



TECHNICAL COORDINATING COMMITTEE
Minutes of April 27, 2016
10:30 a.m., Greensboro, NC
3rd Floor GDOT Conference Room
Melvin Municipal Office Building

ATTENDANCE

| | | | |
|----------------|-----------------|----------------|-----------------------------------------------|
| Tyler Meyer | <i>GDOT/MPO</i> | Mike Mills | <i>NCDOT Division 7</i> |
| Craig McKinney | <i>GDOT/MPO</i> | Kelly Larkins | <i>PTRC/PTRPO</i> |
| Daniel Amstutz | <i>GDOT/MPO</i> | Scott Rhine | <i>PART</i> |
| Lydia McIntyre | <i>GDOT/MPO</i> | Joe Geigle | <i>FHWA</i> |
| Tram Truong | <i>GDOT/MPO</i> | Bill Bruce | <i>Town of Oak Ridge</i> |
| Adam Fischer | <i>GDOT</i> | Scott Whitaker | <i>Town of Summerfield</i> |
| Chris Spencer | <i>GDOT</i> | Hanna Cockburn | <i>GSO Planning Dept</i> |
| George Linney | <i>GTA</i> | Matt Wallace | <i>Guilford County Parks & Open Space</i> |
| Bruce Adams | <i>GTA</i> | Alex Rosser | <i>PTAA</i> |
| Cari Hopson | <i>GTA</i> | Don Bryson | <i>VHB</i> |
| | | Eric Reynolds | <i>Proterra</i> |

Tyler Meyer called the meeting to order at 10:34 am.

1. Approve Minutes of March 23, 2016

Kelly Larkins moved to approve the minutes of the March 23, 2016 meeting. Scott Rhine seconded the motion. The TCC voted unanimously to approve the minutes of the March 23, 2016 meeting.

2. FY 2016-2025 MTIP Amendment: Rail Projects

Tyler Meyer explained that NCDOT is requesting the MPO to amend the MTIP for two passenger rail projects and nine rail safety projects. The two passenger rail changes add funding to FY 2017 for P-2918, Piedmont Corridor Amtrak service, and C-5571, passenger rail marketing. The nine rail safety projects are essentially three umbrella project numbers that are divided into Strategic Transportation Investment (STI) tiers: *Statewide*, *Regional*, and *Division Needs*. Additional funding will be added in FY 2017 for rail-highway crossing safety projects (Z-5400 DIV, REG, and SW). New rail-highway crossing safety enhancement

Planning for the transportation future

projects will be added as well; Z-5700 and Z-5800 are new umbrella projects with breaks for Statewide, Regional, and Division projects.

Hanna Cockburn inquired about the timeline of operations for the southeast rail high-speed corridor. Meyer noted that there have been studies and environmental impact statements done for the Richmond to Raleigh corridor but he was not aware of the current timeline. Scott Rhine noted that the Southeast Rail Conference was held in Charlotte recently, which he attended. There was a lot of conversation about this project, but it still needs to receive funding as a nationally-important project and corridor much like the northeast rail corridor or other corridors in the country. Different segments of the project are moving at different paces, and as such there is no clear timeline for when it will all come together.

Hanna Cockburn moved to recommend the FY 2016-2025 MTIP Amendment: Rail Projects to the TAC for approval. Adam Fischer seconded the motion. The TCC voted unanimously to recommend the FY 2016-2025 MTIP Amendment: Rail Projects to the TAC for approval.

3. FY 2016-2025 MTIP Modification: Y-4807 B Lowdermilk & Sykes Realignment

Tyler Meyer noted that this project to realign Lowdermilk Street and Sykes Avenue into one intersection with East Market Street will also close the Pine Street crossing of the NCRR. This project initially emerged out of the East Guilford Traffic Separation Study from several years ago. Sidewalk and curb and gutter will be installed with this project and will meet up with the Holts Chapel/Lowdermilk Street sidewalk improvements. NCDOT is funding the construction of the project with NCRR dividends made available for rail improvements by the NC General Assembly, while the City and MPO are funding right-of-way acquisition. This Modification moves construction from FY 2016 to FY 2017 to allow for more time to finalize the project agreement between NCDOT, NCRR, and the City of Greensboro. Right of way is still planned to be initiated in FY 2016.

