Thursday, May 18, 2023
Locust Town Hall/Locust, NC
Joel Huneycutt Community Rm.
6:00 - 8:00 pm

AGENDA: TECHNICAL ADVISORY COMMITTEE

1. Ethics Statement
John Ballard, Chairperson

2. Public Comment

3. Amend/Adopt Agenda.....**(ACTION NEEDED)**
John Ballard, Chairperson

4. Approval of Minutes from March 2023.....**(ACTION NEEDED)**
John Ballard, Chairperson

5. RRRPO 2024 PWP Approval.....**(ACTION NEEDED)**
Lee Snuggs, RRRPO

The draft RRRPO PWP24 will be presented and voted on for approval.

6. Stanfield Sidewalk Project.....**(ACTION NEEDED)**
Lee Snuggs, RRRPO

The NCDOT-Divisoin-10 staff, RRRPO and Stanfield elected officials are in favor of a new route along this project corridor. It was determined by all parties that more homes/people would benefit with the revised route. Additional funds are also being researched by Division-10 to supplement Stanfield with their required monetary contribution for the project, being that the project has been extremely delayed, at no fault to either party.

7. CMAQ Funds Swap.....**(ACTION NEEDED)**
Lee Snuggs, RRRPO & Scott Miller, NCDOT

The final decision of project(s) to be included in the CMAQ Funds Swap will be discussed and voted upon.

8. Metrolina CommunityViz Data & Model Presentation/Statement of Work(SOW) Contract
(ACTION NEEDED)
Lee Snuggs, RRRPO

The objective of this project is to update the 2019 Metrolina Region CommunityViz Model and use it immediately for the Rocky River Rural Planning Organization (RRRPO) planning area represented in

the 2055 Metrolina Regional Travel Demand Model. Specifically, our work will focus on updating the 2019 Metrolina CommunityViz data and model created for the 2050 Metrolina Regional Travel Demand Model, and associated land use data, to allocate future socioeconomic data at the traffic analysis zone level. At the completion of the project, Centralina Regional Council will provide the file structure and GIS data files used to create the Metrolina CommunityViz Model to RRRPO and its member jurisdictions for independent use.

9. NCDOT Updates
a. County Updates.....Division Staff
b. Mobility & Safety Division.....Regional Traffic Staff
c. Corridor Development Engineer..... Scott Miller
d. Transportation Planning Division..... Roger I. Castillo

10. Old Business

11. New Business

12. Adjourn

Dinner Provided

Next Meeting: *TBD*

Thursday, March 16, 2023
Raye Boardroom,
SPCC/Polkton, NC
6-8 pm

Technical Advisory Committee Meeting Minutes

Members Present: John Ballard (Chairman-Wadesboro), Jarvis Woodburn (Anson County), Bill Peak (New London), Charlie Council (Badin), Melvin Poole (Red Cross), Richard Allen (Peachland), Peter Asciutto (Stanly County), and Michael Herron (Misenheimer).

Members Absent: Wes Hartsell (V.Chairman-Norwood), Tony Lanthrop (NCBOT), Chris Whitley (Albemarle), Lanny Hathcock (Oakboro), and Melissa Merrell (Union County).

Others Present: Roger Castillo (NCDOT-TPD), Theo Ghitea (NCDOT), Scott Miller (NCDOT), Pate Butler (NCDOT), Brandon King (Stanly County-Alt.), Reaghan Murphy (CRC-Zoom), Lee Snuggs (RRRPO) and Lisa Park (RRRPO).

The meeting convened at 6:00 pm. Quorum was established.

1. **Ethics Statement**
   The Ethics Statement was read to members by Chairman John Ballard..

2. **Public Comment: None**

3. **Amend/Adopt Agenda (Approved)**
   A motion was made by Michael Herron to approve the agenda.
   It was seconded by Jarvis Woodburn and unanimously approved.

4. **Approval of Minutes from January 2023 (Approved)**
   A motion was made by Bill Peak to approve the minutes.
   It was seconded by Michael Herron and unanimously approved.

5. **Metrolina CommunityViz Data & Model Presentation/Draft Statement of Work(SOW)Contract…….(INFORMATION)**
   Reaghan Murphy, Centralina Regional Council/Lee Snuggs, RRRPO

   A presentation was provided to the group outlining the benefits of this project to the RRRPO region. The objective of this project is to update the 2019 Metrolina Region CommunityViz Model and use it immediately for the Rocky River Rural Planning Organization (RRRPO) planning area represented in the 2055 Metrolina Regional Travel Demand Model. Specifically, our work will focus on updating the 2019 Metrolina CommunityViz data and model created for the 2050 Metrolina Regional Travel Demand Model, and associated land use data, to allocate future socioeconomic data at the traffic analysis zone level. At the completion of the project, Centralina Regional Council will provide the file structure and GIS data files used to create the Metrolina

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CommunityViz Model to RRRPO and its member jurisdictions for independent use. A final vote will be taken at our May meeting.

