

**REVIEW OF THE CURRENT DRAFT WAKE COUNTY TRANSIT PLAN,
RESEARCH AND OBSERVATIONS ON TRANSIT IN OTHER MARKETS, AND
A PROPOSAL FOR A BUS RAPID TRANSIT-BASED APPROACH AS AN ALTERNATIVE TO THE CURRENT DRAFT PLAN**

Draft revised August 19, 2013

SUMMARY

During the past year, RTA members have asked for and received responses to a series of questions about the draft Wake County Transit Plan and its focus on buses, commuter rail, and light rail among its core and enhanced elements. We have also reached out to every mayor and county commissioner in Wake County, to identify their overall goals for transit and enhanced travel options.

In addition, RTA members and staff have researched a wide range of transit options and alternatives in other markets, including visits within the past two years to regions including Washington, D.C., suburban Maryland, northern Virginia, Pittsburgh, Cleveland, Austin, Minneapolis, Atlanta, and Nashville. We have also examined the current transit-funding situation facing our neighbors in Charlotte. And we have gathered advice and information from several transit and transportation experts from other areas, including Dr. Joe Hummer, P.E., chair of the Department of Civil and Environmental Engineering at Wayne State University and former professor at North Carolina State University as a technical advisor to the Regional Transportation Alliance for this effort.

The following pages summarize some of our findings to date about the current draft plan, including benefits, concerns, and observations about opportunity costs. After reviewing the draft transit plan and considering potential alternatives, our concern is that many of the benefits of the current draft plan are uncertain, delayed, and narrowly focused geographically. The draft plan also includes substantial opportunity costs and commits our community to a series of infrastructure choices and potentially irrevocable capital and operating funding commitments that would crowd out other important public investments for a decade or more.

The following pages also provide information about bus rapid transit, which is being considered, adopted, and successfully implemented in more and more markets across the U.S. and abroad. Research and experience in numerous regions, many of which have similarities to ours, demonstrates it is not an "inferior" or "fallback" technology to light rail. Bus rapid transit has a series of possible forms or elements that can be included on a case-by-case, scalable, and flexible basis to improve the overall mobility throughout Wake County in a more effective and viable fashion than the framework of the draft plan. In addition, significant economic development has been realized or is projected in areas from Cleveland to Pittsburgh to Montgomery County, Md. along bus rapid transit corridors.

The RTA Steering Committee has unanimously affirmed RTA's support for an acceleration of steps to provide enhanced regional transit options and a broader distribution of significant transit investments across the County. The Steering Committee has also unanimously endorsed a BRT approach for Wake County as a more effective and viable approach than the framework of the current draft plan.

The RTA will provide its recommendation for pursuing the development of a BRT-based alternative tailored for our community to the leadership of member chambers of commerce and area transit and transportation partners. To jumpstart that process, we have developed a draft example BRT-based implementation framework for Wake County based on our past and ongoing research. The draft example framework included at the end of this document is intended as a starting point for a fresh discussion of regional transit solutions for Wake County, not "the answer."

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I. Goals for transit and of the core and enhanced elements of the current draft Wake County transit plan

On March 18, 2013, Wake County Commissioners adopted goals for transit for the year, including the following:

Evaluate Draft Wake County Transit Plan and initiate community discussion on plan elements, alternatives to the plan and assess support for a voter referendum.

We had previously noted in our August 2, 2012 letter to the Commissioners our understanding that goals for transit among various segments of the community might include several options. A list of possible options include:

- Providing travel alternatives to avoid the expense or challenge of driving/parking
- Providing reliable travel options to avoid traffic congestion
- Focusing land use and future growth
- Relieving traffic congestion
- Connecting various municipalities with each other, and to key employment/other destinations with the County, including RTP, with reliable transportation options
- To create options to enable the use of time driving/parking differently
- Improving existing transit service, particularly for travelers dependent on transit
- Attracting new riders to transit
- Attracting and retaining talent
- Enhancing economic development
- Reducing environmental impacts, including the amount of driving and the use of fuel
- Augment a healthy and active lifestyle
- Support a benefit that is available to the broader community
- Providing a fiscally responsible plan that minimizes capital and operating cost risk
- Maximize the return on the County's financial investment in transit
- Improve the mode share for transit for accessing Downtown Raleigh

While many of these goals are complementary, we recognize that the relative weighting of each of these goals will mean more or less emphasis on various plan elements. Our sense is that it would be helpful for Commissioners to highlight and prioritize their goals for transit and travel options to facilitate an objective evaluation of how well the draft plan or other approaches might meet those needs as well as to determine if any elements are missing or need to be reprioritized.

