2005 Alliance Leadership Briefing and Tour to San Diego

From January 6-8, 2005, 40+ elected, business, and transportation leaders traveled from North Carolina to San Diego and southern Orange County, California in order to learn from and engage experts on a series of mobility solutions with which North Carolina has little or no experience. Through the 2005 Regional Transportation Alliance Leadership Tour, participants received an opportunity to tour and learn about the operation of HOT/FasTrak lanes, toll roads, local transportation option, ramp meters, trolleys/light rail, regional rail, and more.

The goal of the tour was education and collaboration with leaders from another region who face similar issues to those we face in urban areas in North Carolina. Tour participants were able to view a range of solutions, understand the implications of each solution, and discern the relationships that had to be formed among elected officials, government agencies, business and the electorate to implement the solutions.

The *2005 Regional Transportation Alliance Leadership Tour to San Diego and southern Orange County,* California was acclaimed by both participants and other colleagues as a unique, high-leverage opportunity to identify solutions in place in another high growth area and generate ideas for implementation back home. This 2005 Leadership Briefing Tour report document has been created to assist that process by summarizing the tour purpose, findings, and opportunities..

The tour report begins with a welcome letter from Representative Drew Saunders of Huntersville, the chair of the Blue Ribbon Commission. Part I is the post-tour briefing report, which contains *background and observations*, lessons learned, and **opportunities and challenges for North Carolina** concerning six major policy and operational areas. Part II is an executive overview, which provides some background on the tour and why San Diego and southern Orange County was chosen. Part III is the final agenda provided to attendees at the commencement of the trip. Part IV lists every participant on the 2005 tour.

Contents of Tour Report:

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January 4, 2005

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2005 Leadership Tour Attendees,

As Chair of the Blue Ribbon Commission to Study Solutions to North Carolina's Urban Transportation Needs, I thank you for taking the time out of your schedule to participate in the 2005 Regional Transportation Alliance Leadership Tour to San Diego and southern Orange County, California.

The Blue Ribbon Commission was formed by the North Carolina Legislature in 2003 as part of House Bill 48 to "study the unique mobility needs of urban areas in North Carolina." Among our statutory charges are consideration of various options "which would give urban areas more control over their regional mobility future." By being a part of this Alliance Leadership Tour, you are indeed taking action to improve your future transportation—and quality of life—and I applaud each of you for that.

The Regional Transportation Alliance has been a friend to transportation for several years. The Alliance has shown great leadership in organizing this Tour; and it has been a pleasure to work with each of the members of the Alliance, including fellow Blue Ribbon Commission members Joe Freddoso of Cisco Systems and Duane Long of Longistics. The Alliance has developed an extensive Tour agenda for you that includes a first-hand examination of several transportation innovations including: toll roads, "FasTrak" toll lanes, regional rail and commuter trolleys, local multimodal financing options, and more.

I regret that I cannot join you on the Tour due to an unavoidable constituent service conflict in my hometown of Huntersville, but I assure you that I look forward to receiving your report during our Commission meeting in Raleigh on January 25. I am confident that our final report to the 2005 General Assembly will include some of the ideas that you generate during this 2005 Alliance Leadership Tour.

Best wishes for a productive and enjoyable trip,

Representative Drew P. Saunders
Chair, Blue Ribbon Commission to Study Solutions to North Carolina's Urban Transportation Needs
Huntersville

DPS:rf

Regional Transportation Alliance
2005 Leadership Tour to San Diego and Southern Orange County, California

Primary findings by topical area:

1 – Local revenue options, cash flow management, project delivery

- Voters will approve – resoundingly – additional investments in transportation if they understand the benefits and such benefits are guaranteed.
- Voters supported the balanced approach to mobility solutions – 1/3 regional freeways, 1/3 local streets and highways, and 1/3 transit – and the geographical balance for projects.

2 – Transit and Transit-oriented development

- A region can exhibit both high-density, transit-oriented development along some corridors and low to moderate levels of density elsewhere.
- Although the initial capital investment of the trolley/LRT system is costly, the long-term operating costs are much lower than the bus system.
- Additional investments in at-grade intersection improvements as well as grade separations between highways and rail can improve traffic operations and safety for all users.

3 – Toll Roads

- Facilities can be funded by the private sector under a framework that provides a maximum rate of return and a reversion date on which the roads return to public hands.
- Toll roads can be a catalyst for job opportunities in the adjacent corridor.
- Since tolls can be varied to coordinate supply and demand, toll options provide users with a free-flow option with guaranteed trip times that motor fuels tax-funded roads cannot.

4 – High-Occupancy Vehicle ("HOV") , High-Occupancy/Toll ("HOT"), and Valu*Express* lanes

- Operating restricted lanes as "HOT" lanes – by allowing single-occupant users to pay a toll to use the lanes while retaining free access for vehicles with multiple occupants – can provide revenues for transit operations and a better use of restricted lane capacity.
- Efficiency limits still exist, since trips that would have been taken in a single vehicle anyway (e.g. a parent and child) are still counted as "carpools" under either HOV or HOT.

5 – Freeways, expressways, and ramp meters

- A four lane freeway or expressway can still provide enormous free-flow travel time savings compared to signalized boulevards, while being more attractive and "contextually sensitive" than ten-lane freeways or massive intersections.
- Ramp meters can provide improved traffic flow along a region's trunk freeway system at a fraction of the cost of widening an entire roadway.

6 – Overall investment in Transportation

- It is possible to accommodate significant growth without worsening congestion in the transportation system.
- There is not a single solution for reducing congestion and maintaining mobility – a series of solutions, implemented through effective partnerships between local, regional, state and federal agencies and the private sector must be implemented.
- Speed in implementation of more options improves the chances of preserving and enhancing mobility.

Regional Transportation Alliance
2005 Leadership Tour to San Diego and Southern Orange County, California

Opportunities for North Carolina:

Local Revenue Options

- Counties should be permitted to implement local revenue options for multimodal transportation solutions.
- Enabling language should provide areas with many options for raising additional revenue.