Scott Rhine moved to recommend the FY 2016-2025 MTIP Modification: Y-4807 B Lowdermilk & Sykes Realignment to the TAC for endorsement. Scott Whitaker seconded the motion. The TCC voted unanimously to recommend the FY 2016-2025 MTIP Modification: Y-4807 B Lowdermilk & Sykes Realignment to the TAC for endorsement.

4. Coordinated Human Services Transportation Plan Amendment

Tyler Meyer explained that this change is considered a Routine Amendment under the Public Involvement Plan, meaning that this change is administrative in nature and that the public was notified through the regular meeting process and updates for scheduled MPO meetings. The Coordinated Human Services Transportation Plan (2014) identifies eligible projects and guides project selection for the Section 5310 FTA grant program, *Enhanced Mobility for Seniors and Individuals With Disabilities*. Public transit agencies and non-profit organizations are eligible to compete for funding from this program. GTA, as the direct recipient of these funds for the MPO area, is responsible for administering and overseeing compliance for these funds from sub-grantees. This funding can be used for a variety of purposes, including transit vehicle acquisition.

However, FTA regulations make purchase of transit vehicles by agencies other than the direct recipient (GTA) excessively difficult. These difficulties include sub-grantee reporting requirements (required monthly over the useful life of the vehicle); useful life requirements (vehicles must be kept in service for their full useful life as defined by FTA or grant funds must be repaid); and GTA oversight requirements (ensuring sub-grantee compliance and financial responsibility if the sub-grantee defaults on the grant). As a result, FTA and NCDOT strongly recommend removing the eligibility from the Coordinated Plan. The eligibility of non-profits and other potential sub-grantees to compete for operating funds will remain the same with this amendment. This amendment is being made now because the MPO is about to open its call for projects for Section 5310 and this will provide needed clarity to potential applicants about this type of eligibility.

Adam Fischer moved to recommend the Coordinated Human Services Transportation Plan Amendment to the TAC for approval. Hanna Cockburn seconded the motion. The TCC voted unanimously to recommend the Coordinated Human Services Transportation Plan Amendment to the TAC for approval.

5. Resolution of Support: GTA Grant Application for Section 5339 Funds for Electric Bus Acquisition

Tyler Meyer noted that GTA is applying for a new discretionary transit grant provided for under the FAST Act to support the acquisition of electric buses. GTA has been exploring the possibility of purchasing electric buses to replace retiring buses in their fleet. At the end of the meeting more information will be provided about electric buses, but this action is to support their grant application for Section 5339 funds.

Scott Rhine moved to recommend the Resolution of Support: GTA Grant Application for Section 5339 Funds for Electric Bus Acquisition to the TAC for endorsement. Adam Fischer seconded the motion. The TCC voted unanimously to recommend the Resolution of Support: GTA Grant Application for Section 5339 Funds for Electric Bus Acquisition to the TAC for endorsement.