To further that effort, RTA staff in spring 2013 reached out to all seven commissioners along with all 12 mayors in Wake County in order to ask three questions regarding their goals for transit and the most important destinations:

1. Do you believe enhanced transit or improved travel options in some form are important to our community and County? If so, why?
2. What do you want transit to accomplish? In other words, what are the top two outcomes you want transit to achieve?
3. Other than downtown Raleigh, what are the top three places that transit needs to serve effectively?

The three questions intentionally focused on goals rather than "bus" or "rail," although those specific modes did come up from time to time. Here is a summary of those conversations:

- Strong support for additional transit or travel options, with a consensus on wanting to create effective options other than driving to get around the County and region to deal with growth.
- A wide variation in goals for transit beyond those common themes, including concerns of serving an aging population, economic development, financial viability, and sustainable services.
- Other than Downtown Raleigh, which was treated as the one natural destination for transit, the primary desired locations to connect to were Research Triangle Park, RDU Airport and N.C. State University, followed by a wide variety of destination types, including retail, educational, health care, etc. In addition, there was support for enhancing connectivity with communities within and beyond the County.
- Of those who mentioned modes, buses were strongly supported. There was both support for and concerns about rail.

The current Wake County transit plan consists of expanded bus service, a commuter rail line from Durham to Cary, Raleigh, and Garner, and a light rail line from Downtown Cary to Downtown Raleigh to Millbrook Road. Together those elements are called the “enhanced” plan. If federal funding were deemed impossible to obtain for the light rail, then the plan would revert to a “core” plan without light rail. To be clear: if the current draft plan were placed for referendum by the County Commissioners, the voters would be voting on the enhanced plan, with an understanding that only the “core” plan elements had a high degree of certainty.

Last year RTA members asked a series of questions about the draft plan as part of our 2012 planning retreat. Here are the responses we received earlier this year to the questions from our members concerning goals:

- **“The goals of the bus plan are:**
 - 1) Provide new, viable, and effective services in the early years of the plan
 - 2) Provide an inter-county connection to each Wake County municipality
 - 3) Expand and extend routes to run between important locations within Wake County at a minimum frequency of every thirty minutes during peak hours
 - 4) Establish a stronger relationship between bus service and capital investment at corridor level (urban transit corridors, signal priority, bus on shoulder)
 - 5) Clarify and support the regional bus connections to make routes easier to use and more frequent
 - 6) Support local goals for land development as much as possible.
 - 7) Support the rail investment as implemented.

- **“Although (the commuter rail and light rail) projects are both rail projects they have very different goals. The goals of the commuter rail line are:**
 - 1) Connect several important areas within the region with a lower cost, faster to implement option.
 - 2) Create a service connection between important regional areas that does not use the roadway network and can therefore be time reliable regardless of congestion or vehicle incidents
 - 3) Support local goals for land development as possible.
 - 4) Introduce a new transit technology in a specific corridor in the County and establish a precedent for other corridors.

- **“The goals of the light rail are:**
 - 1) Meet the demand for high frequency, reliable local trips within Wake County
 - 2) Create a service connection between important areas in the County that does not use the roadway network and can therefore be time reliable regardless of congestion or vehicle incidents.
 - 3) Foster local goals for developments that are less “auto-centric” and have the ability to boost the effectiveness of the overall transit system.
 - 4) Introduce a new transit technology in a specific corridor in the County and establish a precedent for other corridors.”

Based on our understanding of the County’s current draft plan, we offer the following observations on the responses outlined above.

Observations on the bus elements of the draft plan. We support the stated goals of the bus plan, and the plan as proposed begins to address those goals. However, the result will still be a system with infrequent routes along most corridors (particularly outside peak periods), limited bus stop infrastructure in many places, and buses being stuck in the same traffic congestion as other vehicles as the region grows.