Transit

- The public should be given the view of a fixed-guideway plan in its entirety (with proper caveats for adjusting to future growth) before the initial investment is made.
- Areas should consider accelerating subsequent phases of a fixed-guideway system through bonding in order to create a more comprehensive system for transit users.
- Funding for at-grade intersection improvements and highway-rail grade separations should be included in initial or subsequent construction phases for transit projects.

Toll Roads

- Toll roads should implement high-speed toll collection lanes throughout the system.
- The state's urban areas should be permitted to develop their own regional toll systems for new regional freeways or restricted freeway lanes in order to complement the efforts of the NC Turnpike Authority and to increase and accelerate opportunities for new routes.

HOV, HOT, Valu*Express* Lanes

- All proposed HOV lanes in North Carolina should be permitted to operate as HOT lanes in order to provide additional revenues and options with a guaranteed level of service.
- Operation as "Valu*Express*" lanes (one price for all vehicles regardless of occupancy, with the price itself encouraging carpooling at or above HOV-2 levels) should also be explored.

Freeways, Expressways, and Ramp Meters

- North Carolina's urban areas should look for opportunities to implement "junior" freeways or expressways – grade separated roadways with four to six-lanes at most – in order to provide free-flow bus and vehicular travel in a contextually sensitive design.
- Ramp meters should be studied and implemented for peak hour operation along existing and proposed freeways and expressways wherever travel

Overall Conclusions

- If we are to compete on the global stage, we must make major transportation investments in our growing metropolitan regions – the economic engines of our state's economy.
- The ongoing transfer to the state general fund of transportation resources should be stopped to prevent further deterioration of our urban and rural mobility infrastructure.

Attendees (45 total):

9 Local and State Elected Officials
6 Local, Regional and State Transportation Officials
18 Business Leaders
4 Media Representatives
8 Chamber of Commerce Staff members (including RTA)

Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina

1 – Local revenue option, cash flow management, and project delivery

Background and observations:
Gary Gallegos and Ken Sulzer - the current and former executive directors of the San Diego Association of Governments (SANDAG) – described San Diego's successful "TransNet" program. SANDAG, which serves as the regional transportation planning agency for San Diego, operates the ongoing TransNet initiative - a locally-funded and managed transportation program created in 1988 in response to explosive growth. Voters approved the initial program – primarily funded by a ½ cent county sales tax dedicated to transportation - with a 53% level of support. Since that time, billions of dollars of transportation projects in the region have been successfully planned and implemented. In November 2004, voters approved a 40-year renewal of the existing ½ cent sales tax by more than a 2:1 margin.

The 2004 campaign for the renewal of TransNet local revenue option for transportation was highlighted by targeted marketing of proposed benefits in local areas throughout San Diego County in addition to a focus on major projects benefiting the entire San Diego region. The balanced TransNet program – which allocates roughly 1/3 of the revenues to the freeway system, 1/3 to local roads, streets, intelligent transportation systems (ITS), and operations and maintenance, and 1/3 to transit construction and operations – is used to leverage state, federal, and private dollars and accelerate (through bonding) by decades the transportation projects listed in the "Mobility 2030" plan for the San Diego region. Given the expansive nature of the existing freeway system, only 37 miles of new freeway will be constructed under the plan, with the remainder of the freeway resources applied towards restricted or "managed" lanes on the existing freeway system and associated bus rapid transit (BRT) services.

Many groups "bought in" to the balanced multimodal modal approach for the TransNet renewal. The support was bipartisan, and included environmentalists, taxpayers' groups, developers, etc. In addition, the sales tax was not the only revenue piece – impact fees on development were also included. A taxpayer oversight committee has been instituted to ensure safeguards of the public's resources.

Cash flow management and project delivery practices are employed through a close partnership between SANDAG and Caltrans District 11 that seeks to minimize project delivery times. SANDAG, which serves as a single metropolitan planning organization (MPO) for all of San Diego County, controls roughly 75% of the state resources in the region through a formula allocation, with the state controlling 25%. Organizationally, Caltrans District 11 has a programming branch that works directly with a similar branch at SANDAG. These branches perform most of the program-level fund swaps and cash management. Activities include TIP amendments, coordinating funding needs and priorities, etc. Project managers on large or complex projects have an assistant who is responsible for implementing and monitoring expenditures. SANDAG also serves as an implementing agency in addition to Caltrans.



Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina (continued)

1 – Local revenue option, cash flow management, and project delivery (continued)

Lessons learned

- Additional resources beyond those available from the State are needed to meet the many challenges of a rapidly growing market.
- When given specific proposals, the voters will approve – resoundingly – additional investments in transportation if they understand the benefits and such benefits are guaranteed.
- Voters supported the balanced approach to mobility solutions – 1/3 regional freeways, 1/3 local streets and highways, and 1/3 transit – and the geographical balance for projects.
- Having a single MPO serve an entire region helps an area speak with one voice and deal with issues from a regional perspective.
- To facilitate project delivery, the State of California empowered local MPOs to play a lead role in the planning, execution, and managing of regional transportation strategies.

Opportunities for North Carolina

- **North Carolina's counties should be permitted to implement local revenue options for multimodal transportation solutions. The enabling language should be flexible to allow the regions to explore many options for raising additional revenue.**
- **After receiving authorizing approval, North Carolina's counties participating in local option should assemble a package of multimodal projects that could be accelerated if additional resources are made available.**
- **Safeguards should be incorporated in the legislation, including the opportunity to hold a referendum as well as periodic review, to ensure the support of the public.**
- **A reexamination of the state-MPO relationship in North Carolina should occur, with an eye toward empowering the MPOs as well as strengthening NCDOT's focus and resources for preserving the trunk highway system.**
- **Given the dual MPO nature of the Triangle – with the Capital Area MPO (CAMPO) serving Wake County and portions of other eastern Triangle counties, and the Durham-Chapel Hill-Carrboro (DCHC MPO) serving Durham County and portions of Orange and other western Triangle counties – it will be critical that the region's MPOs continue to cooperate and coordinate with each other as well as other stakeholders including NCDOT, TTA and other transit agencies, and the private sector.**

Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina (continued)

2 – Transit and transit-oriented development

Background and observations:
The San Diego Metropolitan Transit System (MTS) operates an extensive transit system that includes a network of bus lines in central and southern San Diego County, two trolley/light rail transit (LRT) lines that connect downtown with two sports arenas and the international border, and a paratransit (door-to-door) service. The trolley is the first in the United States of the "new generation" of light rail transit and remains among the largest systems in the country. The North County Transit District (NCTD) operates a network of bus lines in northern San Diego County as well as the regional Coaster rail line that connects northern suburbs with downtown. The Coaster rail is a diesel-powered unit – like the proposed TTA rail in the Triangle – but it is considered heavy rail because it has a locomotive, rather than the proposed diesel multiple units (DMUs) for the Triangle.