6. RRRPO 2024 PWP Draft.....(INFORMATION)
Lee Snuggs, RRRPO

Members were provided a draft of the RRRPO PWP24 for review and questions. The final PWP24 will be voted on during the May meeting.

7. Carbon Reduction Program(CRP) Project List…….(INFORMATION)
Lee Snuggs, RRRPO & Scott Miller, NCDOT

Members were emailed a list of projects that were chosen for the CRP project list. There are a total of 8 projects that will be submitted by the end of the month for final review/approval by NCDOT. The floor was open for discussion and/or other projects nominated to be added to the list.

8. Stanfield Sidewalk Project Update……..…….**(INFORMATION)**
Lee Snuggs, RRRPO

An in-person meeting between Stanfield, Locust, RRRPO and NCDOT/Div. 10 was held to look at concerns with areas along the west side of the corridor. Looking at a new route along this corridor, it was determined by all parties that more homes/people would benefit with the revised route. Division 10 will develop new estimates for crossing at the new point and present them to the Stanfield Board of Commissioners at their May meeting. If they approve of the new crossing and cost estimate, additional funds can be sought since the project has gone through the STIP process. Additional funds are also being researched to supplement Stanfield with their required monetary contribution for the project, being that the project has been extremely delayed, at no fault to either party.

9. CMAQ Funds Swap…….(INFORMATION)
Lee Snuggs, RRRPO & Scott Miller, NCDOT

Possible projects for the CMAQ Funds Swap were presented and discussed: Roundabout in Misenheimer #52/Pfeiffer University, Gray Stone Day School($2-3 Million); Roundabout in Badin at Falls Road/#740($2-3 Million); Realignment at #52/Plank Road in Ansonville($1-1.5 Million). Vote of final projects will occur at the RRRPO's May meeting.

10. NCDOT Updates:

a. County: Division Staff

- **NC 24/27 Widening Project (R-2530B) –** Project is approximately 76% complete. Current operations include earthwork, drainage, culvert construction and wet utility installation. Indian Mound Rd and Stony Gap have re-opened to traffic. According to Contractor, project status is scheduled to meet 7/1/23 completion date; however, the Department expects work to continue after this date. The Department's expected completion is the end of 2023. Controlling operation is wet utility relocations.

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- **Old Cottonville Road Emergency Bridge Closure (DJ00246)** –Working is ongoing and the bridge is expected to be opened to traffic in May 2023.
- **Millingport Road Bridge Replacement (DJ00390)** – Construction will begin in mid-April 2023. The bridge is over Long Creek near Richfield.
- **City Pond Road Bridge Replacement (B-5809)** – Bridge is complete. Contractors are working on grading the project. Paving should begin soon. Project should be completed except for vegetation establishment in April.
- **US 52 Bridge Replacement over Rocky River (B-4407)** – Traffic has been placed on the new structure. Currently in the process of tearing down the existing structure. Project should be completed except for vegetation establishment in June 2023.
- **NC 740 & Blackhawk & Wright Rd**.(north of Badin) - Stanly County Board passed a resolution supporting the project. NCDOT will use resources to help realign those intersections.

b. Mobility & Safety Division:Regional Traffic Staff

- No updates at this time. There will be a turn-in at the end of the month.

c. Corridor Deveopment Engineer: Scott Miller - previously discussed.

d. Transportation Planning Division: Roger I. Castillo

- NCDOT has a new chief information officer.
- Further updates provided in the TPD monthly newsletter.

11. Old Business: None

12. New Business:

- Website Update
- SEI/RED submittal due by April 17, 2023

13. Adjourned at 7:01 pm.

Adopted: This the 18th day of May, 2023.

_____ _____

John Ballard, TAC Chairperson **Lee Snuggs, Secretary**

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FY 2024 (July 1, 2023-June 30, 2024)
PLANNING WORK PROGRAM/DRAFT
ANNUAL FUNDING SOURCES TABLE
Rocky River RPO