Observations on commuter rail. The commuter rail plan – which would cost more than \$300 million in Wake County alone – is very expensive for what it is projected to deliver (7,000 trips per day in 2035). Although the goal is a “lower-cost, faster-to-implement option,” the proposed commuter rail project here is more than 10 times the cost of the existing Nashville commuter system. In essence, it is only low cost when compared with the cost of the proposed light rail project. While commuter rail would be time reliable, it would offer infrequent travel opportunities during rush hour (30-minute service) and even fewer options during the rest of the day (hourly or less often). Commuter rail does, indeed, provide a roadway congestion-free option. But so would express lanes on I-40, which: are also in the metro plans; are currently under feasibility study; would provide service to far more people; have been successfully implemented in markets across the country; and would be paid for by highway and toll funding.

Observations on light rail. While responses suggested the goals of the two forms of rail were very different, three of the four goals, in fact, are very similar: create a connection free of roadway congestion; support land-use development; and introduce a new transit technology in the region. Regarding the first goal, we agree there is demand for high frequency, reliable local trips within Wake County. The challenge is that the light rail is so expensive – more than \$1 billion in capital costs to develop the initial segment between Downtown Cary and Millbrook Road and more than \$10 million in annual operating subsidies to carry a projected 16,000 riders by 2035 – that by concentrating so many resources in a single corridor, it crowds out funding that could be used to increase the reach, frequency and reliability of travel options as well as to create complementary corridor investments in more areas – particularly in a large county such as Wake which is experiencing county-wide growth.

We also have concerns about whether the final goal listed for both forms of rail – i.e., to establish a technology precedent – should be listed as a goal at all. It commits the region – perhaps irrevocably – to investing in and maintaining multiple forms of expensive transit infrastructure while excluding or preempting other options that may develop over time.

A review of the Alternatives Analysis documents highlighted other concerns about the tradeoffs associated with rail investment. For example, the commuter rail alternative analysis document noted (emphasis added):

“Further, the need to transfer from one bus to another, which often includes long wait times and schedule uncertainty, can deter people from using transit, particularly for **non-work** trips.”

While the light rail alternative analysis document noted (emphasis added):

“Further, the need to transfer from one bus to another, which often includes long wait times and schedule uncertainty, can deter people from using transit, particularly for **work** trips.”

Our concern here is that non-work trips plus work trips constitutes the entire universe of possible transit trips. With the cost of rail itself reducing funding available for additional bus frequency, it may be that the need to transfer will, indeed, deter transit usage for both work and non-work trips due to long wait times. If that were to be the case, then, rail ridership potential will be limited, and opportunity costs magnified further.

The documents describe other challenges, including “Buses Operate in Mixed Traffic along Increasingly Congested Roadways” and “Bus Travel Offers No Travel Savings over Auto.” Both documents report that “Currently, buses operating in mixed traffic conditions are subject to congestion, traffic signals, and accident delays. Service providers, however, are able to maintain fairly consistent on-time performance through continuous and coordinated bus service planning.... Despite the best efforts of transit service planners, by 2035, buses operating in congested roadways will simply be unable to provide reliable transit service.”

While we agree with those challenges, a viable response would be to improve bus travel through a comprehensive strategy in concert with targeted highway investments rather than focusing a substantial portion of transit dollars on two substantially parallel, high-cost rail corridors that crowd out other improvements. This perspective gains further credence given the reported aversion to transferring and the associated uncertainty and long wait times for infrequent buses.

II. Transit alternatives, observations, and experiences in other markets

Bus rapid transit in various forms is currently open or under development in several communities, including Miami, Los Angeles, Chicago, Eugene, Boston, Kansas City, Las Vegas, and other cities in the U.S. and elsewhere. Outlined below is a sampling of our findings to date:

