

**Burlington-Graham Urban Area
Technical Coordinating Committee
Tuesday August 15, 2017
9AM**

**Municipal Conference Room
425 South Lexington Avenue
Burlington, NC**

AGENDA

1) Call to Order & Quorum Chairman

- **Welcome & Introductions**
- **Changes to Agenda / Add On Items**
- **Speakers from the Floor – 3 minutes per speaker**

2) Approval of Minutes from May 16, 2017 TCC Meeting Chairman

3) Metropolitan Planning Process Presentation Wannetta Mallette

INFORMATION: The TCC membership has experienced some turnover in the past year. For the benefit of our new members, Ms. Mallette will provide an overview of the Metropolitan Planning Process and BGMPO functions.

RECOMMENDATION/ACTION: For Information Only.

4) SPOT 5.0 and Division Alternative Criteria and Weights Ed Lewis. NCDOT Division 7

INFORMATION: NCDOT Secretary Trogon stated at the May 16, 2017 TAC meeting that his highest priority is to provide greater assistance to smaller MPOs in the planning and prioritization of projects that reflect the unique needs of each Division. Ed Lewis will provide an overview of the NCDOT Prioritization process and Alternative Criteria and Weights for MPOs that choose to utilize alternative scoring for Division level projects. The Alternative Weighting Criteria is attached.

RECOMMENDATION/ACTION: Receive information and recommend approval of Division Alternative Weighting Criteria Option #2.

5) State Transportation Improvement Program (STIP) Wannetta Mallette

The NCDOT released the DRAFT list of the 2018 – 2027 STIP June 2017. The public review process ended July 12, 2017 followed by Board of Transportation adoption, August 4, 2017. The BGMPO STIP project list was previously emailed to the TCC and is attached.

RECOMMENDATION/ACTION: Receive information and recommend approval.

6) Southern Loop Update

Hemang Surti, NCDOT TPB

INFORMATION: The NCDOT Transportation Planning Branch (TPB) assessed the impacts of removing the proposed Southern Loop in the City of Graham. The TPB will provide an update and discuss the Comprehensive Transportation Plan amendment schedule.

RECOMMENDATION/ACTION: Receive information and develop recommendation for TAC action.

7) Piedmont Triad Regional Freight Study

Mark Kirstner, PART

INFORMATION: The Piedmont Authority for Regional Transportation (PART) maintains the Piedmont Triad Regional Model (PTRM). The growth in freight and its importance to national, state and regional economies has resulted in the expansion of the regional model to include freight. PTRM staff will provide an update of the Piedmont Triad Advanced Freight Study.

RECOMMENDATION/ACTION: Receive information and discuss.

8) Other Business

Wannetta Mallette

- Reports & Questions from TCC Members
- BGMPO Website Redesign Update
- SPOT 5.0 Update
- CommunityViz Guidebook Update – Mark Kirstner
- PART Update – Scott Rhine

- **Next Meeting Scheduled for October 17, 2017**

ACCESS TO INFORMATION:

ALL MPO DOCUMENTS AND DATA CAN BE PROVIDED IN ALTERNATIVE FORMAT UPON REQUEST

PLEASE CONTACT THE MPO OFFICE FOR ADDITIONAL ASSISTANCE AND INFORMATION

336-513-5418

ACCESO A INFORMACION

TODOS LOS DOCUMENTOS Y DATOS DE MPO SE PUEDEN PROPORCIONAR EN FORMATOS ALTERNOS A PETICION

POR FAVOR COMUNIQUESE CON LA OFICINA DE MPO PARA INFORMACION E ASISTENCIA ADICIONAL

336-513-5418

It is the policy of the Burlington Graham Metropolitan Planning Organization to ensure that no person shall, on the ground of race, color, sex, age, national origin, or disability, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity as provided by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and any other related non-discrimination Civil Rights laws and authorities.

MINUTES

BURLINGTON-GRAHAM URBAN AREA TECHNICAL COORDINATING COMMITTEE TUESDAY May 16, 2017 9AM

MEMBERS PRESENT

Sean Tencer, Elon
Nolan Kirkman, Burlington
Theo Letman, Orange County Transit
Amy Nelson, Burlington
Nathan Page, Graham
Aaron Holland, Graham
Dan Danieleley, Burlington Airport
Montrena Hadley, Mebane
Cy Stober, City of Mebane
Brandon Parker, Gibsonville
Ben York, Village of Alamance
Libby Hodges, Alamance County
Lanny Rhew, Burlington
Ralph Gilliam, ACTA
Mike Mills, Division 7

BGMPO STAFF PRESENT

Mike Nunn
Wannetta Mallette
Carley Maynard

NCDOT STAFF PRESENT

Ed Lewis, Division 7
Michael Orr, TPB

OTHERS PRESENT

Brooke Kochanski, PART
Sarah McGuire, PART
Frank Glover, Graham
Ryan Allshouse, Graham
Peter Murphy, Orange County Transit

Call to Order

Chairman Kirkman called the May 16, 2017 TCC meeting to order and introduced all members and guests. Chairman Kirkman asked for any speakers from the floor to limit comments to 3 minutes per speaker. No speakers were present and no changes to the agenda were made.

Approval of Minutes from March 21, 2017 TTC Meeting

Chairman Kirkman asked for any comments or corrections to the minutes from March 21, 2017 TCC meeting. Montrena Hadley made a motion to approve the minutes and Abigaile Pittman seconded the motion. The motion was unanimously approved.

PART Express Route Changes Update

Brooke Kochanski, PART Manager of Marketing and Communications announced the grand opening of the new PART Transportation Center on May 17, 2017 and presented an update of PART system changes. The update included an evaluation of funding, capital investments, routes and ridership by service area. As a result, a new fare equalization structure was created for PART's urban and rural routes. Proposed express route changes:

Route 1 Winston Salem	Discontinue Federal Building stop, add Innovation Quarter stop
Route 3 High Point	Designate fixed/timed bus stops along Hwy 68
Routes 1, 2 and 3	Extended weekday service to 9:30 p.m.
Route 4 Alamance/ Burlington	Additional AM and PM rush hour bus and discontinue Whitsett stop
Route 5 Amtrak Connector	Schedule will now coincidence train schedule
Route 6 Surry County	Add stop at King, combine Route 12, and discontinue Novant Frontis and Kimel Park stops.
Route 8 Davidson County	Discontinued, vanpool offered
Route 10 Randolph County	Greensboro hospital stops discontinued, reduce headways, expand service
Route 13 Yadkin County	Discontinued, vanpool offered
Route 14 Davie County	Discontinued, vanpool offered
Route 17 Kernersville/ Winston-Salem Shuttle	Additional mid-day VA Center service
Route 18 - Kernersville/ PART Regional Hub	Additional mid-day service
Airport Shuttles	Extended service to 9:30 p.m. and Saturday service beginning September 30th

The proposed changes will be presented at the next PART Board meeting on Wednesday May 17, 2017. PART is soliciting public comments until the date of the scheduled public hearing June 14, 2017.

Southern Loop Transportation Model Analysis

Michael Orr, NCDOT-Transportation Planning Branch (TPB) presented an overview of the Southern Loop planning level traffic study and the TPB's revised recommendations. The TPB acknowledged the Graham City Council October 2016 resolution not to protect the Southern Loop's right-of-way. The TPB conducted the analysis to assess the impact of the Southern Loop MTP-2040 highway system removal. The study scope was limited to the immediate vicinity of NC 49 to Cherry Lane (SR 2123) in Graham. The model

to the immediate vicinity of NC 49 to Cherry Lane (SR 2123) in Graham. The model analysis indicated the Southern Loop's removal will diminish the level of service (LOS E) on a portion of NC-87 south of I-40 by year 2040. NCDOT-TPB advised the TCC to take no action to remove the Southern Loop from the CTP until after the CTP is revised in conjunction with the development of the next MTP (due for adoption in year 2020). The CTP update is expected to take 18 months.

Nathan Page confirmed that Graham City Council began the process of removing the Southern Loop from its planning maps and would not approve any alternatives proposed within city limits but is not opposed to NCDOT protecting the Southern Loop right-of-way.

Division Engineer Report

Mike Mills reported that the proposed widening of NC 62 public meeting held on May 15, 2017 was well attended and over 21 public comments were submitted. NCDOT will host another public meeting next Spring to present draft plans. Construction is expected to begin 2020.

Mr. Mills then provided an overview of BGMPO Project List. The list will be emailed to TCC members as the handout contained a few errors. The following projects were highlighted:

- Church Street @ Williamson and Church Street @ Graham-Hopedale Road intersection improvements are scheduled for construction, summer 2018.
- Mebane-Oaks @ I-40 interchange is funded and design work completed.
- The 119 Bypass (Section A) bid letting is scheduled on May 9. The project is on a very aggressive construction schedule.
- The 119 (Section B) will begin right-of-way acquisition, summer 2017 with contract letting in 2018

Other Business

Wannetta Mallette reported that the BGMPO is in the process of updating its website. RFP's were solicited last month and Granite Sky Civic Design was selected as the Consultant. The \$21,800 contract is pending NCDOT approval. The project is expected to begin June 2017 and take approximately 17 weeks to complete. TCC members are listed as project stakeholders and are requested to provide content and site review during the beta testing phase.

Ms. Mallette requested TCC members forward any additional SPOT 5.0 projects by June 1, 2017.

Mike Nunn presented the Link Transit update. Link Transit will celebrate its one-year anniversary on June 6, 2017 and will commemorate the event, June 5 - 9 with week-long promotions including "Fare Free Week" and giveaways at the Worth Street transfer center. Link Transit exceeded 75,000 riders in April, and predicts over 80,000 annual riders by June; an average of 6,800 riders per month. Over 50% of the riders are using the Link Transit system for school, work, shopping and medical trips. The Red, Purple, and Orange routes are the system's highest demand routes. Transdev ranked Link Transit highest in safety of all of its similarly-sized systems in the region.

Link Transit offers riders the capability of tracking real-time bus route information via the TransLoc App, texting Link Transit the stop number to determine bus arrival times, or calling Link Transit Customer Service, Monday-Friday, 8 a.m. to 5 p.m.

Mr. Nunn said Link Transit future plans include:

- Accepting credit cards for fare payments
- More fare options - 30 day pass, etc.
- Additional bus shelters (an \$8,000 to \$10,000 investment)
- Sidewalk connection improvements, and
- Evaluating extension of weekday service hours and weekend service

Adjournment

There being no further business, Chairman Kirkman adjourned the TCC meeting at 9:53 a.m. The next TCC meeting is scheduled on August 15, 2017.