Signage for the trolley was easy to understand, including static and dynamic message signs, and boarding and alighting seemed simple enough. The double-decker Coaster rail cars were comfortable and attractive, and travel was as rapid as on the freeway despite a largely single-track alignment.

We noted that the trolley, which operates along local streets in and around the downtown and "Old Town" areas and along an existing railroad bed in many other portions of the county, requires signalization at grade crossings, preempting adjacent signals and delaying nearby traffic.

Connections between the various rail lines can be easily made at a series of intermodal centers near downtown San Diego. Farebox recovery ratios approach 60% for one of the San Diego trolley lines, with bus recovery ratios closer to 40%. Higher-density development was identified near transit stations near the downtown core. MTS has unified several transit agencies in the region, leaving only two in existence – MTS and NCTD – and both appeared to be successful. SANDAG now performs planning for MTS. Several representatives of SANDAG, the area's regional planning agency, noted that incremental investments in transit are not as successful as making major investments in a regional system. The new TransNet local option, described elsewhere, includes significant monies for transit operations.

SANDAG has developed a series of pedestrian-bicycle guidelines as part of the region's comprehensive plan. In addition, SANDAG administers a "smart growth" incentive program to encourage the development of walkable communities and complimentary development near transit stations.

Lessons learned:

- A region can exhibit both high-density, transit-oriented development along some corridors and low to moderate levels of density elsewhere, similar to that found in the Triangle region.
- Transit can be a timesaving as well as stress-saving alternative for users to sitting in traffic.
- Rail transit can significantly delay buses and cars on congested surface streets if grade separations are not provided or grade crossing improvements are not made.
- Convenient connections between systems are as important as the design of the individual systems.
- Although the initial capital investment of the trolley/LRT system is costly, the long-term operating costs are much lower than the bus system.
- Incremental planning and construction investments will not attract a large number of users.
- More investment in transit will be required to provide a reasonable travel option for travelers.
- A system-wide plan for regional fixed-guideway transit is necessary prior to implementation.
- Additional investments in at-grade intersection improvements as well as grade separations between highways and rail can improve traffic operations and safety for all users.

Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina (continued)

2 – Transit and transit-oriented development (continued)

Opportunities for North Carolina

- **Despite funding being available only to implement incremental steps, the public should be given the view of the fixed-guideway plan in its entirety (with proper caveats for adjusting to future growth) before the initial investment is made.**
- **Where resources permit, areas should consider accelerating subsequent phases through bonding in order to create a more comprehensive system for transit users.**
- **Funding for at-grade intersection improvements, as well as appropriate highway-rail grade separations, should be included as part of the initial or subsequent construction phases for regional transit projects.**
- **Commitment to allowing the land use patterns and density that is supportive of public transit is necessary to ensuring its long-term success.**

Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina (continued)

3 – Toll roads

Background and observations:
Orange County, California operates a countywide toll system over 50 miles in length that provides users with free-flow travel. The toll road looks like a regular freeway except for the toll signage and the high-speed toll plaza. Users with prepaid FasTrak transponders can travel at any speed through the toll plaza – actually a series of overhead gantries that read the transponder – and are billed automatically in a manner similar to that used for mobile telephones. Users without transponders on this roadway can pay cash. The cost of the FasTrak transponders in the west coast was reported to be approximately 50% of that used by the EZ-Pass system in the northeast.

The San Joaquin Hills toll road was reported as being the single most important economic development driver for new jobs along the corridor by creating both mobility and accessibility for the area. The timesavings over competing "free" but congested interstates are clearly enormous in Orange County, which borders Los Angeles. Los Angeles has been reluctant to implement toll roads thus far but Orange County has enjoyed tremendous success with their system.

It was unclear if or how integrated land use planning and transit development was coordinated with the development of the toll facility.

Lessons Learned:

- Toll facilities can be funded by the private sector under a framework that provides a maximum rate of return to ensure reasonable toll rates and a reversion date on which the roads return to public hands.
- Toll roads can be a catalyst – in some cases the primary catalyst – for job opportunities in the adjacent corridor.
- Toll roads can relieve congestion and provide congestion alternatives for users in growing regions.
- Since tolls can be varied to coordinate supply and demand, toll options can provide users with a free-flow option with guaranteed trip times that motor fuels tax-funded roads cannot.

3 – Toll roads (continued)

Opportunities for North Carolina

- **The selection and implementation process for proposed toll roads in North Carolina should be accelerated.**
- **Toll roads should implement high-speed toll collection lanes as the primary means of collecting revenues.**
- **North Carolina should consider the technologies and costs associated with both the California FasTrak and northeastern EZ-PASS systems before deciding.**
- **The state's urban areas should be permitted to develop their own regional toll systems for new regional freeways or restricted freeway lanes in order to complement the efforts of the NC Turnpike Authority. Any roads implemented would create accelerated opportunities for regional coordination and efficiencies with other modes.**

Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina (continued)

4 – High-Occupancy Vehicle ("HOV") , High-Occupancy/Toll ("HOT"), and ValuExpress lanes

Background and observations:
The leadership group heard from the operators of the I-15 FasTrak lanes – the San Diego Association of Governments (SANDAG) and TransCore, a private subcontractor. The FasTrak lanes began an existing two-lane, reversible roadway in the median of I-15 reserved exclusively for carpools of 2 or more occupants ("HOV-2"). As in North Carolina's I-77 high-occupancy vehicle lanes, HOV lane entry requires a driver and at least one other occupant of any age. The San Diego I-15 HOV lanes consistently had excess capacity due to low HOV usage levels. SANDAG developed a pilot program, in cooperation with the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans) that permitted paying customers to use the lanes under a trial basis. The program has since been made permanent.