- **Cleveland** has implemented a bus rapid transit line at a fraction of the cost of light rail, reporting billions in economic development. According to General Manager Joe Calabrese, "If the Healthline bus rapid transit project were light rail instead of BRT, I do not believe that ridership, customer satisfaction nor related economic development could have possibly been any better than what we realized with the HealthLine. If we were putting all of our rapid transit lines in for the first time today, I suggest that they would all be high-end BRT rather than light rail, due to the significantly higher capital and operating cost of rail as well as the longer time needed for light rail implementation."
- **Pittsburgh** has one of its most prominent transit-oriented developments, Eastside, along the Martin Luther King, Jr. East Busway, with a \$75 million additional expansion announced this year.
- **Montgomery County, Md.** has changed its plan for the Corridor Cities Transitway from light rail to bus rapid transit because of, rather than in spite of, economic development objectives. According to The Washington Post, a busway could be built "10 to 12 years sooner than a light-rail line, providing an additional decade of new jobs and tax revenue from the development that would follow. A \$772 million light-rail line would generate a total 'economic impact' of \$1.3 billion between 2014 and 2050, while a \$491 million bus rapid transit line would spur \$2.2 billion, according to the study by consultant Parsons Brinckerhoff." In a presentation by Rick Kiegel with the Maryland Transit Administration during the RTA Leadership Tour to Suburban Maryland earlier this year, we learned that projected 2035 volumes for the 15-mile-long BRT project are 56,000 trips per day by 2035 – which would be about nearly 3.5 times the projected use of the proposed 14-mile light rail line in Wake County (i.e., 56,000 vs. 16,000) while costing hundreds of millions less.
- **Nashville** Mayor Karl Dean explained the proposed \$175 million bus rapid transit line in the Tennessee capital (a project costing less than one-sixth the proposed Wake light rail line) this way: "This is the creation of a transit system for the city, and, you know, I think we've shown by starting with the BRT Lite on Murfreesboro Road and Gallatin Road that you just keep moving. And so the next thing we would do after this project would be to look at other corridors to see whether we could do full BRT or BRT lite, further connecting things together."
- **Minneapolis** just opened its first bus rapid transit line earlier this summer, providing 15-minute service throughout the day by using a widened and strengthened shoulder of a roadway along an arterial corridor with new stations. Minneapolis also has a new bus rapid transit transfer station in the median of I-35 West.

Here are some additional observations.

- An **Urban Land Institute** article from earlier this year noted that "many of the most widely recognized models of place making -- especially in the suburbs -- have compact, mixed-use centers with higher-density residential space, shared parking, and pleasant places to walk, but no transit.... "There are many important qualities of such town centers, but light-rail service -- or even bus transit -- does not need to be one of them. Rather they require the basics of planning, development, and redevelopment to create attractive places."
- **The Rockefeller Foundation** conducted polls earlier this summer that demonstrated strong support for bus rapid transit in cities across the country. Associate Director Benjamin de la Peña noted, "as city planners and elected officials evaluate mass transit options in their communities, BRT should be on top of the list because it's one the fastest and most cost-effective ways to expand and modernize public transportation."
- **Federal Transit Administrator** Peter Rogoff, in last year's visit to our region, reminded us that "there's nothing wrong with rubber tires. We're big rail advocates, but more than anything else, we're big transit advocates. And rail does not make sense in every application and for every budget." He also offered similar remarks when addressing the Boston Federal Reserve Bank, stating that "agencies deciding between bus and rail investments ... need to be mindful of the costs they are teeing up for future generations. Is Bus Rapid Transit a workable option for every corridor – no. But it's a fine fit for more communities than are seriously considering it."

Given **Charlotte's** proximity to Wake County, our sense is that the current transit-funding situation there may also be instructive.