Division 7 MPO and RPO Alternative Weights Options for Division Needs

Criteria	Option 1 (Current)	Option 2 (Proposed)	Option 3 (Proposed)
Congestion	15%	15%	15%
Benefit/Cost	15%	15%	15%
Safety	10%	15%	10%
Freight	5%	0	0%
Accessibility/Connectivity	5%	5%	10%
Total	50%	50%	50%

**BURLINGTON GRAHAM METROPOLITAN
PLANNING ORGANIZATION
TRANSPORTATION ADVISORY COMMITTEE**

**RESOLUTION ADOPTING ALTERNATIVE CRITERIA WEIGHTS FOR THE
QUANTITATIVE EVALUATION OF DIVISION NEED PROJECTS TO ADDRESS THE
STRATEGIC PRIORITIZATION FUNDING PLAN FOR TRANSPORTATION
INVESTMENTS FOR DIVISION 7**

WHEREAS, the Burlington Graham Metropolitan Planning Organization (BGMPO) provides transportation planning services for Alamance County, Guilford County, and Orange County, and

WHEREAS, House Bill 817 outlines the Strategic Prioritization Funding Plan for Transportation Investments; and

WHEREAS, based on this legislation quantitative, qualitative and local input criteria shall be used to rank Division Need Projects; and

WHEREAS, Metropolitan Planning Organizations (MPOs), Rural Transportation Planning Organizations (RPOs) and the North Carolina Department of Transportation Division Engineers have been given an opportunity to define their own quantitative criteria and weights for the quantitative evaluation of Division Needs Projects using the criteria outlined by the Strategic Planning Office of Transportation Workgroup; and

WHEREAS, the BGMPO is located in Division 7 as defined by the legislation and the North Carolina Department of Transportation; and

WHEREAS, the BGMPO is located in Division(s) 7 of the North Carolina Department of Transportation; and

WHEREAS, a set of criteria, referred to as Option 2, has been proposed to evaluate Division Needs Projects for Division(s) 7 jurisdiction based on the following quantitative criteria: 15% Congestion, 15% Benefit/Cost, 15% Safety; and 5% Accessibility/Connectivity; and

NOW THEREFORE, be it resolved that the BGMPO Transportation Advisory Committee fully endorses and supports the criteria for the quantitative evaluation of Division Need Projects to address the Strategic Transportation Investment for Division(s) 7.

I, Leonard Williams, Transportation Advisory Committee Chair, do hereby certify that the above is a true and correct copy of the action of the BGMPO Transportation Advisory Committee duly held on this, the 15th day of August 2017.

Leonard Williams, Chair
Transportation Advisory Committee

Subscribed and sworn to me this 15th day of August, 2017.

Notary Public

My commission expires _____

**2018 - 2027 State Transportation Improvement Program (STIP)
BGMPO Project Listing**

INTERSTATE	CITY/COUNTY	LOCATION	PROJECT DESCRIPTION	PE/ROW	CONSTRUCTION	COST/FUNDING
I-40/85	Alamance/Orange	East of N 54 In Graham to West of Buckhorn Road	Pavement Rehabilitation		Under Construction	\$ 10,910,000
I-40/85	Alamance/Guilford	East of Rock Creek Dairy Road to West of University Drive	Pavement Rehabilitation		Under Construction	\$ 4,525,000
I-40/85	Alamance/Orange	NC 54 In Guilford to West of University Drive in Alamance	Pavement Rehabilitation	GARVEE	Complete	\$ 19,870,000
I-40/85	Graham	NC 49 to NC 54	Pavement Rehabilitation		Under Construction	\$ 100,000
I-40/85	Alamance	NC 49 to NC 54	Mill and Resurface	GARVEE	Complete	\$ 11,383,000
I-40/85	Alamance	Mebane Oaks Road	Interchange Improvements	FY 2018	FY 2019	\$ 18,146,000
I-40/85	Alamance	Guilford County Line to East of NC 49	Pavement Rehabilitation		Under Construction	\$ 14,411,000
HIGHWAY						
US 70	Burlington	St. Marks Church Road	Intersection Improvements	In Progress	FY 2018	\$ 2,900,000
US 70	Burlington	Huffman Mill Road	Intersection Improvements	FY 2018	FY 2019	\$ 1,300,000
US 70	Burlington	University Drive	Intersection Improvements & US 70 Widening	FY 2018	FY 2019	\$ 1,300,000
NC 54	Graham	NC 49	Intersection Improvements	FY 2019	FY 2021	\$ 1,216,000
NC 62	Burlington	Ramada Road to Church Street	Widen to Multilanes	FY 2018	FY 2019	\$ 7,600,000
NC 119	Mebane	Trollingwood-Rawfields Road to Lowes Boulevard	Widen to Multilanes	FY 2021	FY 2023	\$ 8,700,000
NC 119	Mebane	I-85 to S. Mrs. White Road	Widen to Multilanes, New Location	In Progress	FY 2018/19	\$ 151,340,000
New	Mebane	Trollingwood-Hawfields Road to Industrial Site	Construct Two-Lane Road	In Progress	Under Construction	\$ 3,286,000
New	Elon	US 70 to NC 100	Construct Multilane Facility	GARVEE	Complete	\$ 30,477,000
Various	Burlington/Graham	Burlington to Graham	Signal System Upgrade	In Progress	FY 2018	\$ 10,851,000
Graham-Hopedale Road	Burlington	W. Hanover Road to Morningside Drive	Widen to Multilanes with Bike/Ped Lanes	FY 2021	FY 2023/24	\$ 15,200,000
US 70	Burlington	Graham-Hopedale Road	Intersection Improvements	In Progress	FY 2018	\$ 1,556,000
US 70	Burlington	Tarleton Avenue to Fifth Street	Widen and Construct Center Turn Lane	FY 2019	FY 2021	\$ 11,319,000
NC 87	Alamance	Mill Race and Haw River	Bridge Replacement		Under Construction	\$ 5,865,000
Various	Alamance	Selected Locations	Bridge Replacement		Under Construction	\$ 19,304,000
Pond Road	Alamance	Alamance Creek	Bridge Replacement		Under Constructiton	\$ 1,234,000
NC 49	Alamance	NC 119	Install All-Way Stop and Channelization		Under Construction	\$ 468,000
NC 54	Haw River	Mt. Willen Road to Salem Church Road	Install Traffic Signal and Turn Lanes		Under Construction	\$ 400,000
AVIATION						
Burlington/Alamance Airport	Burlington	Runway	Construct Paved Overrun/Safety Improvements	In Progress	FY 2020	\$ 2,080,000
Burlington/Alamance Airport	Burlington	Runway 24 Approach	Easements and Construction Clearance	In Progress	In Progress	\$ 180,000
BICYCLE AND PEDESTRIAN						
US 70	Burlington	Graham-Hopedale Road to Sellars Mill Road	Construct Sidewalk	FY 2018/20	FY 2021	\$ 110,000

NC 49/ NC 54	Graham	W. Pine Street to N. Marshall Street	Construct Sidewalk	FY 2019/21	FY 2022	\$ 175,000
US 70	Burlington	Beaumont Avenue to Graham-Hopedale Road	Construct Sidewalk	FY 2019	FY 2021	\$ 118,000
NC 87	Graham	Ivey Road to East Gilbreath Street	Construct Sidewalk	FY 2018/20	FY 2021	\$ 214,000
Graham-Hopedale Road	Burlington	W. Hanover Road to N. Mebane Street	Construct Sidewalk	FY 2018/20	FY 2021	\$ 150,000

TRANSIT

ACTA	Alamance		Operating Assistance		\$ 228,000
ACTA	Alamance		Capital		\$ 259,000
ACTA	Alamance		Capital		\$ 1,875,000
ACTA	Alamance		Administration		\$ 4,882,000
ACTA	Alamance		Operating Assistance		\$ 122,000
ACTA	Alamance		Operating Assistance		\$ 642,000
ACTA	Alamance		Operating Assistance/BGMPO		\$ 1,284,000
ACTA	Alamance		Operating Assistance/Alamance County		\$ 124,000
ACTA	Alamance		Operating Funding for Alamance County		\$ 494,000
LinkTransit	Burlington		Purchase Five New LTV's		\$ 1,066,000
LinkTransit	Burlington		Capital and Pedestrian Improvements		\$ 2,347,000
LinkTransit	Burlington		ADA Services		\$ 75,000
LinkTransit	Burlington		Operating Assistance		\$ 1,400,000
LinkTransit	Burlington		Transit Planning/Route Evaluation		\$ 188,000
Orange Public Transit	Orange		E. Burlington to Mebane/Hillsborough Circular Routes		\$ 480,000
Orange Public Transit	Orange		Operating Assistance		\$ 94,000
PART	Alamance		Operating Assistance		\$ 800,000
PART	Alamance/Guilford		Operating Assistance		\$ 2,644,000
PART	Alamance/Guilford		Operating Assistance		\$ 11,817,000
PART	Alamance/Guilford		Safety and Security		\$ 39,000
Triangle Transit Authority	Orange		Capital Assistance		\$ 3,751,000
Triangle Transit Authority	Orange		Purchase One Transit Bus/Mebane Park & Ride Lot		\$ 498,000
Triangle Transit Authority	Orange		Purchase One Replacement Vehicle		\$ 475,000
Triangle Transit Authority	Orange		Purchase One Replacement Vehicle		\$ 475,000

PASSENGER RAIL

Various	Alamance		Rail Crossing Safety	In Progress	\$ 10,291,000
Piedmont	Alamance		Purchase Five Bi-Level Passenger Cars	FY 2018	\$ 18,000,000
Piedmont	Alamance	Train 74/75	Equipment Capital and Yard Maintenance	In Progress	\$ 158,562,000
Piedmont	Alamance	Graham to Haw River	Siding and Curve Realignment	Under Construction	\$ 11,605,000

RESOLUTION

**BURLINGTON - GRAHAM URBAN AREA ADOPTION OF THE METROPOLITAN
TRANSPORTATION IMPROVEMENT PROGRAM (MTIP) FOR FY 2018 - 2027**

The following resolution was offered by _____ and seconded by
_____ and upon being put to a vote was duly adopted.

WHEREAS, the Transportation Advisory Committee has found that the Metropolitan
Planning Organization is conducting transportation planning in a continuous, cooperative, and
comprehensive manner; and

WHEREAS, The Metropolitan Transportation Improvement Program (MTIP) is a staged multiple year
listing of all federally funded transportation projects scheduled for implementation within the Burlington -
Graham Urban Area which have been selected from a priority list of projects; and

WHEREAS, The document provides the mechanism for official endorsement of the program of projects
by the Transportation Advisory Committee (TAC); and

WHEREAS, Projects listed in the MTIP are also included in the State TIP (STIP) and balanced against
anticipated revenues as identified in the STIP; and

WHEREAS, the Metropolitan Transportation Plan has a planning horizon year of 2040, and meets all
the requirements in 23 CFR 450.