The FasTrak program allows paying customers to access the HOV lanes by paying a fee and thereby provides a peak-direction alternative for single occupant users. The entry price to the lanes can change from $1-$4 under normal conditions, up to $8 under extremely heavy conditions. The prevailing price can change every 6 minutes based on conditions on the general purpose (unrestricted) lanes and is displayed on ground-mounted dynamic message signs at the entrance to the FasTrak lanes. Entry is only permitted at the beginning of the 8-mile stretch

In addition to providing a better use of available capacity by operating the restricted lanes as High-Occupancy/Toll ("HOT") lanes, the shifting of traffic to the HOV lanes also serves to reduce congestion somewhat in the adjacent, general-purpose lanes. Revenues generated are used to fund the express transit "Breeze" bus service in the corridor. The contractors remarked that Caltrans would like for the FasTrak lanes to be filled to capacity with HOVs. However, when asked how the express transit would be funded if the HOVs actually did fill up the use and crowd out the paying users, the contractors simply responded "from other funding sources." A proposed future project for I-15 will include bus rapid transit (BRT) stations along the corridor with direct access to the FasTrak lanes.

Our site visit, conducted in late afternoon on January 6, 2005, revealed low traffic volumes on both the main lanes and general purpose lanes upon our arrival; the prevailing entry price of $1 reflected this low level of congestion. The dynamic pricing signage seemed very small and difficult to observe. At the toll plaza – which was simply an overhead gantry with radio frequency identification readers – our hosts could not confirm that the system was working (collecting revenues from single-occupant users). Belying the low levels of congestion at the entrance, traffic exiting the lanes experienced excessive delays due to insufficient receiving capacity.

Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina (continued)

4 – High-Occupancy Vehicle ("HOV"), High-Occupancy/Toll ("HOT"), ValuExpress lanes (cont'd)

Lessons learned

- "HOV" lanes provide free, high-speed travel to vehicles with two or more occupants, regardless of the ages of the occupants. Single-occupant users are not permitted to use HOV lanes when HOV restrictions are in effect.
- HOV lanes along the congested corridors often have available capacity that could be used without significantly reducing speeds in the restricted lanes.
- Operating restricted lanes as "HOT" lanes – by allowing single-occupant users to pay a toll to use the lanes while retaining free access for vehicles with multiple occupants – can provide revenues for transit operations in the corridor and a better use of available capacity in the restricted lanes.
- Since HOT lanes generate at least some revenue and provide a better use of existing capacity than HOV lanes, they are invariably a more efficient alternative than HOV lanes.
- Changing the entry price for paying customers helps to coordinate supply and demand under HOT lane operations and retain high-speed travel for users.
- Efficiency limits still exist, since trips that would have been taken in a single vehicle anyway (e.g. a parent and child) are still counted as "carpools" under either HOV or HOT operations and "crowd out" paying customers. These trips will reduce the financial resources available for both lane construction and transit operations and limit the ability to coordinate supply and demand, since raising the entry price under HOT operations only impacts vehicles that are paying a toll.
- The exits from the express lanes must be uncongested to maximize the efficiency and attractiveness of the HOV, HOT, or ValuExpress lanes to potential users.

Opportunities for North Carolina

- **North Carolina has approximately one month's experience with HOV lanes in Charlotte. If excess capacity is observed in them – and, given case history from many other regions (Miami, Washington, Atlanta, Minneapolis-St. Paul, etc.), it appears reasonable that there will be at least some excess capacity at various times of the day – additional revenues could be generated by opening the restricted lanes to paying customers.**
- **All proposed HOV lanes in North Carolina should be permitted to operate as HOT lanes in order to provide additional revenues and options with a guaranteed level of service.**
- **Given the efficiency limits noted above and the need to enforce occupancy restrictions under both HOV and HOT frameworks, operation as "Valu*Express*" lanes (one price for all vehicles regardless of occupancy, with the price itself encouraging carpooling at or above HOV-2 levels) should also be explored for restricted lanes in North Carolina.**
- **As noted under section 3, Toll roads, the state's urban areas should be permitted to develop their own regional toll systems for new regional freeways or restricted freeway lanes in order to complement the efforts of the NC Turnpike Authority.**

Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina (continued)

5 – Freeways, expressways, and ramp meters

Background and observations:
San Diego County has a series of regional freeways – four interstate and four California state highway – just in and around the San Diego downtown area. We traveled on I-5, I-15, and California 163 – roads with varying cross sections. I-5 was an eight-lane freeway heading north from the downtown core towards Orange County. I-15 included a wider median with the FastTrak "HOT" lanes in the center for eight miles. The 163 (Cabrillo or Escondido Freeway) included a four-lane cross section that weaved through underpasses in Balboa Park. All were efficient. The urban freeway system – which is the urban free-flow travel system – is far more extensive than found in North Carolina's urban areas, particularly the Triangle. The proposed extensions to the system only total 37 miles, which reflects the fact that the basic system is largely complete and that remaining opportunities close to the city are constrained by geography.

More than 200 "ramp meters" - traffic signals located along freeway onramps - control vehicular entry onto San Diego County freeways. Ramp meters regulate or "meter" vehicular access to freeways by allowing two vehicles to enter upon each short green indication displayed by the ramp meter traffic light during rush hours. This regulation dramatically improves the efficiency of freeway operations, thereby improving safety and reducing delays for motorists. HOV bypass lanes are provided at many of the ramps to reduce travel times for buses and carpoolers.