- By way of comparison, Mecklenburg and Wake counties have similar overall populations. However, as Mecklenburg County is much smaller geographically, it is 1.5 times as dense as Wake County. In addition, it has a far larger, more centralized, single central city, with two major interstates serving the city, but no RTP-like development as a major job center nearby. In other words, it is naturally better suited for major fixed-route transit service for a host of complementary reasons.
- Charlotte and Mecklenburg County have been widely praised for their "centers and corridors" approach as well as the plan to coordinate transit and land use – and rightfully so. There has been more than \$1.4 billion in private residential, office, and retail development along Charlotte light rail stations, according to a spring 2013 report by the Charlotte Transit Funding Working Group. The initial light rail line to south Charlotte is the first installment in a multiple corridor fixed-guideway approach developed in the 1990s, with the extension of the initial light rail line to northeast Charlotte currently under construction.
- The 2013 report from Charlotte's Transit Funding Working Group noted that the recession had rendered the 2006 sales tax revenue projection no longer valid by 2011, and the new lower base had resulted in a \$2.3 billion reduction in projected revenue by 2035. The report stated that "The loss of \$2.3 billion in future revenue streams along with reduced funding capacity at the state and federal level means that after completion of the LYNX Blue Line extension, the local sales tax will not have the capacity to advance other rapid transit corridors after accounting for the anticipated growth of existing operating services and maintaining existing assets/facilities in a state of good repair."
- An April 2013 *Charlotte Business Journal* article noted that Jeffrey Parker, head of Ernst & Young's infrastructure advisory group, said Charlotte's four major corridors would cost \$4.5 billion to build, with \$3.3 billion unfunded – and that figure assumed a 50 percent federal match for the Independence corridor, estimated to cost \$2.3 billion, as well as \$75 million in grants to complete a streetcar line. The figure also assumed an additional half-cent transit tax above the half-cent tax already in place. Without those assumptions, the gap would apparently be larger. Another *Journal* article noted that Charlotte also is seeking to fund an additional \$1.7 billion in ongoing operating costs, which would raise the overall projected transit funding gap to \$5 billion to complete its corridors 2035.
- A recent recommendation from the Charlotte Transit Funding Working Group is to develop a flexible toolbox of various funding and financing mechanisms to complete each of the primary transit corridors by 2035. Such mechanisms might include: federal, state, and local funds; tax increment financing; federal TIFIA loans; an additional transit sales tax and/or an expansion of the products/services applicable to local sales tax; special assessment districts; policies to accelerate private investment; among others.
- David Howard, who chairs the City Council's transportation committee, noted in a recent *Charlotte Business Journal* article, "There's a huge group of business community leaders who don't understand we're out of money." In addition, former Mayor Anthony Foxx (now U.S. Secretary of Transportation) has recently noted: "We've got a great vision. It's expensive. But we don't really have the means to implement it. Couple that with the fact that we don't have any room left to annex and the fact that we're the fastest-growing metro in the country and you have a recipe for disaster."

III. Summary of concerns about the current draft Wake County transit plan

The current transit plan has a number of positive aspects, and given its clarification that uncertain elements are “enhanced,” it is direct and straightforward. However, after reviewing the draft transit plan and considering potential alternatives, our concern is that many of the benefits of the current draft plan are uncertain, delayed, narrowly focused geographically, and result in substantial opportunity costs. It commits our community to a series of infrastructure choices and substantial and potentially irrevocable capital and operating funding commitments that would crowd out other important public investments for a decade or more.

- Although the increase in bus transit would be helpful, the result would still be a system that does not provide a viable, sustainable alternative for most trips, due to both low frequency and a lack of bus lane investments or other congestion improvements.
- The proposed commuter rail investment is very expensive for the projected number of riders and the expected frequency across the region.
- The proposed light rail project would be built largely in an existing freight corridor and would consume substantial local and state transit funding for benefits that are delayed, uncertain, and overly focused in a narrow geographic area.
- To that point, one of the primary stated reasons for considering rail in the alternatives analysis documents – avoiding transfers and long wait times – may be exacerbated by devoting hundreds of millions of dollars along a narrow set of existing rail corridors that will crowd out potential transit investments in other corridors that could improve frequencies and help focus economic development.
- Adding multiple new rail technologies would commit the citizens of our community to a series of infrastructure choices and capital and operating funding commitments that may crowd out other important public investments for an extended period of time, and/or create expectations for additional investments that cannot readily be delivered.
- While light rail operating costs may be lower than bus once volumes reach a certain level, our region may not realize those volumes for many years, if ever. Moreover, automated buses or other technologies may have diminished or eliminated that advantage by that time.
- We are also not convinced that our freight rail corridors are particularly conducive or optimal for higher-density growth, particularly the east-west corridor from Cary to Raleigh that serves as the trunk line of the N.C. Railroad Company and the location of the future high-speed line to Charlotte. We understand there are a number of hazardous chemicals that are regularly transported along the N.C. Railroad Company’s freight corridor. In addition, North Carolina is the third largest producer of chemicals in the U.S. behind Texas and Louisiana, according to Wake County staff.
- As the north-south line parallel to Atlantic Ave. is a lightly-used freight corridor, it may be better suited to economic development efforts. But that corridor also is the site of the future high-speed line to Richmond. Further, Atlantic Avenue has no local bus service along it today, indicating it is not currently a high-demand transit route.