NOW THEREFORE, be it resolved by the Burlington - Graham Urban Area Transportation Advisory
Committee that the Metropolitan Transportation Improvement Program for FY 2018 - 2027 be adopted
for the Burlington - Graham Urban Area Metropolitan Planning Organization on this the 15th day of
August, 2017.

Leonard Williams, Chair
Transportation Advisory Committee

STATE of North Carolina
COUNTY of Alamance

I, _____, a Notary Public of _____ County, North Carolina do hereby
certify that Leonard Williams personally appeared before me on the 15th day of August, 2017 to
affix his signature to the foregoing document.

Notary Public

My commission expires: _____.

Southern Loop Comprehensive Transportation Planning Timeline

2003	BGMPO approves project corridor study and functional design conducted. Contract awarded to Stantec.
Aug 2003	BGMPO Thoroughfare Plan Alignment (Alternative A Hwy 49 to Monroe Holt Road) developed and present to TCC
Oct 2003	NCDOT develops Alternative B (crosses NC 87 further south based on an Alamance Loop functional design). Alternatives A & B developed by NCDOT and presented to Graham staff for review
Apr 2004	Alternatives presented to Graham City Council. Council selects Alternative B.
Apr and June 2004	BGMPO hosts two public meetings and presents Alternative A & B
Nov 2004	Alternatives C & D developed in response to public comments
Dec 2004	Graham City Council approves Alternative A
Jan 2004	Alternative A presented to TCC and TAC
Feb 2004	TCC & TAC approves Alternative A
Oct 2016	Graham Council passes resolution withdrawing support for Alternative A. October 4th, 2016 meeting, the Graham City Council withdrew their support for the proposed location of the Southern Loop, canceling a resolution of support previously passed on December 2004
March 2017	Graham Staff affirms Graham's position in meeting with BGMPO Staff
April 2017	In news article, Lee Kimrey states the Department of Transportation will consider routes for the loop outside the city's jurisdiction, though it will not consider scrapping the idea altogether. "There has to be an alternative route," Kimrey said. "We cannot eliminate the Southern Loop from the map."
April 2017	NCDOT-TPB conducts planning-level traffic study to estimate the impact of removing the portion of the Southern Loop within the City of Graham from the MTP-based 2040 highway system and finds no significant impact with the exception of a portion of NC 87 (So. Main Street) immediately south of I-40 is expected to exceed LOS D by the year 2040. Recommends: <ul style="list-style-type: none"> •Take no action at this time. •Acknowledge that the City of Graham has not protected and does not intend to protect right-of-way for the Southern Loop within its jurisdiction. •Revise the CTP in conjunction with the development of the next MTP (due for adoption in 2020) to include the following: <ul style="list-style-type: none"> •Remove the portion of the Southern Loop within the City of Graham. •Propose improvements to NC 87 (S. Main Street) which address congestion near I-40.
May 2017	NCDOT-TPB presents to TCC and TAC. NCDOT Secretary Trogdon is informed of Graham's request to remove Southern Loop and directs NCDOT to expedite its removal.
May 2017	BGMPO and NCDOT-TPB discuss developing the CTP amendment project schedule. BGMPO staff also meets with member jurisdictions and affirm their

	support of the Loop in its entirety.
June 2017	BGMPO, NCDOT-TPB and Graham staffs meet to brief Graham on CTP amendment schedule and discuss options if Southern Loop is removed. Graham will present options to Council at its July 11 th meeting.
June 2017	BGMPO and NCDOT-TPB discuss next steps. NCDOT-TPB states the final decision to remove Southern Loop rests with the TAC. TPB develops report (attached) for TAC August meeting. TPB will focus on Graham's section of the Loop; provide a map or table showing the traffic volumes at certain points along the entire loop though impacts are expected to be minimal in 2040; and address system-wide alternatives during the full update of the CTP or if requested sooner by the TCC.

Southern Alamance Loop Report for presentation to the BGMPO TCC on August 15, 2017

I. Background

On October 4, 2016, the Graham City Council adopted a resolution to withdraw support and removal of the Southern Alamance Loop from NC 49 (Maple Avenue) to Cherry Lane (SR 2123) within the BGMPO CTP due to possible negative economic and future developmental impacts. The resolution was presented at the October 18, 2016 BGMPO TCC & TAC committee meetings as an Information Only item. At the January 17, 2017 meetings, Mr. Griffin McClure, Graham alternative representative, asked about the status of the Southern Alamance Loop project. Mr. Mike Nunn suggested alternative routes/different options need to be discussed and to provide that information at a later date. A conference call on April 5, 2017 with BGMPO, TPB, and City of Graham staff was held to determine the traffic impacts of removing the portion of the Southern Alamance Loop. During the May 16, 2017, Michael Orr from NCDOT-TPB presented existing and future model data showing the removal of the Southern Alamance Loop has minimal traffic impact to the surrounding road network near the proposed project area and recommend that a decision regarding the Southern Alamance Loop be addressed through an update to the BGMPO CTP. On May 18, 2017, an email message was sent from NCDOT Secretary James Trogdon, III to Jamal Alavi, TPB Branch Manager, requesting the portion of Southern Alamance Loop be removed and take necessary action expeditiously to amend the BGMPO CTP. Another conference call on May 31, 2017 with BGMPO and TPB staff was held to review the pros and cons of amending the CTP as well as reviewing possible alternative options. A meeting was held at the BGMPO Conference room, 234 East Summit Avenue, in Burlington on June 27, 2017 with BGMPO, TPB, and City of Graham staff to discuss the next steps and options for the project removal. During that meeting, it was decided that TPB will present 4 options to the TCC for their recommendation to the TAC at the August 15, 2017 meeting.

II. Alternatives

Alternative 1 – maintain Southern Alamance Loop as shown in current BGMPO CTP/MTP and re-analyze road network during the full update of CTP to begin now (approximately 18 months for completion).

Alternative 2 – maintain Southern Alamance Loop as shown and re-analyze road network during the full update of CTP to begin in 2018 in conjunction with the 2020 MTP update (approximately 18 months).

Alternative 3 – pursue a re-alignment of Southern Alamance Loop and amend CTP now with tentative timeline stated below:

August 2017 TCC & TAC

- Present report

October 2017 TCC & TAC

- Present draft amended CTP maps for approval

November 2017

- Public workshop with 30 day comment period

January 2018 TCC & TAC

- Present comments from public workshop
- Present final amended CTP maps for adoption

February 2018 BOT meeting

- Schedule for adoption

Alternative 4 – remove the portion of Southern Alamance Loop as requested by City of Graham through an immediate amendment to the BGMPO CTP (same timeline shown for Alternative 3).

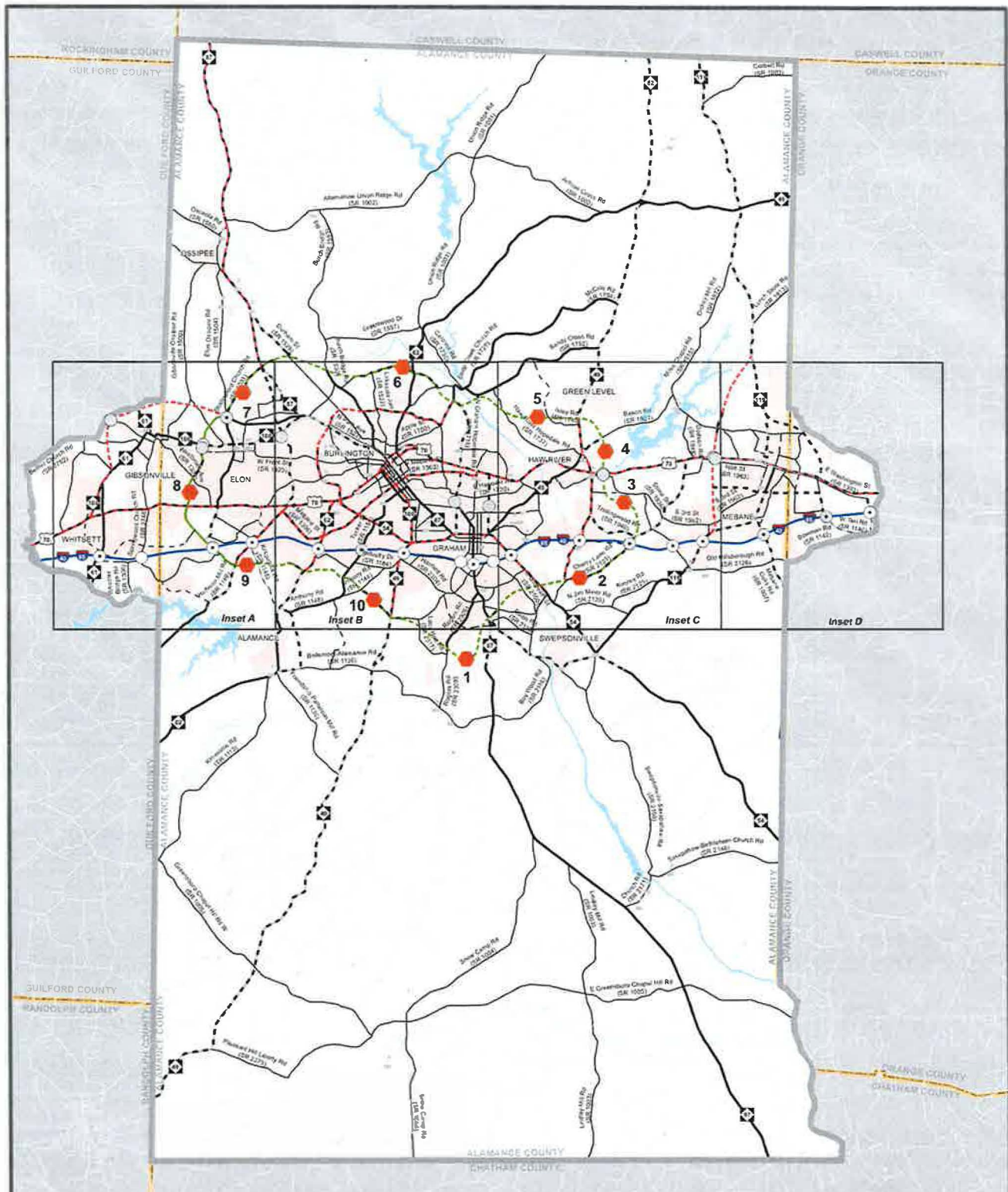
III. Action

The TCC is encouraged to make a formal recommendation to the TAC regarding the City of Graham's request to remove a portion Southern Alamance Loop from the BGMPO CTP.