TASK CODE	WORK CATEGORY	RPO PROGRAM FUNDS			
		LOCAL 20%	State 0%	FEDERAL 80%	TOTAL
I. DATA COLLECTION AND ASSESSMENT					
I-1	DATA COLLECTION AND ASSESSMENT	$ 4,000	$ -	$ 16,000	$ 20,000
I-1.1	Highway				
I-1.2	Other Modes				
I-1.3	Socioeconomic				
I-1.4	Title VI				
II. TRANSPORTATION PLANNING					
II-1	COMPREHENSIVE TRANSPORTATION PLAN (CTP) DEVEL	$ 4,800	$ -	$ 19,200	$ 24,000
II-1.1	Develop CTP Vision				
II-1.2	Conduct CTP Needs Assessment				
II-1.3	Analyze Alternatives and Environmental Screening				
II-1.4	Develop Final Plan				
II-1.5	Adopt Plan				
II-2	PRIORITIZATION	$ 2,000	$ -	$ 8,000	$ 10,000
II-2.1	Project Prioritization				
II-3	PROGRAM AND PROJECT DEVELOPMENT	$ 3,154	$ -	$ 12,615	$ 15,769
II-3.1	STIP Participation				
II-3.2	Merger / Project Development				
II-4	GENERAL TRANSPORTATION PLANNING	$ 5,800	$ -	$ 23,200	$ 29,000
II-4.1	Regional and Statewide Planning				
II-4.2	Special Studies, Projects and Other Trainings				
III. ADMINISTRATION OF TRANSPORTATION PLANNING AND POLICIES					
III-1	ADMINISTRATIVE ACTIVITIES	$ 4,100	$ -	$ 16,400	$ 20,500
III-1.1	Administrative Documents				
III-1.2	TCC / TAC Work Facilitation; Ethics Compliance				
III-1.3	Program Administration				
IV. DIRECT COSTS					
IV-1	PROGRAMMATIC DIRECT CHARGES	$ 1,815	$ -	$ 7,260	$ 9,075
IV-1.1	Program-wide Direct Costs				
IV-2	ADVERTISING	$ 100	$ -	$ 400	$ 500
IV-2.1	News Media Ads				
IV-3	LODGING, MEALS, INCIDENTALS	$ 300	$ -	$ 1,200	$ 1,500
IV-3.1	Hotel Costs				
IV-3.2	Meal Costs				
IV-3.3	Incidentals				
IV-4	POSTAGE	$ 25	$ -	$ 100	$ 125
IV-4.1	Mailings				
IV-5	REGISTRATION / TRAINING	$ 200	$ -	$ 800	$ 1,000
IV-5.1	Conference Registration				
IV-5.2	Meeting / Workshop / Training Fees				
IV-6	TRAVEL	$ 300	$ -	$ 1,200	$ 1,500
IV-6.1	Mileage Reimbursement				
IV-6.2	Car Rental Costs				
IV-6.3	Other Travel Expenses				
V. INDIRECT COSTS					
V-1	INDIRECT COSTS	$ -	$ -	$ -	$ -
V-1.1	Incurred Indirect Costs				
RPO OPERATIONAL EXPENSE TOTAL		$ 26,594	$ -	$ 106,375	$ 132,969

Approved by the TAC on: _____20__

Signature, TAC Chairman

Signature, RPO Secretary

Centralina Services Agreement – EXHIBIT M

Statement of Work

Rocky River Rural Planning Organization (RRRPO) – Metrolina CommunityViz Data and Model
(the "Project")

This Statement of Work ("SOW"), dated as of the 1st day of July, 2023 (the "Effective Date"), is by and between CENTRALINA COUNCIL OF GOVERNMENTS, d.b.a Centralina Regional Council, a North Carolina regional council of governments pursuant to Chapter 160A, Article 20, Part 2 of the General Statutes of North Carolina and having a principal place of business at 10735 David Taylor Drive, Suite 250, Charlotte, North Carolina 28262 ("Centralina"), and between Stanly County, a NC local government and having a principal place of business at 201 S Second Street, Albemarle, NC 28001 ("Client"), pursuant to which Centralina will provide to Client planning services (the "Services"). Centralina and Client have previously entered into a Centralina Services Agreement (the "Agreement"). The Agreement is incorporated into this SOW by this reference. In the event of any conflicting or additional terms between this SOW and the Agreement, the Agreement will govern, except with respect to price and scope of work, any "Other Terms and Conditions" included below that apply solely to this SOW, or other items expressly permitted by the Agreement.

I. Introduction

This document outlines the tasks and deliverable that constitute the Services under this SOW that Centralina shall provide to Client on a fixed fee basis in support of the Project, the compensation that Client shall pay to Centralina for the Services, and other Project support to be provided by Client. Primary contacts for the Project are as follows:

	Centralina	Client
Project Manager	Michelle Nance, Assistant Regional Planning Director	Lee Snuggs, Director RRRPO Administrator
Email Address	mnance@centralina.org	lsnuggs@rockyriverrpo.org
Telephone Number	(704) 348-2709	(704) 986-3876

Centralina's invoices shall be mailed to the Client's Project Manager named above and to the Client's Accounts Payables if listed below:

Attn to Name and/or Title	Toby Hinson
Dept	Finance
Mailing Address, City, ST ZIP	Stanly County 201 S Second Street Albemarle, NC 28001
Email address	thinson@stanlycountync.gov
Telephone Number	

II. Services

The Client hereby retains Centralina to provide project management, planning and GIS services for the Rocky River RPO. Centralina will perform the tasks and activities, and provide to Client the deliverables as described in Appendix A.