We suggest that it is time to consider turning the page on a paradigm from one that has focused its initial major proposed transit investments on existing freight rail corridors to one that focuses on overall mobility and prosperity. To be clear, this view is not saying “no” to enhanced transit options, but rather an emphatic “yes” to the possibility of a better, more cost-effective and more sustainable transit future.

IV. Considering bus rapid transit (BRT) as a framework for enhancing transit

Wake County and the Research Triangle area of North Carolina are clearly successful and prosperous. We work collaboratively and make decisions wisely. We are not necessarily the “first mover” in transportation and other investments – we were the last state touching the Atlantic Ocean to have a toll road – but we are often the “best mover.” For example, we waited until toll technology advanced far enough to make sense for our community, and we now have the most modern turnpike in America, with high-speed toll collection and full interoperability with systems in the Midwest, mid-Atlantic, Northeast, and Florida. Further, we were not the first region to have online bus-tracking technology, but we were the first large region in the country to include every public transit bus in an easy-to-use predictive application, thanks to Triangle Transit's leadership and the cooperation of each of our region's transit partners.

Bus rapid transit is being considered, adopted, and successfully implemented in more and more markets across the U.S. and abroad. Research and experience in numerous regions, many of which have similarities to ours, demonstrates clearly it is not an “inferior” or “fallback” technology to light rail. Substantial economic development has been realized or is projected in areas from Cleveland to Pittsburgh to Montgomery County, Md. along bus rapid transit corridors. Bus rapid transit has a series of possible elements that can be included on a case-by-case, scalable basis to improve the overall mobility for Wake County.

Bus rapid transit was addressed in one of the responses to a question from RTA members:

“United States practice with quasi-BRT solutions that are partially in dedicated running ways and partially in mixed traffic have had an unfortunate history of underfunding the project elements that make transit most attractive to customers by guaranteeing high speeds at rush hour, while investing instead in cosmetic upgrades that do not improve travel times or reliability.

While the description of negative experiences elsewhere seems reasonable, we consider the response more of a helpful reminder of what not to do, rather than a reason to dismiss BRT as an option. There is no reason to assume that Wake County would be doomed to such a future, any more than we were doomed to have a turnpike with toll booth delays or limited interoperability.

The response also noted:

“[t]he opportunities for separate rights-of-way for Bus Rapid Transit in Wake County are severely limited and are generally held to be of secondary importance by both NCDOT and local governments to expanding roadways as a priority.”

Whether or not that is true for several arterial corridors, the response does not take into account the proposed express lane system, all of which is now eligible for statewide, regional, and division-level funding thanks to the new Strategic Mobility Formula. Proposed express lanes together with the turnpike could create as a series of backbone corridors from which to consider complementary highway and transit investments that could provide more mobility options for more citizens. In addition, more right-of-way can be acquired for various arterial corridors – although there is obviously a capital investment associated with that strategy, that cost should not take a widening or other road expansion option off the table at the outset.

The response also noted that:

“Some efforts, such as Bus On Shoulder Systems (BOSS) and traffic signal priority, have had modest impacts in preventing additional lost time for buses in challenging mixed traffic conditions, but these treatments, while helpful, are not a substitute for grade-separated busways that provide consistent, high average travel speeds.”

And:

“Buses in mixed traffic will not have the travel time advantages as light rail vehicles in separate rights-of-way.”

Those statements are both true, but they ignore the opportunity costs associated with light rail construction, and with complete busway construction for that matter. In terms of the current draft plan, not building the light rail would free up hundreds of millions of transit local option dollars as well as local and regional transportation dollars to improve the highway network that buses use, including bus priority measures, bus lanes, and to improve bus frequency to simplify transfers and encourage transit use. In addition, a focus on bus travel would allow the region to leverage its existing highway network, its new and emerging turnpike system, and proposed express lanes. Finally, the operating costs and/or ridership capacity of bus travel may well improve over time as bus rapid transit technology and automated vehicle technology advances.