Alamance Southern Loop analysis
PTRM v4.2 output

Point Location	Hwy Segment	From - To	2013 AADT	PTRM 2013	PTRM 2040 Build	PTRM 2040 No Build	2040 AADT	Existing Capacity
1	Southern Alamance Loop	Rogers Rd (SR 2309) to NC 87	N/A	N/A	1100	N/A	N/A	N/A
2	Cherry Ln (SR 2123)	Jimmie Kerr Rd (SR 1928) to I-40	700	2000	8500	3200	3000	13600
3	Eastern Alamance Parkway	Trollingwood Rd (SR 1940) to US 70	N/A	N/A	10300	10400	N/A	N/A
4	Eastern Alamance Parkway	US 70 to NC 49	N/A	N/A	8400	8400	N/A	N/A
5	Eastern Alamance Parkway	NC 49 to Haw River Hopedale Rd (SR 1737)	N/A	N/A	8000	8100	N/A	N/A
6	West Old Glencoe Rd (SR 1545)	NC 62 to Lakeside Ave (SR 1522)	2200	2100	3900	3900	4100	13600
7	Shallowford Church Rd (SR 1301)	NC 87 to W Haggard Ave	5400	5800	6200	6200	5700	14600
8	University Drive	Westbrook Ave (SR 1309) to US 70	13000	14200	22300	22300	20500	46400
9	Grand Oaks Blvd	Huffman Mill Rd (SR 1149) to NC 62	8100	5400	7600	7700	11500	46400
10	White Kennel Rd (SR 1157)	Anthony Rd (SR 1148) to NC 49	1700	6100	8600	7800	2400	11800

Build = Southern Loop in place
No Build = Southern Loop removed in Graham



Freeways	Other Major Thoroughfares
Existing	Existing
Needs Improvement	Needs Improvement
Recommended	Recommended
Expressways	Minor Thoroughfares
Existing	Existing
Needs Improvement	Needs Improvement
Recommended	Recommended
Boulevards	Existing Interchange
Existing	Proposed Interchange
Needs Improvement	Existing Grade Separation
Recommended	Proposed Grade Separation

0 1 2 3 Miles

Sheet 2 of 5

Base map date: October 2008

Refer to CTP document for more details

Highway Map

Burlington-Graham MPO

Comprehensive Transportation Plan

Plan date: September 2, 2010

NCDOT PROJECTS LOCATED IN BGUMPO - UNDER DEVELOPMENT

TIP/WBS #	Description	Let/Start Date	Completion Date	Cost	Status
B-5239 42841.3.2	Replace Bridge #126 on NC87 over Mill Race and Bridge #119 over Haw River	12/19/17	FY2019	\$5,930,250	R/W acquisition underway - 80% complete
B-5735 45691.3.1	Replace Bridge #307 over Back Creek on SR 1936 (Stone Street Extension)	3/15/18	FY2019	\$1,900,000	ROW authorization pending
R-5787B 44917.3.3	Curb ramp improvements at various intersections in Orange and Alamance Co.	5/18/17	Fall 2017	\$303,340	Planning and design activities underway
ER-2971 3607.3.08	Install widening, curb and gutter, and construct sidewalk on NC 49 (Main St.) between the east side of the Haw River Bridge and Stone St. in Haw River	1/27/16	5/1/17	\$275,000	Under construction - 95% complete, additional work and punchlist items pending
ER-2971 3607.1.16 3607.3.16	Construct sidewalk on the east side of SR1716 (N. Graham Hopedale Rd) between Wilkins St. and North Ashland Drive in Burlington	Spring 2017	Summer 2017	\$70,000	Design and R/W certification complete, final PS&E under review
I-5711 50401.2.1 50401.3.1	Interchange improvements at I-40/I-85 and SR 1007 (Mebane Oaks Rd) in Mebane	6/18/19	FY2022	\$17,446,000	Planning and design activities underway
I-5954 45907.1.1 45907.3.1	Pavement Rehabilitation on I-40/I-85 from east of NC54 in Alamance Co. to west of SR 1114 (Buckhorn Rd) in Orange Co.	7/18/17	11/15/18	\$10,885,000	Planning and design activities underway
SS-4907BQ 44757.1.1 44757.2.1 44757.3.1	Intersection improvements (All Way Stop) at SR 1005 (Greensboro-Chapel Hill Road) at SR 2369 (Sylvan School Road) and SR 2371 (Pleasant Hill Road) in Snow Camp.	Aug. 2017	Sept. 2017	\$22,500 R/W \$153,000 CON	Planning and design activities underway
SS-4907BS 44894.1.1 44894.2.1 44894.3.1	Installation of traffic signal at the intersection of US70 and SR 1114 (Buckhorn Road) East of Mebane.	Aug. 2017	Oct. 2017	\$40,500 R/W \$43,200 CON	Signal design complete, R/W acquisition pending

NCDOT PROJECTS LOCATED IN BGUMPO - UNDER DEVELOPMENT

TIP/WBS #	Description	Let/Start Date	Completion Date	Cost	Status
U-3109A 34900.2.FR4 34900.2.FRU4 34900.3.FR2	NC119 Relocation from I-40/I-85 to north of SR 1921 (Mebane Rogers Road) in Mebane	5/16/17	FY2020	\$92,220,000	R/W certified, Utility relocations underway
U-3109B 34900.2.3 34900.3.FR3	NC119 Relocation from north of SR 1921 (Mebane Rogers Road) to south of SR 1918 (Mrs. White Road) in Mebane	7/17/18	FY2020	\$17,813,000	Planning and design activities underway, R/W acquisition begins 8/18/17
U-5538C 44113.3.4	Construct left turn lanes on all approaches at the intersection of SR 1981 (Trollingwood-Hawfields Rd) and NC 119 in Mebane	Jun. 2017	Aug. 2017	\$700,000	R/W acquisition and utility relocation underway
U-5752 51077.2.1 51077.3.1	Intersection improvements at US 70 (South Church Street) and St. Marks Church Road in Burlington	6/30/18	FY2019	\$935,000	Planning and design activities underway, R/W acquisition begins 6/30/17
U-5843 50233.2.1 50233.3.1	Intersection improvements at US 70 (South Church Street) and SR 1817 (Graham-Hopedale Road) in Burlington	6/30/18	FY2019	\$1,163,000	Planning and design activities underway, R/W acquisition begins 6/30/17
U-5844 50234.2.1 50234.3.1	Construct multi-lanes on NC62 from SR 1430 (Ramada Road) to US 70 (South Church Street) in Burlington	4/16/19	FY2021	\$7,100,000	Planning and design activities underway, R/W acquisition begins 1/16/18
W-5707D 44853.1.4 44853.2.4 44853.3.4	Safety improvements for curve on NC 49 located between Buckingham Mountain Road (non-system) and SR 2363 (Beale Road) in Snow Camp.	7/5/18	FY2019	\$200,000 R/W \$450,000 CON	Planning and design activities underway
44450	Construct right turn lane, extend existing left turn lane and signal modification at the intersection of Forestdale Dr.(non-system) at US 70 (S. Church St.) in Burlington	3/14/17	Summer 2017	\$143,000	R/W certified, 1st let rejected due to non-responsive bids, City will re-let

NCDOT PROJECTS LOCATED IN BGUMPO - UNDER DEVELOPMENT

TIP/WBS #	Description	Let/Start Date	Completion Date	Cost	Status
46944	Realign SR 1151 (Troxler Rd) approximately 100 ft. south to improve the intersection with NC62 in Burlington	4/10/17	6/30/17	\$140,000	Construction underway - 33% complete
47292	Installation of crosswalks and pedestrian signals and update curb ramps at the intersection of NC-119, SR 1007 (Mebane Oaks Rd) and Falcon Ln (non-system) in Mebane	Summer 2017	Fall 2017	\$80,000	Signal design pending, Traffic to coordinate curb ramp improvements with Maint.



North Carolina Department of Transportation

Active Projects Under Construction - Alamance Co.