6. Resolution of Support: GTA Grant Application for Section 5339 Funds for Galyon Depot Renovations

Tyler Meyer noted that GTA is applying for another new discretionary transit grant provided for under the FAST Act. The Galyon Depot needs to be renovated in order to reconfigure and expand the customer waiting area to a centralized location, expand the driver's lounge area and public restroom facilities, improve the security and vending areas, relocate staff offices, and create a public meeting room. GTA ridership has more than doubled since the Depot opened in 2003 and the number of drivers has grown by more than two-thirds since that time. This renovation is necessary to accommodate the current ridership as well as future riders and operational needs. Lydia McIntyre asked how much of the renovations the grant would cover. Meyer noted that it would cover up to 80% of the cost, and if the project does well in P4.0 10% state matching funds could be acquired. Adam Fischer inquired about the total cost of the project. Bruce Adams noted that the renovations are estimated to cost \$1.5 million. Hanna Cockburn asked if the plans for the Depot renovations account for the electric charging station needs. Fischer noted that the previous application for the electric bus acquisition would account for work in relation to the charging stations. He also noted that Duke Energy has an incentive grant to provide up to \$250,000 for electric bus charging stations that the City may compete for. Tyler Meyer added that the Section 5339 funding GTA is applying for is newly created under the FAST Act and is different from the Bus and Bus Facility formula program that GTA already receives funding from.

Scott Rhine asked if this grant is necessary to complete the Depot renovations. Fischer confirmed that this is the case. Local funds are set up for a match, but the renovations cannot be done without additional grant funds. Adams noted that the City received a state grant to do preventative maintenance such as fixing roof leaks and other repairs which is separate from these other renovations.

Adam Fischer moved to recommend the Resolution of Support: GTA Grant Application for Section 5339 Funds for Galyon Depot Renovations to the TAC for endorsement. Scott Rhine seconded the motion. The TCC voted unanimously to recommend the Resolution of Support: GTA Grant Application for Section 5339 Funds for Galyon Depot Renovations to the TAC for endorsement.

Business Items

1. Prioritization 4.0 Update & Next Steps

Lydia McIntyre noted that NCDOT has released the draft quantitative scores for the projects submitted for P4.0. At this point, all scores represent just the quantitative component. No local input points have yet been assigned. McIntyre noted that NCDOT does allow the MPO to review the individual scores and to seek any needed data or calculation corrections as needed.

At the statewide level, final scores are based 100% on the quantitative score. Local input points are not a factor at the statewide level. For regional projects, the quantitative score will comprise 70% of the final score while 30% comes from local input points. At the Division Needs level final projects scores will be 50% based on the quantitative score and 50% by local input points. The MPO methodology on assigning local points has already gone through public review and been approved by the TAC. The next step will be

determining which projects at the regional and local needs levels to assign local points to increase their chances of being funded.

There are six projects in the Greensboro MPO on the list of Draft Funded Statewide Projects. These are expected to end up in the STIP but since this is a draft it is subject to change. Something different NCDOT is doing this year is to partially fund projects. One project in particular, I-40 (I-5965), which is to widen I-40 through Greensboro between Elm-Eugene Street and Randleman Road, is estimated to cost \$116 million but was only partially funded at \$64 million. McIntyre noted she will need to speak to NCDOT about why it was partially funded and whether the MPO should put points on the project at the Regional Tier. Tyler Meyer noted the partial funding may be tied to cash flow considerations because it is such a large project. The other projects include: improve the I-40 interchange with Elm-Eugene Street; three Piedmont Triad International Airport projects; and a grade separation at Hilltop Road.

Chris Spencer asked if the interchange improvement and I-40 widening project could be combined to be done as one project. Meyer noted it would make more sense to move the interchange improvement (listed in FY 2023) to an earlier horizon year since it is a needed safety project and is very low cost.

Adam Fischer asked if there had been any meetings scheduled or further investigation of the Hilltop Road grade separation. McIntyre said that GDOT had provided a functional design for the improvement as part of the project submittal but nothing else had been done recently. Craig McKinney noted that it is not likely much will be done until the STIP is approved.

McIntyre went on to discuss the proposed statewide projects that have not been selected for funding at the Statewide Tier. Per NCDOT methodology the table lists the scores these projects would receive when considered at the regional and division needs tiers as well. Per the MPO's one-step down rule, these statewide projects that will not be funded under the Statewide tier may be considered for funding at the regional needs level. Spencer noted that it appeared that the Franklin Boulevard grade separation project, when it steps down to the Regional Tier, will be the highest ranking Regional project in the MPO. McIntyre noted that this was correct.