V. Recommendation: Implement BRT as a more viable and effective approach than the current draft plan

As noted previously, we would like the Commissioners to provide and weight their goals for transit to facilitate an objective evaluation of how well the draft plan or other approaches might meet those needs as well as to determine if any elements are missing or need to be reprioritized. Based on our discussion at last year's RTA retreat, responses to our members' questions, and responses received from County Commissioners and mayors earlier this year, we suggest the following as a possible starting point for a community objective for transit:

Implement a useful, reliable, cost-effective, customer-focused, flexible and scalable, intermodal travel system for residents, businesses, and visitors that links business, educational, shopping, healthcare, cultural, recreational, entertainment, and other activities and destinations across the County and region while simplifying connections and minimizing the requirement to drive.

Such a system would ideally strengthen our current standing as having the lowest traffic congestion of any large metro area in America, accelerate our enhanced transit future, and provide effective service for commerce and freight as well as for commuting and personal travel. The system should take advantage of our existing and proposed freeway and street network without being unduly limited by it. Also, it should reduce reliance on federal and/or state government grants for our transit future while maintaining or expanding opportunities for federal and state funding assistance.

This document provided an overview of bus rapid transit, which is being considered, adopted, and implemented successfully in more and more markets across the U.S. and abroad. Research and experience in numerous regions, many of which have similarities to ours, demonstrates it is not an "inferior" or "fallback" technology to light rail. Bus rapid transit has a series of possible elements that can be included on a case-by-case, scalable, and flexible basis to improve the overall mobility throughout Wake County in a more effective and viable fashion than the framework of the draft plan. In addition, significant economic development has been realized or is projected in areas from Cleveland to Pittsburgh to Montgomery County, Md. along bus rapid transit corridors.

The RTA Steering Committee has unanimously affirmed RTA's support for an acceleration of steps to provide enhanced regional transit options and a broader distribution of significant transit investments across the County. Based on the experiences in other markets, and the overall goal for transit as described above, the Steering Committee has unanimously endorsed a BRT approach for Wake County as a more effective and viable approach than the framework of the current draft plan.

The RTA will provide its recommendation for pursuing the development of a BRT-based alternative tailored for our community to the leadership of the member chambers and area transit and transportation partners. To jumpstart that process, we have also developed a draft, six-part example BRT-based implementation framework for Wake County based on our past and ongoing research.

To be clear, this example framework included in the **Appendix** on the final page of this document is intended as a starting point for a fresh discussion of regional transit solutions for Wake County, rather than "the answer." Indeed, the community would help determine not just where the investments would go but also the level of proposed investment. Example areas or corridors that might be considered for significant or substantial arterial or transitway investments might include Capital, New Bern, Blue Ridge, Six Forks/Midtown, Wilmington/Hammond/Timber, Kildaire Farm, Chatham, NC 54 west, US 70, and/or possible corridors in Raleigh, Cary, Garner, Morrisville, and indeed all municipalities across northern, eastern, southern and western Wake County. In addition, freeway BRT options – including consideration of freeway caps at select locations to connect communities and encourage economic development – could be considered across the entire freeway system as a complement to the Bus on Shoulder System (BOSS) that began this month in Wake County.

VI. Conclusion

Enhanced travel options for a growing market are not optional, they are essential for ensuring that all members of our community can share in our region's prosperity. Thankfully, our community is not "running out of time" to make a decision on transit, from a congestion standpoint, as we enjoy some of the lowest traffic congestion in the U.S. for major cities, and our market is very resilient and attractive economically. In addition, enhanced transit is too important to our future – and too expensive – to make an uninformed decision. That having been said, the longer we wait to implement a robust enhanced system, the longer we will wait to receive the mobility and economic benefits of that system.

We recognize that federal matching funds for single corridors – and the entire Federal New Starts process required for receiving those funds – carry the potential to distort planning for transit investments, particularly in a decentralized region such as ours, by incentivizing significant over-investment and focus in a narrow area and crowding out other investments. Even amidst this matching funding framework, our sense is that a bus rapid transit approach can make realizing a successful transit future a faster reality for more people, at less cost, in less time.