<u>Contract Number</u>	<u>TIP Number</u>	<u>Location Description</u>	<u>Contractor Name</u>	<u>Resident Engineer</u>	<u>Contract Bid Amount</u>	<u>Availability Date</u>	<u>Work Start Date</u>	<u>Completion Date</u>	<u>Progress Schedule</u>	<u>Completion Percent</u>
C203274		REPLACEMENT OF 11 BRIDGES IN ALAMANCE CO AND 3 BRIDGES IN ORANGE CO.	HAYMES BROTHERS, INC.	Kirkman, PE, Christopher D	\$6,356,520.00	04/29/2013	05/23/2013	12/13/2016	99.99	99.91
C203782	I-5309	PAVEMENT REHAB ON I-40/I-85 FROM EAST OF THE GUILFORD CO. LINE TO 0.2 MILES EAST OF NC-54 IN GRAHAM.	APAC - ATLANTIC, INC. THOMPSON ARTHUR DIVISION	Kirkman, PE, Christopher D	\$11,966,430.84	04/25/2016	07/05/2016	11/30/2017	49.00	32.12
	I-5836	PAVEMENT REHAB ON I-40/I-85 FROM EAST OF THE GUILFORD CO. LINE TO 0.2 MILES EAST OF NC-54 IN GRAHAM.	APAC - ATLANTIC, INC. THOMPSON ARTHUR DIVISION	Kirkman, PE, Christopher D	\$11,966,430.84	04/25/2016	07/05/2016	11/30/2017	49.00	32.12
DG00223	ER-2973	LANDSCAPING ON SR 1311 (COOK ROAD) FROM WESTBROOK AVE TO NC 100	INGLE & SON LANDSCAPING, INC.	Ingram, PE, J. Paul	\$41,436.40	02/21/2015	03/10/2015	05/15/2017	100.00	94.91
	U-3110B	LANDSCAPING ON SR 1311 (COOK ROAD) FROM WESTBROOK AVE TO NC 100	INGLE & SON LANDSCAPING, INC.	Ingram, PE, J. Paul	\$41,436.40	02/21/2015	03/10/2015	05/15/2017	100.00	94.91
DG00316		RESURF. SR 1165, SR 1168, SR 1545, SR 1668, SR 166, SR 1670 SR 1671, SR 1681, SR 1712, SR 1927, SR 1981, SR 2010, ETC.	APAC - ATLANTIC, INC. THOMPSON ARTHUR DIVISION	Kirkman, PE, Christopher D	\$1,878,529.04	09/06/2016	04/17/2017	11/17/2017		
DG00322		RESURFACING 15 SECONDARY ROADS	RILEY PAVING INC	Kirkman, PE, Christopher D	\$1,654,795.36	10/03/2016		11/17/2017		
DG00323	C-5600F	INSTALLATION OF FIBER-OPTIC COMMUNICATION NETWORK AND RELATED WORK FOR CENTER TO CENTER CONNECTION ON I-40/I-85	ALS OF NORTH CAROLINA, INC.	Kirkman, PE, Christopher D	\$885,605.60	11/14/2016	02/27/2017	09/09/2017	35.00	42.42
DG00332	W-5601 IF	GUARDRAIL END TERMINAL UPGRADES ON I-85	NICKELSTON INDUSTRIES, INC.	Kirkman, PE, Christopher D	\$494,243.00	12/05/2016	05/01/2017	09/05/2017		
DG00333		MILLING AND RESURFACING THE NB AND SB I-40/I-85 REST AREAS	APAC - ATLANTIC, INC. THOMPSON ARTHUR DIVISION	Kirkman, PE, Christopher D	\$380,152.05	03/16/2017	03/27/2017	06/23/2017	60.00	99.73
DG00334	C-5600D	INSTALLATION OF CCTV CAMERAS AND DYNAMIC MESSAGE SIGNS ALONG I-40/I-85 FROM I-840 TO SR 2478 (SPRINGWOOD CHURCH ROAD)	TRAFFIC CONTROL DEVICES, INC.	Kirkman, PE, Christopher D	\$563,861.15	03/02/2017	03/24/2017	12/16/2017	5.00	6.19
DG00350		RESURFACING SR 1005 (GREENSBORO CHAPEL HILL RD)	RILEY PAVING CO	Kirkman, PE, Christopher D	\$1,074,191.18	04/03/2017		11/17/2017		
DG00352		AST RETREATMENT OF SR'S 1528, 1561, 1564, 1565, 1580, 1582, 1583, 1584, 1589, 1590, 1591, 1593, 1594, 1596, 1601, ETC.	WAUGH ASPHALT, INC.	Kirkman, PE, Christopher D	\$808,835.20	05/01/2017		10/13/2017		
DG00356		AST RETREATMENT OF ONE SR IN ALAMANCE CO., ONE SR IN CASWELL CO. AND 21 SEC. ROADS IN ORANGE COUNTY	WHITEHURST PAVING CO INC	Kirkman, PE, Christopher D	\$956,526.41	04/03/2017	04/17/2017	10/13/2017		

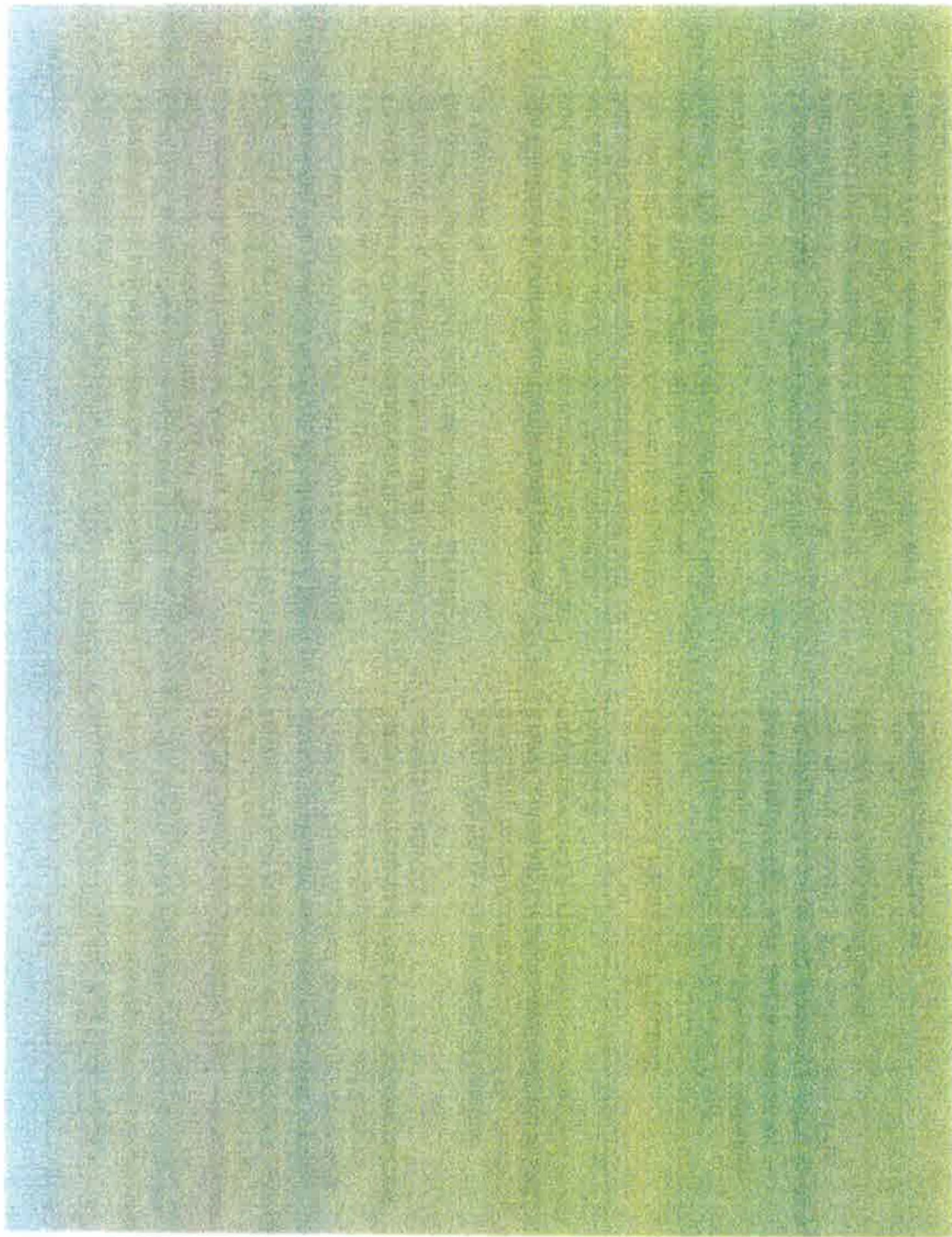
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Explained^{Inc.}

**Piedmont Triad Region
CommunityViz Model**

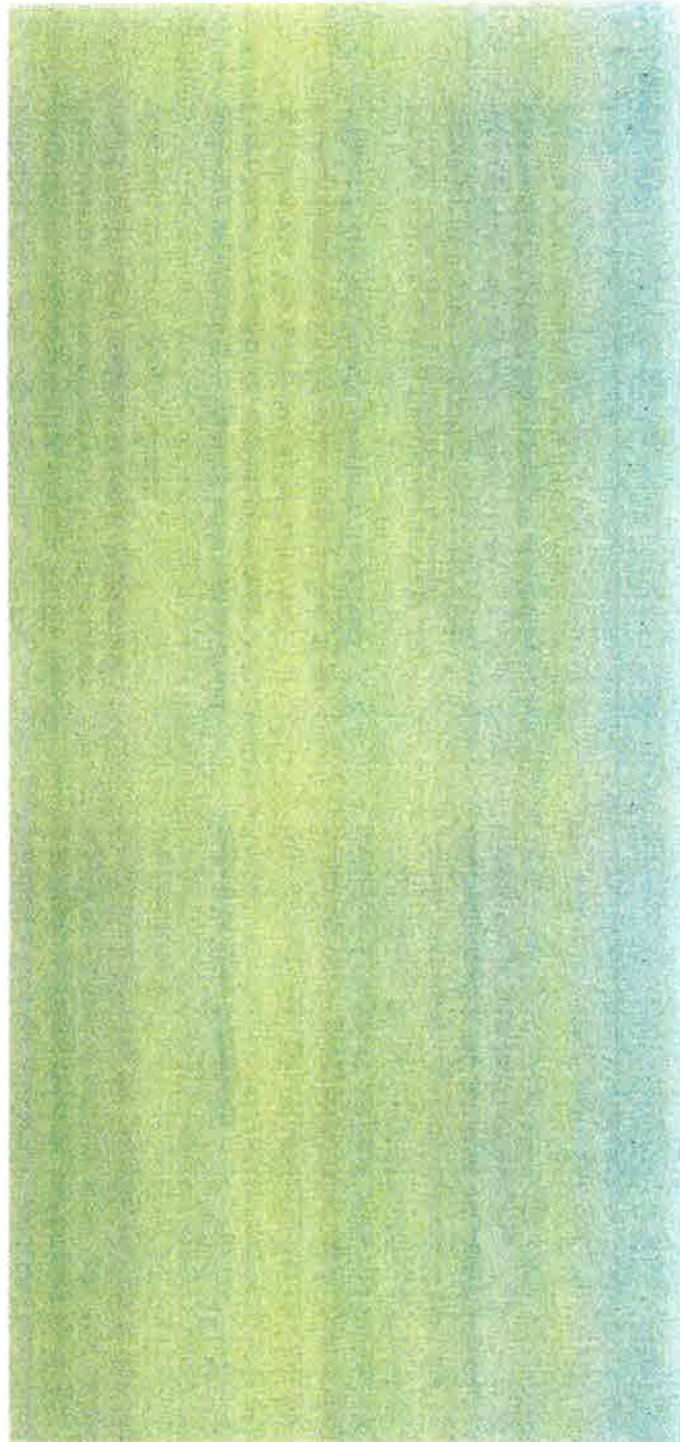


Planning & Implementation Guidebook

June 30, 2017



General Overview



Piedmont Together, completed in 2013, used CommunityViz software to measure and evaluate the impacts of competing growth scenarios for the twelve-county Piedmont Triad Region. Building on this momentum, the Piedmont Authority for Regional Transportation (PART) identified resources to develop the *Piedmont Triad CommunityViz Model Guidebook*, which studied the merits, needs, capabilities and next steps for building a new CommunityViz model for the region. Thoughts, ideas and recommendations in the Guidebook are a resource for the region while they decide if/when/how they may want to move forward on this initiative.

The Guidebook summarizes the planning process, study area considerations, recommended data needs and analysis tools, and intended Model outcomes that could support several transportation and land use planning studies or processes being completed now or in the future for the region (or portions thereof). The document is organized into six main sections:

General Overview — a brief overview of the planning process, a case for moving forward, potential project partners, and opportunities to integrate data, tools, indicators, etc. from the *Piedmont Triad CommunityViz Model* with other initiatives in the region.