McIntyre noted that she was not immediately aware of the details for the US 29 Bypass project that would extend to NC 150 in Guilford County that was submitted by the Piedmont Triad Regional Council. Mike Mills explained that the Town of Reidsville had asked for this project and that it had been submitted by the RPO. McIntyre said the MPO will need to keep this project in mind, although it did not receive very good scores through this process.

Among the Regional Tier projects, the NC 68 project for access management and safety improvements in Oak Ridge scored the best. It was noted that the final scope and design concept for the project needs to be further hashed out with NCDOT. Meyer asked Mills if the Winston-Salem Urban Loop was completely funded and no longer competing for state funds. Mills noted that the eastern sections are funded but the western loop portion still needs funding.

McIntyre went on to the Division Tier projects. The resubmitted Friendly Avenue project by Wendover Avenue scored the best out of the highway projects. A project of concern is the Eugene Street Bridge, which needs extensive repairs and was submitted to P4.0 but scored poorly. Scott Rhine asked if the SPOT workgroup would be addressing an issue about federal funds for transit projects. Meyer explained that this was more of an NCDOT policy issue restricting public transit to the state match and could not be fixed through the workgroup.

McIntyre noted that the bicycle and pedestrian projects competed at the Division Tier. The portion of the A&Y Greenway in southern Summerfield did not score very well compared to the other projects and McIntyre noted that MPO staff would go back and double check the NCDOT scores. Bicycle and pedestrian project scores tend to be better in denser, urban areas due to the way the criteria are scored. The projects are ranked based on how they scored against all other Division projects in one column and how they scored statewide against all bicycle and pedestrian projects in a second column. Meyer commented that the bicycle and pedestrian projects in the MPO are doing very well at the Division Tier and even when compared to other projects statewide.

Fischer noted that one of the reasons the Summerfield A&Y project scored poorly is because the cost to NCDOT was high. McIntyre explained that the Town asked to submit the entire estimated cost of the project. She will go back and review the score for this project to ensure it is accurate and communicate her findings with the Town.

McIntyre went over the next steps for P4.0. NCDOT has provided additional time for the submittal of Regional Tier local input points because of the delay with releasing the draft quantitative scores and statewide funding results. Regional Tier points can be assigned until the end of July, and it is optional to assign Division Tier points at this time. McIntyre noted that the MPO plans to wait until after the Regional Tier projects are programmed before finalizing the projects to receive Division Tier points. Daniel Amstutz inquired about the timing of the public meeting for the local input points. McIntyre noted that she expects this meeting to occur in June.

2. Bike Month Update

Daniel Amstutz noted that May is Bike Month and calendars of the events have been printed for distribution. He encouraged TCC members to take the copies and put them in their offices or other public places. The main events for Bike Month are the First Friday Open Streets on May 6, Bike to Work Week May 16-20, Bike to Work Day May 20 and the Ride with the City, and the Ride of Silence May 18.

First Friday Open Streets on May 6 will be the second time that the City has worked with Bicycling in Greensboro (BIG) to kick off Bike Month with this event. It will be very similar to last year's event, with bicycle-themed vendors, live music, and food. The location will be downtown Greensboro on Elm Street between Washington Street and Market Street and will run from 5-9 pm. One block on Elm Street between Market Street and Friendly Avenue will also be closed off to vehicle traffic, but Market Street and Friendly Avenue will be kept open. A temporary bike lane may also be included in the street closure, and Amstutz is working with BIG to determine how this will take shape.

Bike to Work Week is May 16-20, and three coffee shops have offered to give discounts to people that ride to their shops during this week: People's Perk, Urban Grinders, and Coffeeology. The Ride with the City has been moved to Bike to Work Day on May 20, and it will be a lunchtime ride to Deep Roots Market for lunch and back. Space is limited and participants must register with Amstutz ahead of the ride so he knows how many people are coming. City employees can receive wellness points for participating in the ride.