III. Time of Performance

The time of performance shall be from July 1, 2023 to October 31, 2024.

IV. Compensation

Centralina will perform the tasks identified in this SOW and as detailed herein for a sum of **$8,500**. The amount due to Centralina pursuant to this SOW may not exceed this amount unless proper written justification has been submitted to Client and approved by Client prior to performance of work. Invoices shall be submitted to the Client no later than 30 days after the end of each quarter. Client will be billed for the Services in installments per the table below.

	Payment Amount	Due Date/Upon Completion of Milestone:
A.	$1,500	September 30, 2023
B.	$1,500	December 31, 2023
C.	$1,500	March 31, 2024
D.	$1,500	June 30, 2024
E.	$2,500	Upon completion of all deliverables

V. Other Terms and Conditions

A. **Iran Divestment Act Compliance.** Each Party affirms that, as of the date of execution of this SOW, it is not listed on the Iran Divestment Act lists created by the North Carolina State Treasurer pursuant to N.C. G.S. 147-86.58, nor are its subsidiaries or parent companies, if any.

B. **E-Verify.** The E-Verify requirements of North Carolina state law apply to this SOW. Centralina affirms that it is exempt from the requirements of NCGS Chapter 64 Article 2 concerning its use of E-Verify or other federally-authorized program to check the work authorization of all new employees in the United States, because it is a "governmental body" as defined in that Article. Centralina agrees that it shall not enter into any subcontracts under this SOW unless such subcontractor (a) affirms either its exemption from or compliance with the E-Verify requirements of NCGS Chapter 64 Article 2 and (b) agrees to similarly ensure its subcontractors' affirmation of exemption from or compliance with those statutes.

[Signatures on following page.]

This Statement of Work has been executed by each Party's duly authorized representative as of the date below such Party's signature.

CENTRALINA REGIONAL COUNCIL		**STANLY COUNTY**	
By:	_____	By:	_____
Name:	Geraldine Gardner	Name:	Andy Lucas
Title:	Executive Director	Title:	County Manager
Date:	_____	Date:	_____

"This instrument has been pre-audited in the manner required by the North Carolina Local Government Finance Act."

_____
Toby Hinson, Finance Director

Exhibit A:
Metrolina CommunityViz Model for a Portion of the Metrolina Regional Model Planning Area for Rocky River RPO (RRRPO)

The objective of this project is to adapt and update the 2019 Metrolina Region CommunityViz Model and use it immediately for the Charlotte Regional Transportation Planning Organization (CRTPO), Gaston-Cleveland-Lincoln MPO (GCLMPO), Rock Hill-Fort Mill Area Transportation Study (RFATS), and Rocky River Rural Planning Organization (RRRPO), ("Clients"), planning areas represented in the 2055 Metrolina Regional Travel Demand Model. Specifically, our work will focus on updating the 2019 Metrolina CommunityViz data and model created for the 2050 Metrolina Regional Travel Demand Model, and associated land use data, to include a model architecture and data protocol that allocates future year socioeconomic data at the traffic analysis zone level.

Part A:
Project Understanding

Transportation planning organizations (TPO) are responsible for developing a safe, convenient, and effective multimodal transportation system. One of the tools available for studying long-term impacts to the transportation system is the Metrolina Regional Travel Demand Model (MRM), which is a computer program that forecasts future year demand on existing and planned transportation facilities using anticipated land use, demographic information, and travel patterns unique to the region. The planning horizon years for the regional travel demand model usually are five, 10, 20, and 30 years beyond base year conditions. Approximating future year conditions on the transportation system enables officials to assess the implications of growth, to compare alternative transportation solutions, and to provide a framework for measuring the impact of policy decisions.

The foundation for the MRM includes socioeconomic data — including population, housing, and employment estimates — organized into traffic analysis zones (TAZs). Demand on the transportation system (i.e., trip generation) is calculated directly from the model's socioeconomic data. Updating socioeconomic data in the current MRM is time intensive, and the different processes used by member jurisdictions create significant challenges for normalizing methods to best forecast and allocation of future year growth patterns within the planning area. Consistency in the process to develop socioeconomic data is critical to evaluating the effects of alternative development patterns on the efficiency of the transportation system. The overall goal for the Metrolina Region CommunityViz Model is to use a bottom-up methodology for creating socioeconomic data that is normalized among all the member jurisdictions.