When conditions on the freeway mainline are uncongested, the signals remain dark. Initial complaints were received about the meters since they seem to impede flow to the freeway, but an effective outreach program has helped educate the public about the benefits of ramp meter operations to individual trip travel times as well as motorist safety. Similar experiences in the Minneapolis-St. Paul area were noted whereby ramp meters were turned off for 90 days in response to initial complaints but were subsequently reactivated after analysis showed that operations and safety had worsened with the meters dark.

Lessons learned

- Continued expansion of our freeway and expressway system – that is, our free-flow travel system for users – is a necessity for enhanced quality of transportation service in our urban areas.
- Freeways and expressways – which provide uninterrupted flow for travelers – do not have to be wide to be effective. A four lane grade-separated roadway with a narrow median and a lower speed limit can still provide enormous travel time savings compared to signalized boulevards, while being more attractive and "contextually sensitive" (complementary) to the adjacent environment than ten-lane freeways or massive intersections.
- Ramp meters can provide improved traffic flow along a region's trunk freeway system at a fraction of the cost of widening an entire roadway.

Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina (continued)

5 – Freeways, expressways, and ramp meters (continued)

Opportunities for North Carolina

- **Alternatives exist in congested corridors besides an eight-lane freeway and a Capitol or Independence Boulevard with many traffic signals.**
- **North Carolina's urban areas should look for opportunities to implement "junior" freeways or expressways – grade separated roadways with four to six-lanes at most – which will provide free-flow travel for buses as well as cars and a more "contextually sensitive" solution that is complementary to the existing natural and built environment.**
- **Ramp meters should be studied and implemented for peak hour operation along existing and proposed freeways and expressways wherever travel timesavings and safety benefits will be realized along the state's urban freeways.**

Part I –2005 Alliance Leadership Tour Findings and Opportunities for North Carolina (continued)

6 - Overall investment in transportation

Background and observations:
The San Diego region – with expanding biotech and military employment clusters like the Triangle and Fayetteville - will add 500,000 new jobs over the next 25 years. The region anticipates a slight reduction in overall traffic congestion and delays over the next several decades due to an extensive $42 billion investment in multimodal transportation and an effective partnership between local, regional, and state governments, and the private sector.

Lesson Learned:

- Through strategic investments in mobility, healthy employment growth – an indication of a vibrant, attractive regional economy – can occur in metropolitan regions without exacerbating traffic congestion.
- It is possible to accommodate significant growth without worsening congestion in the transportation system.
- There is not a single solution for reducing congestion and maintaining mobility – a series of solutions, implemented through effective partnerships between local, regional, state and federal agencies and the private sector must be implemented to maximize opportunities for success.
- Speed in implementation of more options improves the chances of preserving and enhancing mobility.
- When local governments are empowered with the responsibility and resources for planning, constructing, and maintaining portions of their regional transportation system, local and state governments can cooperate with other public entities and the private sector to create the mobility solutions necessary to ensure economic vitality and sustain a world-class quality of life.

Opportunities and Challenges for North Carolina:

- **If we are to compete on the national and global stage, North Carolina is going to have to make considerable transportation investments in our growing metropolitan regions – the economic engines of our state's economy.**
- **The ongoing transfer to the state general fund of transportation resources should be stopped to prevent further deterioration of our urban and rural mobility infrastructure.**
- **Unless we are able to sustain or expand our mobility investments in regional economic engines such as Charlotte, the Triangle, the Triad, and other urban centers of North Carolina, we will indicate to potential investors that North Carolina is not serious about improving its economy and creating jobs for its citizenry.**

Part II –2005 Alliance Leadership Tour Overview

1. About the Regional Transportation Alliance and the 2005 Leadership Tour

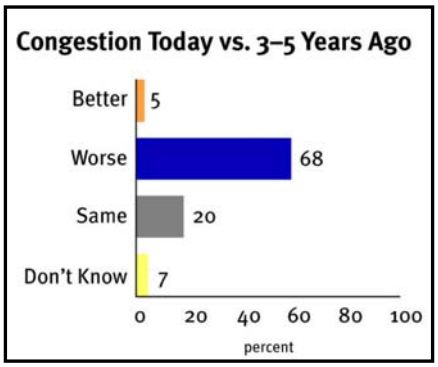
The Regional Transportation Alliance -- a partnership of 18 chambers of commerce and more than 80 businesses in and around six counties in the Triangle area of North Carolina -- is delighted to offer this first-ever Leadership Tour to our members and partners. The Regional Transportation Alliance is the regional business leadership organization dedicated to improving mobility in the greater Research Triangle region. Leading companies, large and small, have come together to bring the expertise, resources, and influence of the regional business community to bear on one of the most vexing, and vital, issues for the Triangle and eastern North Carolina: mobility and traffic congestion.

A recent poll co-sponsored by the Alliance identified two critical facts: Triangle area residents continue to worry about traffic congestion, and Triangle area residents – to a greater degree than residents from every other area in the state - are willing to consider new financial and mobility solutions to resolve it.

This Leadership Tour to San Diego and southern Orange County, California, affords our members and partners a high-leverage, first-hand opportunity to experience HOT/FasTrak lanes, toll roads, local transportation option, ramp meters, trolleys, regional rail, and more. This is an unprecedented opportunity for elected, business, and transportation leaders from the Triangle and beyond to learn from and engage experts on a series of mobility solutions with which North Carolina has little or no experience.

The goal of this tour is not to advocate a particular solution or solutions observed in southern California as "the" magic bullet for our transportation problems back home. Rather, the goals of the Alliance for the tour are to efficiently provide information, opportunities, relationships, and momentum necessary to develop the mobility solutions that are appropriate for our region.