The Ride of Silence will take place on Wednesday, May 18 from 6-8 pm. Participants can begin registering at 6 pm and the ride will begin promptly at 7 pm. This ride memorializes those cyclists that have been killed or injured on public roadways. The ride is about 6 to 7 miles and will take about an hour to complete because it is a slow ride. After the ride BIG is planning to have an after-event called "Time for Triumph" to counterbalance the somber tone of the Ride of Silence by having a celebration of bicycling. It will take place at Preyer Brewing at the corner of Eugene Street and Battleground Avenue directly after the ride.

3. Project Updates

Craig McKinney noted that there was a public workshop on April 21 about R-4707, Reedy Fork Parkway Interchange. Three alternatives for the reconstruction with US 29 along with an interim project were presented at a public workshop. The interim project would build part of the interchange and replace the existing bridge since the bridge replacement is a critical short term need. Around 80 people came to the meeting. Staff were able to share information with the public about the need for this project which include plans for the construction of many new homes and additional commercial and industrial development in this area. The final interchange configuration is still under consideration, but it may well be a diverging diamond interchange.

4. Strategic Reports

Tyler Meyer noted that the 2015 BiPed Plan Update will be taken to the Greensboro City Council for their approval in May. This will dovetail with Bike Month and reinforce the city's commitment to the recommendations provided for in the plan.

The City of Greensboro is hosting the 2016 Conference of the North Carolina Association of MPOs. Transportation professionals, land use planners, and others are expected and encouraged to attend. It will take place from May 11-13 in downtown Greensboro. Registration is still open for the conference. Scott Rhine noted that PART will have staff at the conference and can help out as needed. Craig McKinney noted that GTA and PART will not need to use full-size buses for the mobile tour transportation assistance they will be providing.

Adam Fischer commended staff for their work on organizing the NCAMPO conference and for putting together the Bike Month activities.

Other Items

1. NCDOT Update

Mike Mills noted that work is continuing on the I-73 Connector, Urban Loop, and US 220, among other projects. The I-73 Connector from NC 68 to US 220 should be open to traffic by December of this year. The PTIA taxiway bridge is more than 50% complete. Similarly, the eastern Urban Loop (US 70 to US 29) and western Urban Loop (Bryan Boulevard to Battleground Avenue) projects that are currently underway are more than 50% complete. Right-of-way acquisition between Battleground Avenue and Lawndale Drive is 99% complete, and this portion of the Urban Loop should begin construction by the end of the year.

Lydia McIntyre noted the need to coordinate on media for the High Point Road relocation project to introduce the public to the diverging diamond interchange. Mills noted that a media availability and doing some general public outreach is fine, but he does not want it to be overblown when it is not warranted. McIntyre noted that she has been in touch with the NCDOT Division 7 media contact and will coordinate with them.

2. TCC Member Updates

Adam Fischer noted that Bruce Adams has become the new Transit Division Manager for GDOT, heading up GTA. Fischer added that Adams has been with GTA for many years and understands GTA very well.

Scott Rhine noted that a mitigation plan is being worked out for the I-40 Business closure in Winston-Salem, which will affect people driving from Greensboro to Winston-Salem. He also noted that elected officials who are members of the PART Board had raised questions about the sustainability of funding for future regional transportation needs, in particular transit, and there may be more information coming down the pipeline about how local funds may play into that. He will provide more information as it becomes available.

3. Electric Bus Update

Adam Fischer explained that GTA has been exploring the potential for purchasing electric buses for more than a year. Battery life and recharging for electric buses has been a concern from the maintenance and operations side of GTA. He has been able to visit existing systems that use electric buses such as at Clemson University in South Carolina to learn about how those systems work. The electric bus product GTA is looking at has about a two hour battery life and has a fast-charge system to charge a battery in five to seven minutes. Other benefits include zero vehicle emissions, excellent gas mileage compared to hybrid buses, and low maintenance costs because the motor is smaller and simpler than an average hybrid or diesel motor.

