities. [GoTriangle participated in a debrief with USDOT on the FY21 RAISE grant; GoTriangle's application received a top rating of "highly recommended" and "highly rated" and was eligible for funding. USDOT staff recommended minor revisions and encouraged GoTriangle to resubmit the application in the FY22 cycle due April 14, 2022.](#)

Upcoming Activities – GoTriangle and the consultant will continue to progress pre-design activities.

Schedule Risks – The primary risk to continued progress is securing funding to implement the project.

Mebane Park-and-Ride Relocation Study (18GOT_CD11)

Description – This feasibility study will assess potential new permanent locations for the Mebane park-and-ride. The current facilities is undersized for growing demand, and operates under a short-term agreement with Cone Health. This study will establish site parameters and evaluation criteria for a 150-200 space park and ride to be shared by GoTriangle, PART, and Orange County Public Transit; identify up to five candidate sites; screen sites and select preferred site and an alternate site; develop conceptual design for a preferred location and a possible alternate.

Status – Study activities are progressing; GoTriangle has received feedback from three stakeholder meetings. Concept design and cost estimate for a potential preferred location is complete and under review by GoTriangle staff.

Upcoming Activities – Consultant will finalize the study documentation.

GoDurham Tactical Bus Stop Amenities (21GOT_DC03)

Description – Purchase and installation of seating, solar lighting, and real-time arrival signs at locations identified through customer requests and staff analysis of bus stops with existing conditions suitable for quick implementation.

Status – A pre-bid meeting was held on January 10 with two potential bidders present. Staff is preparing responses to vendor questions.

Upcoming Activities – Completion of procurement activities is expected in the coming months. [One bid was received in response to the initial invitation. GoTriangle plans to readvertise in March with an April bid opening.](#)

Cost Risks – Budget is approximately \$100,000 per fiscal year. Unit costs are assumed to be around \$15,000 to \$20,000 per sign location, which would either limit the number of installation or require additional funding.



Bus Operations and Maintenance Facilities

Projects in the Design Phase

Paratransit Office Space Upfit (TC002-J)

Description – This project will upfit office space and the parking lot at the Plaza building to facilitate moving Paratransit operations from the Nelson Road Facility.

Status – Construction is underway with a 140-calendar-day period of performance ending June 23, 2022.

As of [the end of February, overall work was 30% complete, with interior walls and selective demolition for restroom expansion and piping rough-ins was 90% complete, metal studs and framing for interior walls was 75% complete, and installation of electrical junction boxes was 80% complete.](#) Coordination with operations, IT, and real estate is ongoing.

Upcoming Activities – GoTriangle staff will continue to monitor construction progress. [Exterior work is scheduled to begin in April.](#)

Projects in the Planning Phase

Regional Fleet and Facilities Study (CD-21-19 A)

Description – This study includes three components: (1) assessing fleet and maintenance facility needs for GoDurham and developing a conceptual design for these needs, (2) assessing fleet and maintenance facility needs for GoTriangle and developing a conceptual design for these needs, and (3) planning for potential regional electric bus charging infrastructure and other potential shared operations and maintenance resources for GoTriangle and partners in the region. The scope of services includes planning, conceptual design, and cost estimating to assess needs for expansion of existing maintenance facility sites and evaluate up to four alternative sites for new facilities for GoDurham and GoTriangle. The Study will identify potential expansions and alternatives to current utilization of existing facilities that will improve cost-efficiency and provide responsive services.

Status – Data gathering and initial study activities are complete. Immersion workshops were held in October with GoTriangle and GoDurham staff. Expansion approaches for Fay Street and Nelson Road facilities are confirmed. Staff is reviewing [location analysis for paratransit site search evaluation](#) and design concepts for Nelson Road and Fay Street expansions.

Upcoming Activities – Final design concepts and planning-level cost estimates for Nelson Road and Fay Street will be prepared by the consultant following completion of staff and stakeholder reviews.



Rail Transit Infrastructure Development

Greater Triangle Commuter Rail Study (19GOT CO2/20GOT CD1/TC004-A)

Description – The current phase of study is evaluating the potential for new commuter rail service in the North Carolina Railroad Company (NCRR) corridor in Durham, Wake, and Johnston counties, and will refine the project definition; engage community members, municipalities, and institutional stakeholders; and better understand critical project success factors. In coordination with project partners, GoTriangle will conduct preliminary engineering analysis in areas of concern along the corridor, model rail traffic on the corridor with the inclusion of commuter rail to better define infrastructure needs, and better refine cost and ridership estimates.

Status and Upcoming Activities – As of April 6, 2020, all parties to the Memorandum of Understanding in Support of Continued Development of the GTCR Project, including Johnston county, had voted to proceed with further study. Authorizations for additional consultant support were approved by the GoTriangle Board in May 2020. Study activities across a range of tasks are ongoing:

- Railroad Coordination – GoTriangle and NCRR resolved initial discussions regarding liability, indemnification, and insurance. Modeling is underway by Norfolk Southern and its consultant, [initial results for the baseline scenarios were shared in February](#), and tentative completion is anticipated in the coming months.
- Technical Work Products – Work products from the technical tasks are continuing to be completed, [with recently-received input and conclusion of the Norfolk Southern analysis critical to key deliverables including ridership, cost, and implementation schedule](#).
- Engagement with “resource partners” including local governments, institutions, and other regional partners – GoTriangle is continuing meetings with municipalities individually and as a group with institutional partners on a monthly basis as needed. [Review of the downtown Cary technical memorandum is underway by Town of Cary Staff. Development of the downtown Durham technical memorandum is underway by the consultant in response to recently-received comments from City of Durham](#).
- Community Engagement – The project website launched in late April 2021, and the website is being updated based on user feedback. Staff is engaged in education-focused public involvement throughout the project area, and held a well-attended webinar event in November. Planning for engagement activities in early 2022 is underway.
- Schedule Management – The initial baseline schedule is complete; GoTriangle and the consultant are meeting monthly to formally assess progress and manage interfaces between dependent tasks.

Schedule Risks – To date, primary risks to timely completion of the next steps are related to coordination with entities that are not party to the MOU (e.g. railroads, municipalities, affected major institutions), identification and resolution of competing/conflicting stakeholder goals, and satisfactory engagement with the public under COVID restrictions. These are key priorities with the next steps defined in the MOU, which indicates that the parties will confer to discuss potential extension by April 2022 if the activities are not complete at that time.

Cost Risks – To date, it appears that primary risks to setting a budget within the range of \$1.4B to \$1.8B identified during the earlier phase of study for the Durham-Garner project concept are related to the infrastructure requirements resulting from rail network modeling and related negotiation, design for engineering solutions to engineering constraints in downtown Durham, quantification of necessary levels of contingency required to address FTA risk management guidelines, and emerging interest in evaluation of additional off-peak service and level boarding. These are key priorities with the next steps defined in the MOU.