2004 Alliance Annual Meeting



Source: *2004 NC Go! poll of Triangle residents' perceptions about mobility, co-sponsored by RTA*

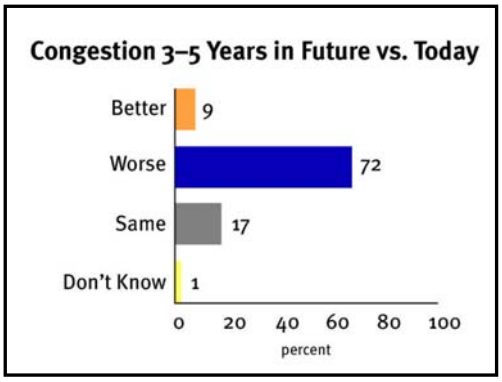
Part II –2005 Alliance Leadership Tour Overview (continued)

2. Transportation and Economic Development

Transportation is one of the essential elements or "success levers" for the economic growth and quality of life of both urban and rural economic regions. While transportation will not be the deciding factor in *all* economic decisions, it will be the critical factor for *some* of them and it will play a major role for many more. Conversations with economic development professionals indicate that mobility, access, and congestion are becoming ever more central to business decisions in North Carolina. Enhancing our State's transportation infrastructure for business and industry will be vital if we are to remain a business-friendly state.

However, while transportation is critical for both urban and rural North Carolina, mobility needs generally vary between urban and rural regions of the state. For rural areas, it may be the basic development of the freeway, expressway, and connector highway system that is of most importance. For urban areas, the basic freeway system may be in place, but the sheer level of demands on the network may be the issue, and the development of modal options may be critical. In many cases, a combination of needs may be at play.

Despite the frequent differences, mobility is not, and cannot, be an urban versus rural issue. While the State's population now resides predominantly in urban areas, access to rural markets remains essential and mobility improvements in those areas benefit all North Carolinians. On the other hand, North Carolina's metropolitan areas will be the economic engines of the state for the foreseeable future and both urban and rural residents alike need effective mobility to and through metropolitan areas. Under these circumstances, neither robbing Peter to pay Paul, nor stealing from Paul to serve Peter, makes either short or long-term sense. Rather, it speaks to the need for improving the entire trunk highway and transportation system - urban and rural - in order to provide the best possible economic opportunities and quality of life for all of the State's citizens.



Source: *2004 NC Go! poll of Triangle residents' perceptions about mobility, co-sponsored by RTA*

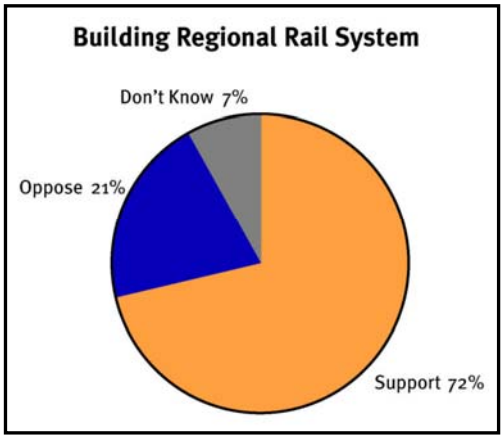
Part II –2005 Alliance Leadership Tour Overview (continued)

3. About the Triangle and other Urban Regions of North Carolina

The Regional Transportation Alliance serves the greater Triangle region of North Carolina, which includes Raleigh, the capital and second-largest city in the state; Durham, the City of Medicine; Cary, the Technology Town of North Carolina; Chapel Hill, the home of the University of North Carolina; and over a dozen more communities form the renowned Research Triangle area. The area has enjoyed sustained economic growth for the past several decades due to the emergence of a multi-pronged economy based on government, university, and research clusters and a quality of life with few if any inherent negatives—although a handful of growth-related challenges do exist.

Like all growing regions in the United States and the world, traffic congestion has been an unavoidable by-product of the Triangle's success. Traffic congestion on major I-40 - the major east-west freeway and the Triangle's main street - has grown exponentially since it opened. The region has both benefited and suffered from a quirk in geography, with the largest county, Wake, not touched by either major north-south interstate in the southeast (I-85 and I-95) - meaning less out-of-region traffic to contend with during peak commuting periods, but also a smaller freeway system to handle the growing traffic that it does have.

The Triangle region is not the largest region in North Carolina. Metropolitan Charlotte is larger, while the "Piedmont Triad" of Greensboro, Winston-Salem, High Point, and Burlington is similar in size to the Triangle. Differences clearly exist between each area – the Charlotte region is centered on the largest city in the Carolinas, while the Triangle consists of a series of medium-sized cities surrounding a zero-population research park – but there are far more similarities in the transportation challenges facing metropolitan regions. In fact, the North Carolina Legislature created a Blue Ribbon Commission, chaired by Representative Drew Saunders of Mecklenburg County, to study the mobility needs of North Carolina's urban areas in 2003.

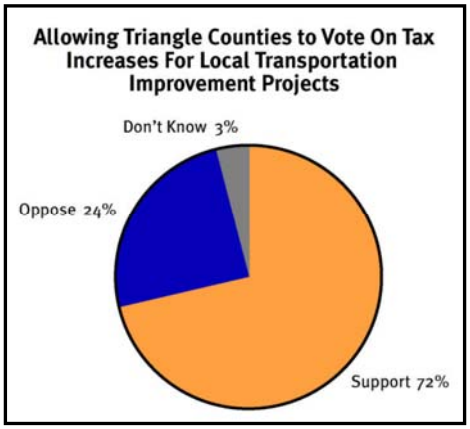


Source: *2004 NC Go! poll of Triangle residents' perceptions about mobility, co-sponsored by RTA*

Part II –2005 Alliance Leadership Tour Overview (continued)

4. Why San Diego and southern Orange County, California?

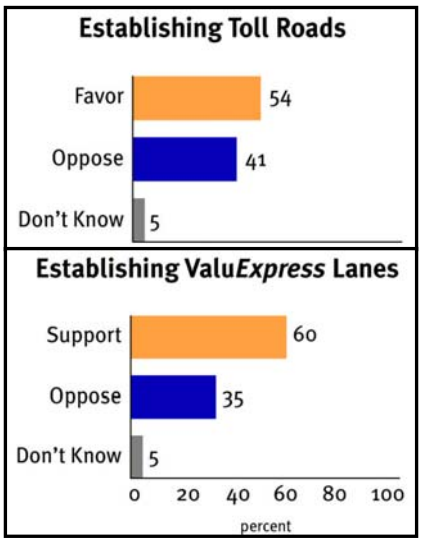
Greater San Diego possesses some similarities to the Triangle and other urban areas in North Carolina. Like the Triangle, the San Diego metropolitan area includes the second largest city in the state, with a virtually identical population density of nearly 700 persons per square mile. It has a multi-pronged economy that has weathered a series of minor setbacks during the most recent recession. It even has a "Golden Triangle" area - a local chamber Web site terms it as "a hot bed of technology, biotech, commercial, educational and financial institutions" - with the "Triangle" in this case being an area intersected by three major freeways and containing a mix of residential, retail, and office.