Fischer introduced Eric Reynolds from Proterra, an electric bus manufacturing company. Fischer noted that Proterra has a bus outside the building that TCC members can take a test ride on after the meeting.

Reynolds explained that Proterra began delivering buses to customers about four years ago. They specialize in manufacturing electric buses. They have an east coast manufacturing facility that employs about 150 people in Greenville, SC. There is also a battery Research & Development facility in Silicon Valley in California and another manufacturing facility will be opening outside Los Angeles. They have buses in 15 transit systems in the U.S. and currently 63 buses in revenue service. Another 84 buses are on backorder with

another 53 buses that have recently been ordered. The company is familiar with the FTA Low and No Emission grant and has partnered with a number of agencies to work together in order to apply for the grant. One of the most recent customers is SEPTA in Philadelphia, which is adding 25 electric buses to its fleet. In a short time Proterra will have vehicles in more than 20 transit systems.

Reynolds noted that the Proterra electric buses are economical for transit systems as well. The buses help save transit systems money over the course of a vehicle life. The buses get on average 18 miles per gallon (in diesel fuel equivalency) whereas most buses get about three to five miles per gallon. A 40-foot Proterra bus costs about \$749,000, which is almost \$500,000 lower than it was five years ago. The charging infrastructure has similarly come down in price. The simplicity of the motor also saves maintenance funds and hassle for transit systems. Lithium-ion battery prices are getting less expensive as the technology becomes mainstream. Since this is a third-generation bus model, it is a tried and tested vehicle in the field.

The construction of the bus body is of a composite material that is lightweight, durable, and strong. As opposed to retrofitting an existing bus chassis, the Proterra electric bus has been designed from the ground up to be a highly efficient electric bus. The batteries are placed in the safest place possible -- the undercarriage -- and in such a way as to keep the weight evenly distributed.

Proterra tries to be as transparent as possible with its customers, and organizes quarterly calls with all their customers and takes feedback on issues that customers have run into. They also provide an on-site technician in the first several months of the life of the buses to train maintenance staff on the new vehicles. There is a regional support staff as well to assist with questions and provide information for customers. Reynolds showed a promotional video of a recent launch of the Proterra buses in the King County (WA) transit system.

He noted that Proterra has analyzed GTA Routes 7 and 9 to determine if these routes would be good candidates for electric buses. The analysis considered average speed, accelerating, braking, temperature, and grade changes, among other factors. Temperature can affect the speed of the charging infrastructure, but only on extremely hot or cold days.

Scott Whitaker asked if the motor or the bus chassis was proprietary. Reynolds noted that the only proprietary part of their electric bus system was the charging head of the fast charge infrastructure. This is because their infrastructure charges faster than any other competitor. The chassis is not proprietary and is a fiberglass composite material that is used by other bus companies. It is durable and strong, and holds up well in crashes. It also weighs several thousand pounds less than diesel fuel buses.

Scott Rhine asked how long the batteries are expected to last. Reynolds explained that they are expected to last six to eight years, and Proterra provides a warranty on the batteries for up to six years. They also offer an extended warranty of up to twelve years on the life of the battery with the understanding that battery life will only continue to improve. Fischer noted that the cost of the bus includes the batteries, which is essentially the fuel source, and that gets paid for up front. So while the bus appears more expensive than a normal fuel bus, it saves money over the life of the bus.

Fischer thanked Reynolds for his presentation and encouraged TCC members to see the test bus outside the building.

4. Wrap-Up

The next TCC meeting will take place May 25 at 10:30 am in the 3rd Floor GDOT Conference Room. The meeting was adjourned by Tyler Meyer at 12:02 pm.