The region's transportation planning organizations have standardized the socioeconomic data allocation processes for the planning area, to eliminate data reporting inconsistencies and to isolate the inherent relationship between land use and urban form for improving the efficiency of the regional transportation system. This effort is part of a regional process to work collaboratively with other MPOs/RPO in the Charlotte region to gain efficiencies and consistency in this work.

Future year socioeconomic data allocation in the model will be made at the traffic analysis zone level for horizon years 2025, 2035, 2045, and 2055. The validity and precision of the Metrolina CommunityViz model for allocating future year socioeconomic data in the planning area rests largely upon the quality

of available data and a strong commitment to model calibration. At the completion of the project, the Centralina Regional Council ("Consultant") will make available to the Clients the file structure and GIS data files used to create the Metrolina CommunityViz Model for their use independent of the Consultant.

Part B:
Key Assumptions

The following assumptions are made in preparing the Scope of Services:

- The study area for the Metrolina Region CommunityViz Model will match the boundaries of the Metrolina Regional Travel Demand Model.
- Staff from the TPO will serve on the Project Management Team and Project Steering Committee to provide direct oversight and counsel for updating and calibrating the Metrolina CommunityViz Model.
- TPO will be responsible for preparing base year (2022) and future year control total data that will be used for adapting and building the new CommunityViz model. This includes base year employment data (such as Info USA point files), population/census data by TAZ, and future year growth projections for horizon years 2025, 2035, 2045, and 2055. The TPO will also be responsible for providing average persons per household statistics and employment space ratios, by county, for the growth categories used in CommunityViz. The TPO will be responsible for providing county-level control totals for population, students, and employment for 2022, 2025, 2035, 2045, and 2055 using the same categories for socioeconomic data used in the Metrolina Regional Travel Demand Model.
- CommunityViz output data for each horizon year will be provided to the Client in tabular (*.dbf) and geographic (*.shp) file formats. Reporting categories will include: single-family residential (dwelling units), multifamily residential (dwelling units), retail (employees), highway retail (employees), low-traffic service (employees), high-traffic service (employees), industrial (employees), office and government (employees), banks (employees), and education (employees).
- The TPOs will be responsible for securing their a copy of CommunityViz if desired for use after the project.

Part C:
Scope of Services

Centralina proposes the following services to adapt and update the 2019 Metrolina CommunityViz Model to include a model architecture, maintenance plan, and data protocol that allocates future year socioeconomic data at the traffic analysis zone level.

Task 1: Project Management:

Task 1 will focus on setting up the staff framework of the project partners, along with laying out the project process and clarifying any issues at the start of the project. Over the course of the project this task will focus on managing resources, schedule, scope, cost and risks.

Task 1.1 Project Management

The consultant will provide overall project management and the consultant Project Manager will be the primary point of contact for the project management team and will be available to the Clients Project Manager(s) throughout the life of the project. The consultant will develop a model build process map and action plan/timeline that details the work to adapt and update the 2019 CommunityViz model that

allocates future year socioeconomic data at the traffic analysis zone level. A project manager and technical advisor will manage the day-to-day consultant duties associated with the project, including: routine coordination with MPO and RPO staff via telephone or email, attendance at MRM coordination activities, disseminating information to project management team members, submitting quarterly progress reports and project invoicing. The "Project Management Team" will include Centralina staff and technical advisor, Charlotte Department of Transportation model staff and a designee from each participating TPO.

Task 1.2 Project Management Meetings and Communication
The consultant project manager will hold regular project management calls (up to 36 total calls) with the Project Management Team to provide project updates, present preliminary findings, coordinate on-going issues, and get feedback on draft data/model components prepared for the project, discuss next steps, review agendas for upcoming meetings, and coordinate other project-related items. Other key stakeholders may participate in coordination calls, as needed, to discuss current issues in the planning process. Project Management Team communications will be conducted by phone, email, virtual meeting and/or in-person as necessary.

Task 1.3 Kickoff Meeting
The consultant team will initiate the project with a kickoff meeting. This meeting serves multiple purposes:

- Bring together client and consultant staff working on the project
- Clarify project schedule, objectives, priorities, work products, project management, and reporting procedures
- Identify and outline available data sources, collection methods, formatting and calculations
- Identify and obtain related plans
- Gain further insight on key decision points
- Discuss known challenges with 2019 Metrolina CommunityViz Model, identify necessary modifications, and reach consensus/approve model changes
- Discuss immediate next steps, upcoming meetings, and deliverables

Task 2: Project Communications:

Task 2 will focus on stakeholder identification and communications.