Source: *2004 NC Go! poll of Triangle residents' perceptions about mobility, co-sponsored by RTA*

There are some obvious differences - San Diego has a large military presence, while North Carolina's three largest urban areas do not, although Fayetteville obviously does. San Diego is a coastal city, while North Carolina's three largest urban areas are not, although Wilmington is. Finally, San Diego is a larger area - San Diego County is more than twice the size of Wake, Durham, and Orange Counties combined, with a similar difference in population. This larger size has provided both the resources and the impetus to consider more transportation solutions than we currently possess in North Carolina.

Several elements of San Diego's transportation system are worth noting. San Diego possesses two trolley lines and one commuter rail line; the Triangle and Charlotte only have proposed regional rail systems at this point, although Charlotte does have a downtown trolley. A wickerwork of freeways cross San Diego; the freeway systems in North Carolina are not nearly as extensive. However, unlike Charlotte, Raleigh, and Greensboro, which are constructing circumferential freeways around their cities, coastal San Diego will not and cannot build a beltway.



San Diego has an HOT/"FasTrak" express toll lane in the median of I-15 and a series of HOV bypass ramps at freeway entrances; North Carolina has had HOV lanes for a less than one month in Charlotte. Orange County, California has a series of toll roads operated by multiple agencies, and San Diego County is constructing a new freeway that will be privately funded and operated; no toll roads exist anywhere in North Carolina, public or private. San Diego County voters just renewed their freeways/ highways/transit local option by more than a 2:1 margin; in North Carolina, only Charlotte has a transportation local option, and it is reserved for transit. San Diego has more than 200 ramp meters; North Carolina has zero.

Source: *2004 NC Go! poll of Triangle residents' perceptions about mobility, co-sponsored by RTA*

Part II –2005 Alliance Leadership Tour Overview (continued)

5. Summary and Conclusion

Clearly, we can learn a lot from San Diego and southern Orange County, California – they have HOV lanes, High-Occupancy Toll lanes, a privately-funded toll road, a trolley, regional rail, multimodal local option, ramp meters, and more. Of course, all of these options may not be appropriate for the Triangle and other areas of North Carolina. But they are certainly worth a look – *particularly since the San Diego Association of Governments (SANDAG) projects traffic congestion to actually get better during the next 25 years – despite an addition of 1 million new people and a half million new jobs.*

♦

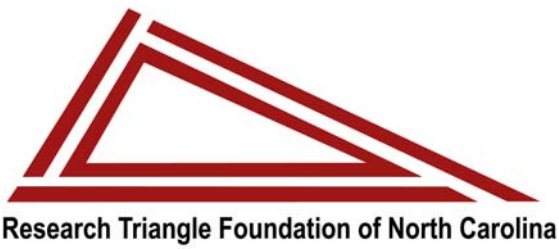
The mission of the Regional Transportation Alliance is to identify, facilitate, and promote mobility solutions for the Triangle region – in cooperation with our public and private partners – to ensure economic vitality and sustain a world-class quality of life. We hope that this 2005 Leadership Tour to San Diego and southern Orange County, California will afford participants with improved relationships among Alliance members, partners, and municipal, county, and state elected officials; enhanced opportunities to experience a series of mobility options and engage the leaders that have implemented solutions in a growing market; and renewed momentum to identify ideas and potential mobility solutions in the Triangle and to other urban areas in North Carolina.

On behalf of the Alliance, we thank you for your support of this first-ever Leadership Tour. "*Let's Get Moving!*"

Joe Milazzo II, PE
Executive Director
Regional Transportation Alliance

Regional Transportation Alliance

Leadership Team Members



Blue Cross Blue Shield of NC

Cherry Bekaert and Holland

Duke Energy - Epley Associates

First Citizens Bank - Greene Resources

Kimley-Horn Associates - RSM McGladrey

Time Warner Cable - Wachovia Bank

Regional Transportation Alliance
2005 Leadership Briefing and Tour
Summary Agenda – all times local

Thursday January 6th

7:16a ***Travel to San Diego***

1:00p ***Welcome Luncheon***

Board Room, San Diego Association of Governments (SANDAG)
Presented by the Greater Durham Chamber of Commerce

1:30p ***Session I – Local Options, Local Solutions, Part 1*** *(SANDAG)*
Presented by the Greater Raleigh Chamber of Commerce

2:15p ***Session II – Local Options, Local Solutions, Part 2*** *(SANDAG)*
Presented by Longistics

3:30p ***Session III – Mobility Innovations on the FasTrak, Part 1*** *(SANDAG)*
Presented by Parsons

3:45p ***Session IV-A - Mobility Innovations on the FasTrak, Part 2*** *(Guided Tour)*
Presented by Excel Moving & Storage

6:00p ***Evening reception and dinner***
Bertrand's at Mister A's, 2550 5th Avenue, San Diego
Presented by Cisco Systems, Longistics, and NC Go!