Early Decisions — a summary of important decision topics that need to be addressed early in the process to develop a *Piedmont Triad CommunityViz Model*, including study area considerations, reporting geographies, and a partnering strategy for the region. Decisions on how best to proceed for these topics could significantly impact the scope, budget and schedule for developing a Model.

Software Information — general information about CommunityViz software, including: system requirements, key terms and definitions, and recommendations for the status and location of an official *Piedmont Triad CommunityViz Model*.

PTCM. Base Year Data Management Tool — a summary of the recommended base year data management tool for a *Piedmont Triad CommunityViz Model* that would be created to allocate socio-economic data for the *Piedmont Triad*

Regional Model; including data needs, model architecture, theory and features behind components of the model, data output and calibration activities.

PTCM. Future Year Allocation Tool — a summary of the recommended future year allocation tool for a *Piedmont Triad CommunityViz Model* that would be created to allocate socio-economic data for the *Piedmont Triad Regional Model*; including data needs, model architecture, theory and features behind components of the model, data output and calibration activities.

Project Schedule — a hypothetical timeline developed by the consultant to build the *Piedmont Triad CommunityViz Model* assuming the model architecture and recommendations presented in this Guidebook.

Guidebook Planning Process

The project team for the *Piedmont Triad CommunityViz Model Guidebook* — including PART staff, PTRC staff, and the consultant — implemented a seven-step planning process using a two-month schedule. Key components of the process are summarized below.

Project Kick-Off Meeting

The project team met with state, region and local government officials on May 4, 2017 to kick-off the planning process. The meeting was used to preview the project, discuss important decisions required for building a land use allocation model and facilitating a scenario planning process, and hearing from the region about project needs or work tasks that should be addressed during the planning process to develop the Guidebook.

Date Inventory & Analysis

The project team identified data and tools available in the region — geographic information system data, technical documents, adopted plans and studies, etc. — to evaluate the potential of building a *Piedmont Triad CommunityViz Model* that could meet the different desires and needs of the region voiced during the project kick-off meeting.

Stakeholder Group Interviews

The project team met with stakeholders in the region on May 22, 2017. The three stakeholder groups identified for building a future CommunityViz Model included staff for the Piedmont Authority for Regional Transportation, the Piedmont Triad Regional Council, and the *Piedmont Triad Regional Model* Technical Team (including NCDOT staff).

The interviews were scheduled for the benefit of the project team, letting them listen and learn from future model developers and data managers about available data (quantity and quality), history with CommunityViz software (especially for *Piedmont Together*), and available time and resources for hosting a future *Piedmont Triad CommunityViz Model*.

Focus Group Meetings

The project team met with focus groups in the region on May 23, 2017. The three focus groups identified for building a future Piedmont Triad CommunityViz Model included urban area interests, rural area interests, and metropolitan planning organization officials.

The interviews were scheduled for the benefit of the project team, letting them listen and learn from model users about potential uses for a future *Piedmont Triad CommunityViz Model* (transportation or otherwise), commitments to partner during data collection and model calibration activities, and the merits for streamlining and normalizing the process to develop socio-economic data to use in the *Piedmont Triad Regional Model*.

Model Framework & Key Concepts

The consultant developed the initial model architecture, potential study area considerations, data needs list, and generalized milestone schedule for building a *Piedmont Triad CommunityViz Model*. The recommendations were based on: 1) data available in the region, 2) previous work completed in CommunityViz for *Piedmont Together*, 3) the wants and needs for a future *Piedmont Triad CommunityViz Model* voiced during the planning process, and 4) the commitments made by potential project partners for building, hosting and

maintaining the Model. This is the starting point for the region to continue vetting the merits of a future *Piedmont Triad CommunityViz Model*, and the time and resources needed to start the model building process.

Policy-Maker Briefings

The project team met with MPO and RPO officials on June 22 and 23, 2017 to preview the consultant team's recommendations for building, hosting and maintaining a future *Piedmont Triad CommunityViz Model*. Important items for discussion included a recommended partnering strategy, list of interested organizations in the region with potential responsibilities assigned, the initial Model framework and key concepts, and next steps for moving forward.

Documentation

The consultant developed the *Piedmont Triad CommunityViz Model Guidebook* as a resource for the region while vetting the value and process for developing a Model. It should evolve and be revised over time as important decisions are made regarding: 1) the study area and potential sub-region reporting, 2) available time and resources for the project team (especially for PART and PTRC staff), and the ultimate list of features (socio-economic data allocation, transportation performance measures, return-on-investment performance measures, etc.) that will be added to the Model now or in the future.

The Case for Moving Forward

Discussions with state, regional and local government officials throughout the planning process identified several reasons to move forward with building a *Piedmont Triad CommunityViz Model* at this time. Generally speaking, the data and tools created under this initiative could greatly improve the quantity and quality of information available for many federal- or state-mandated planning processes, or for local government initiatives to measure and evaluate the trade-offs of competing growth alternatives. A summary of potential benefits associated with building a *Piedmont Triad CommunityViz Model* — taking advantage of the model output, partnerships and

collaboration needed to build and maintain the Model — are summarized below.

Strengthen Other Processes & Tools

Traditional processes and tools for developing region-wide data sets generally follow a top-down approach, whereby data for the state or country are proportionally assigned to the region using some form of shift-share analysis. In terms of allocating socio-economic data, this approach causes problems when the type or intensity of new growth assigned to parts of the region is not supported by the local governments' adopted land use policies, zoning requirements or subdivision standards that control the type, location, pattern and intensity of allowable development.

The lack of understanding for allowable, yet-to-be-built development in parts of the region using a top-down approach creates a potential mismatch for future year growth allocation. This mismatch could significantly impact trip generation in the *Piedmont Triad Regional Model* because industrial employees are assigned where only residential developed is allowed, or continued growth is assumed in an area that is already built out (two hypothetical examples).

A future *Piedmont Triad CommunityViz Model* would use a bottom-up approach for determining build out potential in the region. Incorporating parcel-level development status and community type (land use) assignments with jurisdiction-specific height, bulk and density requirements for each community type category could greatly improve the precision of assigning future year socio-economic data in the region.

Meet Federal Plan Rules & Guidelines

Both the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) advocate for scenario planning, performance-measure testing, and land use-transportation-economic development coordination in various MPO and RPO transportation plans and studies. Recent documents published by the two organizations highlight best practices and opportunities to voluntarily include them in future transportation plans and studies:

- *FHWA Scenario Planning Guidebook*
- *FHWA Congestion Management Process Guidebook*
- *FTA New Starts Application*
- *FTA Small Starts Application*

The *Piedmont Triad CommunityViz Model* could provide starting data and performance measures for several factors that would be considered in future transportation plans and studies. In other regions, information from region-wide CommunityViz models is being used to evaluate candidate road projects (evaluating access to employment centers as one criteria), or to track congestion management performance measures (evaluating proximity to transit service, project presence in existing and emerging growth centers, and proximity of industrial development to strategic freight corridors as criteria).

Make Things More Reliable, Predictable & Transparent

Traditional processes and tools used in the PTRM portion of the PTCM study area twelve-county PTRC region to develop future year socio-economic data varies by MPO or RPO, while the data, tools and processes to use and maintain the *Piedmont Triad Regional Model* (or the North Carolina Statewide Travel Demand Model in RPO areas) are standardized.

In other regions, the need to standardize socio-economic data forecasting and allocation processes is being recognized as an opportunity to make things more reliable, predictable and transparent. It also provides consistent data for doing sub-regional planning that may include one or more jurisdictions, essentially eliminating 'the edge effect' at jurisdictional boundaries that can hinder a planning study. Officials also believe region-wide land use data sets are more defensible to critics who are concerned the data going into the travel demand model is complete, comprehensive and coordinated.

Participants in several of the outreach activities for the *Piedmont Triad CommunityViz Model Guidebook* stressed the importance of normalizing and streamlining socio-economic data processes used in the region.

Bolster Interactions between Land Use (Demand) & Transportation (Supply) Studies

Demand-side solutions for improving the regional transportation system should focus on land use, development density and urban design principles that promote lower vehicle trip generation (internal capture), shorten travel distance, and increase the use of non-vehicular travel modes. Land use mix: development location, pattern and intensity; and site design elements in one or more growth scenarios considered for a study area — the region or a county, city, small area, corridor, etc. — could help improve overall efficiency of the transportation system by lowering demand for vehicle trips.

In other regions, MPOs and RPOs are running multiple growth scenarios (socioeconomic data sets) and multiple transportation networks in the regional travel demand model to balance demand- and supply-side solutions for an efficient transportation system.

Piedmont Together

Piedmont Together, completed in 2013, used CommunityViz software to measure and evaluate the impacts of competing growth scenarios for the twelve-county PTRC region. Parts of the model architecture and the data collected for the study area should be used and adapted to expedite work on the *Piedmont Triad CommunityViz Model*. The capacity and familiarity with CommunityViz software developed during the *Piedmont Together* scenario planning initiative would be valuable for building and maintaining a new model for the region.

Potential Project Partners

The *Piedmont Triad CommunityViz Model* should be created with help and guidance from federal, state, regional and local government agencies working together. Key stakeholders and their general roles are summarized below:

Program Manager & Model Custodians

The organizations listed below should be directly responsible for the project program, data collection protocols, coding, model build and maintenance,

coordination activities, and data sharing protocols to support the *Piedmont Triad CommunityViz Model*:

- Piedmont Authority for Regional Transportation
- Piedmont Triad Regional Council

Considerations specific to geographic areas in the twelve-county study area for the *Piedmont Triad CommunityViz Model* are provided on pages 11 and 12.

Oversight & Coordination

The organizations listed below should review and provided comments (as necessary) on the process, tools and data created for the *Piedmont Triad CommunityViz Model*:

- Federal Highway Administration
- North Carolina Department of Transportation

Data Collection, Model Calibration & Model Users

The organizations listed below should help PART and PTRC staffs: 1) identify and secure the data needed to build and maintain a *Piedmont Triad CommunityViz Model*, 2) review new data created for the Model to ensure its accuracy, and 3) comment on output data from the Model related to its abilities to allocate future growth in the region. One or more of these organizations may decide to do their own work with the *Piedmont Triad CommunityViz Model*, or adapt the Model for their own needs (e.g., changing the unit of analysis from grid cell to parcel or building footprint).