Task 2.1: Project Steering Committee
A project steering committee will be formed to provide direct oversight and counsel for updating / calibrating the Metrolina CommunityViz model. The steering committee will meet up to eight times during the life of the project and include up to 15 individuals (but not unduly limiting important interests from participating in the project). The Client will be responsible for recruiting steering committee members and securing a meeting location (if needed). Following the kick-off event, meetings with the project steering committee meeting will cover preliminary results, on-going issues, and feedback on draft model components or results.

Task 2.2: Development Community Outreach
The development community will be surveyed to understand factors and priorities used in development decisions when conducting site selection for land development. This is especially important in 2023 in order to reflect changes in development protocol stemming from the COVID-19 pandemic. These factors impact the model related to land suitability factors. Surveys will be distributed through the TPOs and economic development agencies throughout the region. A summary of survey findings will be provided to the Steering Committee and serve as the basis for updated assumptions in the model.

Task 2.3: TCC Briefings
The Consultant will update the technical coordinating committee (TCC) members on the project early in the process to outline the timeline and the local government role. Throughout the project and at key milestones, Consultant will provide information to TPO staff for briefings with the technical coordinating committee or policy board to keep them apprised of the model build process. Briefings will be used to summarize key issues in the planning process so that members have awareness and the ability to provide inputs prior to finalizing the Metrolina CommunityViz model.

Task 2.4: Local Government Coordination Sessions
At several key milestones in the project, the Consultant will hold meetings organized by TPO geography to allow local government staff opportunities to review and provide comments on model inputs including but not limited to: development status, updated land use policy, development of new community types, carrying capacity, transportation improvements/projects, and activity and town centers. Community comments will be accepted during the meeting and for a minimum of two-weeks following the meeting. Model adjustments based on comments received will be made in consultation with the Project Team. Based on newly updated and adopted land use policies region-wide, additional outreach will include coordination on the need for new/revised community types, an analysis of new land use policy that may impact land supply modeling assumptions, and an update of the committed development inventory.

Task 3: Metrolina CommunityViz Model Data Collection and Forecasts:
Task 3 will focus on gathering, evaluating, and coding data for input into the Metrolina CommunityViz Model. This task will also include identification and setting of parameters and projections.

Task 3.1: Baseline Data Exchange
The Clients will make available to the Consultant GIS data, resource documents, development data, etc. identified as important to update the Metrolina CommunityViz model, including but not limited to new traffic analysis zone layers, base year data, and any model boundary geography changes based on Census 2020 and urbanized area designations. Data will be exchanged digitally through an agreed upon platform. The Consultant will rely on this data for updating the Metrolina CommunityViz model.

Task 3.2: Data Collection and Verification
GIS data that makes up the carrying capacity analysis module will be reviewed, verified or updated based on new information available, including but not limited to water bodies, wetlands, and rights-of-way.

Data layers for land suitability, including but not limited to major roads and intersections, activity centers, transit station areas of influence, flood hazard areas, water and sewer infrastructure service areas, will be reviewed, verified or updated.

Build out analysis data will be reviewed, verified or updated based on new information available. Data includes assignment of development status at the parcel-level. To develop the community types layer, the Consultant will review recently updated and adopted city and county comprehensive plans (within participating TPO planning areas) and cross-walk adopted land use policy to established regional community types. Per NC General Statute 160D, NC communities regulating land through zoning were required to adopt a land use plan, resulting in a region-wide reset in adopted land use policy for this MCM cycle. Parcel-level community types will be updated accordingly and new community types will be developed as needed to accommodate new growth patterns and types. Through coordination with local governments redevelopable land will be identified and coded. In addition, a survey of local government planning staff will produce a committed development layer to recognize approved projects that have

not been built. The Clients in consultation with the Steering Committee will determine committed development criteria, including cutoff year for considering committed development, for projects in the planning area.

Task 3.3: Population & Employment Control Totals
The Clients (or their designee) will be responsible for providing population and employment forecasts for updating the Metrolina CommunityViz model. The long-range planning horizon for the initial model will be 2055, with interim planning horizon years of 2025, 2035, and 2045. The growth categories and units used in the CommunityViz model will include: single-family residential (dwelling units), multifamily residential (dwelling units), retail (employees), highway retail (employees), low-traffic service (employees), high-traffic service (employees), industrial (employees), office and government (employees), banks (employees), and education (employees). Growth totals from the Clients will be provided at the county-level (or portion thereof) for the TPO's planning area.

The Clients will be responsible for providing average persons per household statistics and agreed upon employee space ratios for the growth categories used in CommunityViz. This information will be used to convert dwelling units to population and employees to non-residential square footage for the study area.