We also recognize that overfocusing on achieving top-level BRT "Standards" from organizations such as the Institute for Transportation & Development Policy (ITDP) that are targeted for higher demand transit areas and which contain requirements for exclusive lanes could lead an area to overinvest in bus rapid transit infrastructure in a corridor. Fortunately *The BRT Standard 2013* by ITDP offer cautions such as "Almost all cities have corridors carrying at least 1,000 (passengers per peak hour in the peak direction). Many cities, however, have corridors where transit demand is very low, even below this level. While many gold-standard BRT features would still bring benefits in these conditions, it is unlikely that such levels would justify the cost and dedicated right-of-way intrinsic to BRT (emphasis added)."

Given the caution from ITDP above, the example framework shown in the Appendix is based on a definition of bus rapid transit as an attractive, accessible, frequent, and reliable public transit service that enables transit vehicles to keep moving between stations, with station arrivals not delayed by signals or traffic congestion, while causing no or minimal delay to other vehicles.

Consistent with the policy decisions we've made throughout the past decade, the Regional Transportation Alliance remains committed to advancing, and indeed accelerating, our enhanced transit future.

Appendix.

Draft example BRT-based approach

Creating a FASTER (Freeway and Street-based Extended Rapid) transit network for Wake County

1 – Commence expansion and enhancement of basic transit service countywide

- Review basic bus route expansion from draft Wake transit plan and implement in staged fashion
- Review intersection and corridor delays for all existing and proposed bus routes
- Identify, prioritize highway improvements that will keep buses on schedule and lower operating costs
- Commence staged implementation of level boarding at bus stops across the county
- Seek legislation requiring vehicles to yield to buses returning to traveled way from shoulder or stops

2 – Partner with municipalities, RTP, and business community to advance circulators and encourage transit use

- Encourage creation of common regional bike-sharing system
- Create a matching fund to encourage development or expansion of transit circulator systems
- Initiate study of pilot, scalable personal rapid transit system for the Park (i.e., "PRT for RTP") and environs
- Encourage decoupling of parking from employee benefits and/or offering transit/bike-share passes

3 – Prioritize frequent network and implement priority measures in Downtown Raleigh, across County, to RTP

- Develop, prioritize frequent transit lines with 15 (gateway), 20 (priority), 30 (express) min. service targets
- Coordinate staged rollout of intersection signal priority measures for public transit/school buses
- Targeted additions of queue jumps, bus lane segments and other measures to minimize transit delays
- Implement bus on shoulder system (BOSS) on remainder of I-40, I-540 and other freeway segments

4 – Coordinate implementation of arterial BOSS, corridor upgrades, transitways, and BRT stations across County

- Develop arterial bus rapid transit (BRT) and BOSS system, and add BOSS to US 1 north of 540
- Reconstruct Capital Boulevard south of I-540 as transit gateway corridor to Downtown Raleigh
- Create, preserve transitway/bikeway corridors along Atlantic and Hillsborough
- Transit station/corridor development: examples might include Blue Ridge, New Bern, Six Forks/Midtown, Wilmington/Hammond/Timber, Kildaire Farm, Chatham, NC 54 west, US 70, and/or others countywide
- Serve all N.C. State campuses and Arena area with transitways, bus lanes, and/or other improvements

5 – Create freeway BRT on I-40/540 to link to RDU/RTP/points west, and on I-440 for Raleigh linkages

- Study, prioritize, and implement bus exits, bypass lanes, and extended bus lanes and linkages
- Coordinate implementation of freeway/express lanes BRT stations along I-40, 540, other freeways
- Coordinate implementation of express or transit lane along portions of I-440 Beltline
- Add freeway caps via air rights to jumpstart transit-oriented development and connect communities

6 – Implement targeted high-capacity transit (e.g., commuter/ light rail) when necessary and cost-effective

- Develop freeway BRT / arterial BRT / commuter rail transfer station along I-40 south of Raleigh
- Analyze commuter rail east of Raleigh to Garner/Johnston Co. and compare with freeway BRT options
- Analyze commuter rail west of Raleigh to Cary/RTP/Durham and compare with freeway BRT options
- Consider light rail or other high-capacity transit options when volumes clearly exceed bus capabilities