- Burlington-Graham MPO
- Greensboro Urban Area MPO
- High Point Urban Area MPO
- Winston-Salem Urban Area MPO
- Northwest Piedmont RPO
- Piedmont Triad RPO
- Cities, Towns & Counties in the Region
- Special Interest Groups in the Region

Potential Model Plug-Ins & Interactions

The *Piedmont Triad CommunityViz Model Guidebook* originally started as a document focused on the potential for developing a region-wide scenario planning model that could be used to quickly and efficiently create socioeconomic data for the regional travel demand model. Attention changed after the project kick-off meeting to evaluate several other opportunities to integrate data, performance measures, and partnering processes for the *Piedmont Triad CommunityViz Model* with other plans and processes for the region (both transportation and non-transportation related).

The paragraphs that follow describe opportunities to integrate data, tools, indicators, etc. from the *Piedmont Triad CommunityViz Model* with other initiatives in the region. It will be important that the project team — considered to be staff from PART and PTRC at this time — understand the full spectrum of potential applications for the Model before starting the build process because it could impact the project's model architecture, data collection protocols, schedule, etc.

Piedmont Triad Regional Model

One of the tools available for studying long-term impacts to the regional transportation system is the *Piedmont Triad Regional Model* (PTRM), 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. Planning horizon years in the travel demand model consider conditions 10, 20 and 30 years beyond base year conditions. Approximating future year conditions on the transportation system helps transportation officials assess the implications of growth, compare alternative transportation solutions, and provide a framework for measuring the impact of policy decisions.

The foundation for the PTRM is socioeconomic data — including population, housing, students and employment estimates — organized into distinct geographic subareas referred to as traffic analysis zones (TAZs). Collectively, this information represents the assumed growth and development

potential for the PTRM study area. Demand on the transportation system (trip generation) is calculated directly from the model's socioeconomic data.

Historically, updating socioeconomic data for the PTRM study area was time intensive, and the top down–bottom up, manual process created significant challenges for allocating future year growth in the region. Specifically, it: 1) created a mismatch between demand and supply statistics for growth allocation in some growth categories and in some parts of the region, 2) marginalized some of the unique conditions for cities and towns in the region, 3) used a non-standardized methodology for translating local plans and ordinances into buildout potential for the region, and 4) used a non-standardized methodology for determining growth hot spots (areas most likely to develop by horizon period) throughout the region. The manual process also limited the ability to evaluate the effects of alternative development patterns on the efficiency of the regional transportation system.

Socioeconomic data allocated in a *Piedmont Triad CommunityViz Model* (traffic analysis zone level reporting) could streamline the workflow for running the *Piedmont Triad Regional Model*. Output data would be normalized for the PTRM portion of the PTCM study area and formatted for direct input into the travel demand model software; saving time and potential errors translating data from several sources.

Metropolitan Transportation Plans

The starting growth scenario for the *Piedmont Triad CommunityViz Model* — community plans — would meet federal rules and requirements for developing the Metropolitan Transportation Plan (MTP) required for all metropolitan planning organizations in the region. Specifically, it would consider land use and development controls reflected in adopted local government plans and ordinances for preparing the documents. Data and tools for the community plans growth scenario would inform the MTP planning processes, and would be useful for identifying, prioritizing and scheduling specific transportation projects included in the MTP documents.

The *Piedmont Triad CommunityViz Model* also affords the opportunity to study alternative growth

scenarios in a MTP planning process, highlighting the relationships between land use (demand), urban form (design), and transportation (supply) for influencing travel behavior and promoting a more sustainable regional transportation system.

Alternative growth scenarios could help validate the planning process and build support (both empirical and political) for a preferred growth scenario that influences socioeconomic data in the *Piedmont Triad Regional Model* and specific project recommendations in the individual Metropolitan Transportation Plans.

Comprehensive Transportation Plans

The starting growth scenario for the *Piedmont Triad CommunityViz Model*—community plans—also meets the rules and requirements in North Carolina for developing the Comprehensive Transportation Plans (CTP) required for all metropolitan planning organizations and rural planning organizations in the region. Specifically, it considers land use and development controls reflected in adopted local government plans and ordinances for preparing the document. Data and tools for the community plans growth scenario would inform the CTP planning processes, and would be useful for identifying, prioritizing and scheduling specific transportation projects included in the CTP documents.

Congestion Management Process

The congestion management process (CMP) for metropolitan areas identified as transportation management areas (TMAs) routinely includes goals, objectives, and performance measures for reducing vehicle congestion, increasing multi-modal travel, and creating more livable, walkable communities. By design, the process also brings together an expanded group of stakeholders to the transportation planning process, including organizations responsible for land use and zoning. Several MPOs designated as TMAs throughout the country include measures in their CMP for accessibility (the ability to reach employment centers, retail centers, activity centers that produce or attract travel demand) and land use (the mix of uses and patterns/intensities of development).

The *Piedmont Triad CommunityViz Model* affords the opportunity to include several factors and performance measures that could be used to strengthen the relationships between land use (demand), urban form (design), and transportation (supply) in a more comprehensive, more effective congestion management process.

NEPA Process

The National Environmental Protection Act (NEPA) requires one or more prepared documents to evaluate the environmental impacts for an array of project types. The Environmental Assessment (EA) is prepared when a determination is needed for whether a project could have negative impacts on human quality of life. The Environmental Impact Statement (EIS) is a more detailed assessment of environmental impacts (following an EA) that considers several project design alternatives simultaneously. Both an EA and EIS require consideration of ‘project build’ and ‘project no build’ conditions to measure and evaluate impacts.

Other regions are using the scenario planning capabilities of CommunityViz software to evaluate ‘project build’ and ‘project no build’ conditions in the NEPA process. Specifically, the land suitability analysis wizard in the software is being used to study the ‘attractiveness’ of a proposed project for influencing future growth and development around it, while varying community type or development status assignments for one or more scenarios in the software is being used to study different development types, patterns and intensities influenced by a proposed project and all its alternatives.

TBEST Software

The Florida Department of Transportation, in partnership with the Center for Urban Transportation Research, developed a transit modeling software — Transit Boardings Estimation and Simulation Tool, TBEST — that is being used throughout the country to evaluate different transit service areas, network configurations, service frequency, spans of service and fare sensitivity. The Piedmont Authority for Regional Transportation is working now to incorporate TBEST into its current and long range transit planning processes.

Parcel-level land use data required to run the TBEST model is very detailed, including: land use category, total land area, buildable area, number of residential dwelling units, non-residential square feet in buildings, and average population by parcel. Future year conditions for all of these categories could be approximated using the *Piedmont Triad CommunityViz Model* (assigning grid cell level data to parcel level data with a series of overlap equations in the software).

Local Government Plans, Studies & Policies

The model architecture and data collection protocols for a *Piedmont Triad CommunityViz Model* could be established to support a variety of topics important to local government plans, policies and studies in the region. Areas of interest may include:

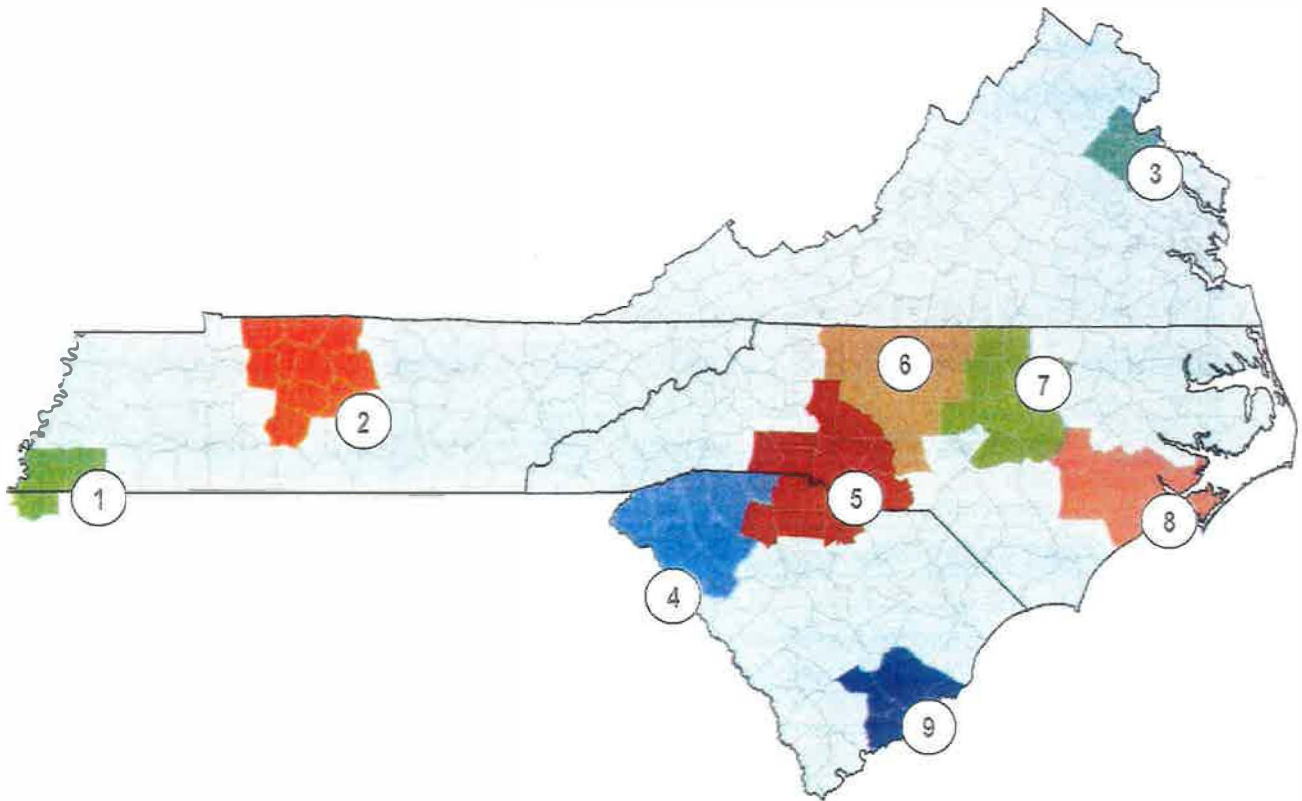
- fiscal impact analysis;
- value capture analysis;
- future land use map alternative studies;
- zoning district regulation testing;
- demand or impact studies for community facilities and services;
- green infrastructure studies; or
- a livability index.

For each category above, the project team would need to establish data needs list, unit of analysis, study area size, and reporting geography to integrate with one or more local government planning processes.

Others' Experience in the Mid-Atlantic Region

Several other regions in the US Mid-Atlantic are already using CommunityViz software to create data for, or complete one or more of, the potential project applications described above — including the Piedmont Triad Region for the scenario planning initiative that supported *Piedmont Together*. Figure 1 on page 8 illustrates where CommunityViz software is being used now for region-wide scenario planning using the protocols and recommendations presented in the *Piedmont Triad CommunityViz Model Guidebook*.