Task 3.4: 2019 Metrolina CommunityViz Model Modifications
The Consultant will review the 2019 Metrolina CommunityViz model and adjust study area boundaries, revise specific attribute or indicator formulas, adjust lookup table data, and modify reporting geographies to improve overall model performance for allocating future year socioeconomic data in the participating TPO planning areas. The Consultant will also develop a methodology for assigning base year socioeconomic data (2022) to grid cells in the planning area.

A sample of built out developments will be identified within the region to confirm employee space ratios, development lookup table values and new place type categories needed. These site validation studies will vary in development intensity, use types and location within the region.

Task 3.5: Interim Horizon Year Growth Allocation
The Consultant will develop scripts in CommunityViz to allocate growth by horizon year used in the Metrolina Regional Model. Scripts will follow a step-up process, where the previous horizon year becomes the base year for allocating new growth in the next horizon year. The Consultant will also work with TPO staff to migrate output data from CommunityViz to socioeconomic datasets by horizon year required to run the MRM. Four horizon years are anticipated for the task: 2025, 2035, 2045, and 2055.

Task 3.6: Metrolina Regional CommunityViz Model
Runs of the Metrolina Region CommunityViz Model will be completed for the community plans growth scenario concept prepared as part of the CONNECT Our Future Scenario Planning Initiative. At the end of the task, the Consultant will make available to the Client the complete model, the model run, and any associated files for maintaining it independent of the Consultant.

Task 4: Socioeconomic Data Process
The Consultant will work with the Clients and their member jurisdictions to develop a system that streamlines the process to complete/submit more regular updates (bi-annual, annual, etc.) to socioeconomic data for their planning areas. The Consultant will focus on opportunities to standardize the process, automate the steps, and interface data directly with the CommunityViz model to help make the process more efficient and compliance more widespread in the region.

The Consultant will review the existing program for submitting annual updates to socioeconomic data and develop a process map that highlights opportunities to make changes consistent with the paragraph above. The Clients will review the process map and provide comments for moving forward, which may include one or more coordination meetings with member jurisdictions for their input as part of Task 2 in the Scope of Services. The Consultant will recommend a suite of tools to manage data, track compliance, and interface between numerical and geospatial data in the Regional CommunityViz model. Implementation of the new Socioeconomic Data Process will occur under a future scope of work.

Task 5: Technical Documentation

The Consultant will develop the Data Dictionary Document to accompany the Metrolina CommunityViz Model which will describe the project and project study area, project data, data sources and data manipulation, and stakeholder involvement. The data dictionary will be presented to the Client for review and comment.

The Consultant will update the 2014 Community Type Summary Document to include updated community types that reflect the changing region. The document will be a tool for local government staff as they work to link transportation and land use in their plans and codes. The data dictionary will be presented to the Clients for review and comment.

The Consultant will prepare a technical memorandum to describe the model architecture, maintenance plan, and data protocol used in CommunityViz to allocate future year socioeconomic data at traffic analysis zone level. The memorandum will summarize key data sets, study area boundaries, key model assumptions, and model output data. The technical memorandum will include a chapter that describes the data needs, protocols, model architecture, and dynamic attribute/indicator dictionaries needed to run the Metrolina CommunityViz Model independent of the Consultant. The summary document will be completed in the last months of the project. A draft memorandum will be presented to the Client for review and comment. The Consultant will respond to one set of written comments provided by the Client.

Electronic copies of all technical documentation (draft/final in Adobe Acrobat format) will be shared with the Clients for their use and distribution.

Task 6: CommunityViz Training

The Consultant will lead a three-day CommunityViz training session with up to ten individuals selected by the project partners. The purpose of the training event will be to demonstrate basic commands and functions in the software using tutorials provided by the software developer.

The format for the event will favor hands-on training, whereby the training facilitator will use slide presentations and tutorials to convey basic and advanced capabilities of the software. A training binder focused on building a regional-scale CommunityViz model will be provided to each student, which can be taken home for their reference following the event.

Part D:
Information Provided by the Consultant

The Client will provide data and information described in the Scope of Services for the Consultant to complete their work. The Consultant is entitled to rely on the completeness and accuracy of all information provided by the Client.

Part E:
Project Schedule

The Consultant acknowledges the process to update socioeconomic data is on-going in the MPO and RPO planning areas. The target date for completion of the Scope of Services identified above is 16 months from start, subject to reasonable review times by the Clients, input from member jurisdictions, holiday schedules, etc. A project schedule entitled "Metrolina Region CommunityViz Initiative Process Map" is made part of Exhibit 1 to this Agreement, and summarizes key steps, their sequence, general planning cycles, and project partner interaction envisioned to complete the Scope of Services.