Figure 1: Application of CommunityViz Software for Other Regions in the US Mid-Atlantic Triad



- | | | |
|--|---|--|
| <p>1 Memphis Urban Area MPC</p> <ul style="list-style-type: none"> Travel Demand Model Metropolitan Transportation Plan Congestion Management Process Regional Studies Local Government Plans | <p>4 Shaping Our Future</p> <ul style="list-style-type: none"> Travel Demand Model Metropolitan Transportation Plan Regional Studies | <p>7 Imagine 2040</p> <ul style="list-style-type: none"> Travel Demand Model Metropolitan Transportation Plans Regional Studies NEPA Process Local Government Plans |
| <p>2 Nashville Area MPC</p> <ul style="list-style-type: none"> Travel Demand Model Metropolitan Transportation Plan Regional Studies Local Government Plans | <p>5 CONNECT Our Future</p> <ul style="list-style-type: none"> Travel Demand Model Metropolitan Transportation Plans Congestion Management Process Regional Studies Local Government Plans | <p>8 Plan It East</p> <ul style="list-style-type: none"> Regional Studies |
| <p>3 Fredericksburg Area MPC</p> <ul style="list-style-type: none"> Travel Demand Model Metropolitan Transportation Plan Regional Studies Local Government Plans | <p>6 Piedmont Together</p> <ul style="list-style-type: none"> Regional Studies | <p>9 BCD Council of Governments</p> <ul style="list-style-type: none"> Travel Demand Model Metropolitan Transportation Plan Regional Studies Local Government Plans |



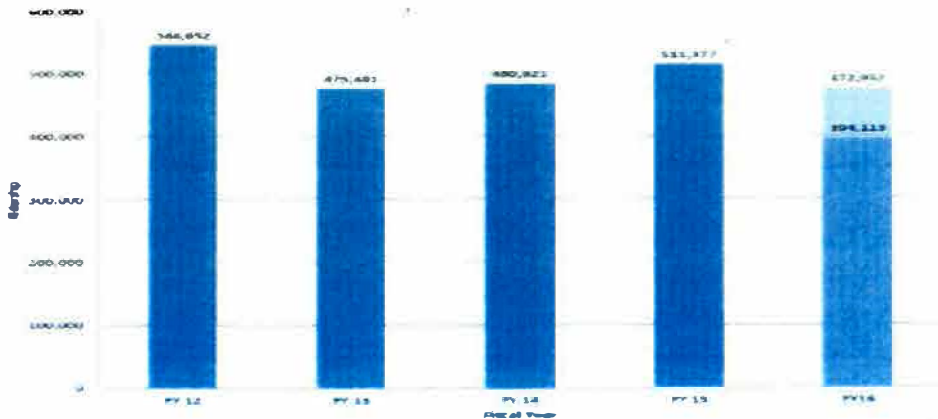
**Piedmont Authority for Regional Transportation
MPO Updates
June 2017**

Coble Transportation Center Ribbon Cutting

The Ribbon Cutting of the Coble Intermodal Transportation Center was held on May 17, 2017. The facility is named in honor of former US Congressman Howard Coble for his decades of public service to the citizens of NC, and for his support of mobility choices in the Piedmont Triad. The transportation center will be the main hub for PART Express Bus Routes and Airport Area Shuttles that connect the Piedmont Triad Region to PTI Airport, Amtrak, Greyhound, and City Transit Agencies. This facility will open to the public on July 3, 2017. View more photos on the PART Website.



**PART Express Fiscal Year Ridership
PART Fiscal Year (July 1 - June 30)**



**PART Express
ridership for
April 2017 was
37,406**

**Estimated PART
Express FY17
ridership is 472,932**



Upcoming Changes to PART Express

PART has reviewed our entire commuter express service, and is proposing service changes to correlate the local financial support, and commuting patterns of our customers. The new route system is a result of on-board surveys, customer satisfaction surveys, and comprehensive transit planning.

The new Coble Transportation Center will be open on July 3, the PART Regional Hub will no longer be served after that date.



PART is proposing the following adjustments effective July 3, 2017:

- Route 1: Remove Federal Bldg. stop, Add Innovation Quarter stop, Extend Service to 9:30pm
- Route 2: Extend Service to 9:30pm
- Route 3: Designate fixed/timed bus stops along Hwy 68, Extend Service to 9:30pm
- Route 4: Remove Whitsett stop, Expand service with additional AM trip and PM trip
- Route 5: No change
- Route 6: Remove Kimel Park and Novant Frontis Plaza stops, Add King P&R stop (Replaces Route 12)
- Route 8: Discontinue Route (Connectivity available via Route 5/Vanpool Offered)
- Route 9: No change
- Route 10: Expand service. Add Additional Service to AM, Mid-Day, PM. Route direct to UNCG and Greensboro Galyon Depot, other stops removed
- Route 12: Discontinue Route (Existing King stop and Service frequency added to Route 6)
- Route 13: Discontinue Route (Vanpool Offered)
- Route 14: Discontinue Route (Vanpool Offered)
- Shuttle 17: Add Mid-Day roundtrip and Afternoon roundtrip service
- Shuttle 18: Add Mid-Day roundtrip and Afternoon roundtrip service
- Shuttle 19: No change
- Airport Area Shuttles 20-23: Extend Service to 9:30pm
- Fares: A simplified fare structure is proposed to include one fare for all routes and passes

PART hereby announces that the PART Board of Trustees will hold a Public Hearing on Wednesday, June 14, 2017 at 8:30am for the proposed PART Express Route Adjustments scheduled for July. The hearing will also cover FY 2018 PART General, Commuter Resources, and Grants Budgets and Federal Transit Administration (FTA) Section 5307 Program of Projects funding allocation. The hearing will be held at PART Office located at 107 Arrow Road, Greensboro, NC 27409.

Faces of PART

David Morris Director of Operations

David has an extensive background in public transportation in the State of North Carolina. This includes management of the Greenville Area Transit System, Ridesharing Services & Vanpooling of the Piedmont and Assistant General Manager of the Winston-Salem Transit Authority. David is also the recipient of the Governor's Public Transportation Award for outstanding service to public transportation in North Carolina.



Howard Ingram Operator of the Month

Congrats to Howard Ingram, April Operator of the Month! Mr. Ingram has been with us since 2015 and does an excellent job driving Shuttle 23 and special events when called upon. Thanks Howard!



Stay Connected with PART on Social Media!



facebook.com/partnc



[@PARTNC](https://instagram.com/PARTNC)



[@PARTNC](https://twitter.com/PARTNC)



youtube.com/partnc



Text "PART" to 55469 for alerts



contactus@partnc.org



www.PARTnc.org



Piedmont Authority for Regional Transportation MPO Updates August 2017

Important Announcements

- **CALL CENTER HOURS:** The Piedmont Transit Resources Call Center is refreshing their hours. You can now reach a Call Center representative between 6:30 AM and 8:00 PM. Call 336-883-7278 for more information.
- **SERVICE ENDS AT 9:30PM:** Extended Hours on Routes 1, 2, 3, and airport area shuttles service ends at 9:30pm. Please make sure to catch your bus at the scheduled time prior to 9:30pm to arrive to final location at that time.
- **HOLDING BUSES:** To ensure that buses will make connections to other systems on time, PART will no longer be able to hold buses at the Coble Transportation Center past regular time of departure. Make sure to plan your trip to account for delays so you don't miss your connections!
- **ALL DAY PASS:** Ride PART Express all day for only \$6! Introducing the brand new Day Pass. Ask your driver when you board, pay, ride ALL day!
- **TRANSLOC:** Get important service alerts, delays, and detours on by downloading the TransLoc Rider App or visiting www.partnc.org/live. Track your bus in real time and create alerts for when your bus is close by.



UNILIMITED

**Unlimited rides.
Unlimited possibilities.**

Introducing the new PART Express
All-Day Pass

Enjoy unlimited rides on all PART Express Routes



**ONLY \$6.00
PER DAY**

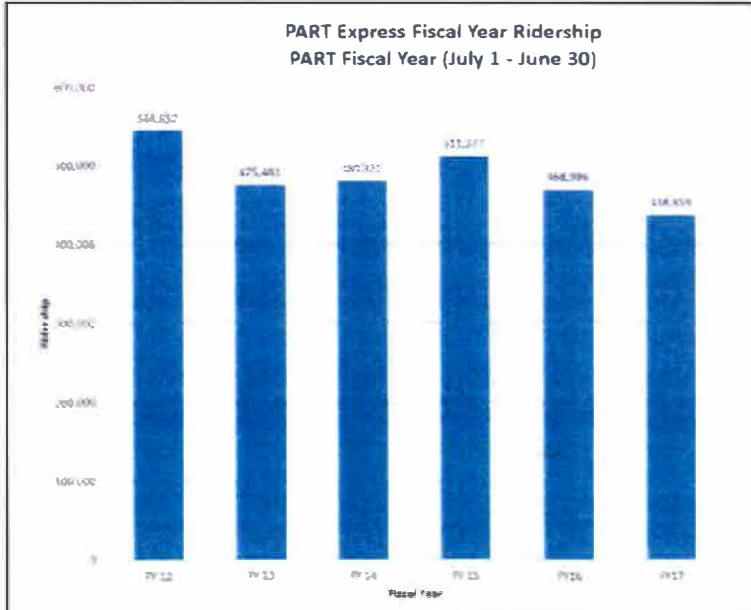
Ask your driver for this pass when
boarding the bus, it will be dispensed
from Fare Box. Expires at midnight the
day of purchase.



PART is currently hiring for a few positions including Commuter Resources Business Analyst, Commuter Resources Information Specialist, Transportation Modeler Analyst and Bus Operators.

RFP for Providing Public Transportation Services

Notice is hereby given that PART is requesting proposals from qualified firms having sufficient experience in providing Public Transportation Services with the specifications outlined in the Request for Proposals. View contract opportunities on the PART Website www.partnc.org



PART Express ridership for June 2017 was 30,329

Estimated PART Express FY17 ridership is 438,859

Faces of PART



**Aldine Ingram
Operator of the Month**

Congrats to Aldine Ingram, Operator of the Month for June. An exceptional Operator since 2015 with excellent customer service skills and enjoys his job. Always willing to assist and keep our customers happy on the Amtrak Route 5.

Stay Connected with PART on Social Media!



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youtube.com/partnc



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contactus@partnc.org



www.PARTnc.org