Part F:
Fee Schedule

The consultant will provide the services described in the Scope of Services above for a lump sum fee of **$8,500** (including expenses) detailed below for budgetary purposes.

TASK	DESCRIPTION	Project Budget
TASK 1	Project Management	$ 816.00
TASK 2	Project Communications	$ 2,533.00
TASK 3	Model Data Collection and Forecasts	$ 4,573.00
TASK 4	Socioeconomic Projections	$ 195.50
TASK 5	Technical Documentation	$ 153.00
TASK 6	CommunityViz Training	$ 178.50
Direct Costs		$ 51.00
Total (Not to Exceed)		**$ 8,500.00**
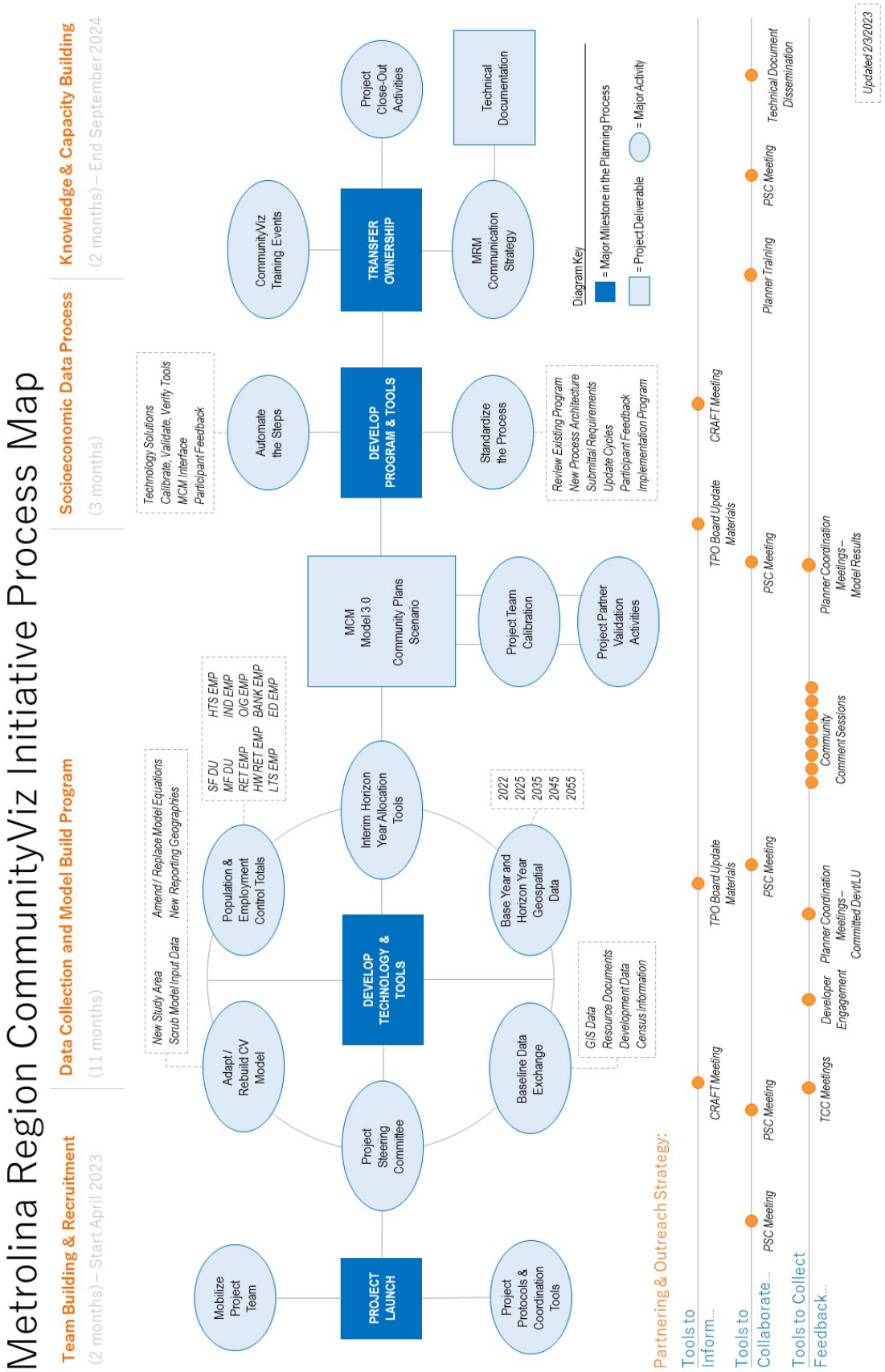
Exhibit 1
Project Schedule