Friday January 7th

7:30p ***Session V – Transit and Transportation Alternatives, Part 1*** *(Guided Tour)*
Presented by Sepi Engineering

8:00p ***Session VI – Transit and Transportation Alternatives, Part 2 – Breakfast*** *(MTS)*
Presented by the Chapel Hill-Carrboro Chamber of Commerce

9:45a ***Session VII – Local and state partnerships*** *(Caltrans)*
Presented by Arcadis

10:30a ***Session VIII – Intelligent transportation systems*** *(Caltrans)*
Presented by Parsons Brinckerhoff

11:00a ***Session IX – Toll road innovations, Part 1*** *(Caltrans)*
Presented by the Cary Chamber of Commerce

11:30a ***Session X – Toll road innovations, Part 2*** *(Guided Tour)*
Presented by Mulkey Engineers and Consultants

2:45p ***Session XI – Transit and Transportation Alternatives, Part 3*** *(Encinitas Train Station)*
Presented by Triangle Transit Authority

3:07p ***Session XII – Transit and Transportation Alternatives, Part 4*** *(Guided Tour)*
Presented by KB Home

4:15p ***Session XIII-A Transit and Transportation Alternatives, Part 5*** *(Guided Tour)*
Presented by Sig Hutchinson

6:00p ***Evening dinner***
Peohe's, 1201 First Avenue, Coronado
Presented by Longistics and First Citizens Bank

Saturday January 8th

5:00a ***Return to North Carolina***

2005 Tour Sponsors

Capitol Broadcasting Company, Inc.

Cisco Systems

COFIROUTE

Longistics

PBS&J

Research Triangle Foundation of North Carolina

TRANSCORE

BB&T

Kimley-Horn and Associates, Inc

Part III – Final Alliance Leadership Tour Agenda

Thursday January 6th

Travel to San Diego

7:16a – Leadership group departs Raleigh-Durham (RDU) airport (America West # 583)

10:23a – Leadership group arrives in Phoenix (PHX)

11:30a – Leadership group departs PHX airport (America West # 182)

11:45a – Leadership group arrives in San Diego (SAN)

12:30p – Leadership group takes Cloud 9 Shuttle to Downtown San Diego

Welcome Luncheon
Board Room, San Diego Association of Governments (SANDAG)

1p – Welcome to San Diego
- Lamont Ewell, City Manager, San Diego; former city Manager, Durham

Session I – Local Options, Local Solutions, Part 1
Board Room, San Diego Association of Governments (SANDAG)

1:30p - The origins of Transnet I – San Diego's original local option for transportation
- Ken Sulzer, former Executive Director, San Diego Association of Governments (SANDAG)

2p - break

Session II – Local Options, Local Solutions, Part 2
Board Room, San Diego Association of Governments (SANDAG)

2:15p - **Transnet II – A successful early renewal for local option**
Mickey Cafagna, Chair, SANDAG; Mayor, City of Poway
Gary Gallegos, Executive Director, SANDAG
Craig Scott, Manager for Transportation, SANDAG
Kim Kilkenny, Executive Vice President, the Otay Ranch Company

3:15p – break

Session III – Mobility Innovations on the FasTrak, Part 1
Board Room, San Diego Association of Governments (SANDAG)

3:30p - **FasTrak I-15 high-occupancy/toll (HOT) lane - overview**
- Kim Kawada, Principal Planner, SANDAG

Part III – Final Alliance Leadership Tour Agenda (continued)

Thursday January 6th (continued)

Session IV

IV-A - Mobility Innovations on the FasTrak, Part 2

3:45p – Optional guided tour of FasTrak I-15 lanes
- Lynn Barton, Senior Transportation Engineer, California DOT (Caltrans)
- Fares Ibrahim, Manager of Customer Service, *I-15 Fastrak*, TransCore

5:15p - check-in to Hilton Gaslamp Quarter Hotel - 401 K St - San Diego

IV-B – for those not taking tour of FasTrak lanes

3:45p - trolley (orange line) to hotel

4:15p - check-in to Hilton Gaslamp Quarter Hotel - 401 K St - San Diego

Evening reception and dinner
Bertrand's at Mister A's, 2550 5th Avenue, San Diego

6p – Leadership group meets bus in front of hotel

6:15p – Welcome Reception
- Mike Murphy, President and CEO, Sharp HealthCare (2005 Chairman of the Board, San Diego Regional Chamber of Commerce)
- Mitch Mitchell, VP Public Policy, San Diego Regional Chamber of Commerce

6:45p – Leadership Dinner

8:45p – Leadership group boards bus for return to hotel

Part III – Final Alliance Leadership Tour Agenda (continued)

Friday January 7th

Session V – Transit and Transportation Alternatives, Part 1

7:30a – Leadership group meets in front of hotel

7:35a – Guided tour of MTS Orange Line Downtown Trolley
- Susan Hafner, Director of Multimodal Operations, MTS

Session VI – Transit and Transportation Alternatives, Part 2 – Breakfast
Board Room, San Diego Metropolitan Transportation System (MTS)

8a – Metropolitan Transit System - Overview
- Paul Jablonski, CEO, San Diego Metropolitan Transit System (MTS)
- Susan Hafner, Director of Multimodal Operations, MTS

8:45a – Pedestrian-Bicycle Solutions in Greater San Diego
- Stephan Vance, Senior Regional Planner, SANDAG

9:15a – Leadership group boards bus

Session VII – Local and state partnerships
Auditorium, California Department of Transportation (Caltrans)

9:45a – Development of the Regional Highway System – and Regional Partnerships
- Pedro Orso-Delgado, District 11 Director, Caltrans
- Allan Kosup, Deputy District 11 Director, Program Management, Caltrans

Session VIII – Intelligent transportation systems
Auditorium, California Department of Transportation (Caltrans)

10:30a – Benefits of Ramp Meters and Traffic Management for Greater San Diego
- Joe Hull, Deputy District 11 Director, Traffic Operations, Caltrans

10:45a - break

Session IX – Toll road innovations, Part 1 (including environmental streamlining)
Auditorium, California Department of Transportation (Caltrans)

11a – Private Toll Road Opportunities in San Diego County – the new SR 125
- Greg Hulsizer, CEO, SR 125
- Muggs Stoll, Deputy District 11 Director, Environmental, Caltrans

Session X – Toll road innovations, Part 2 (including economic development) – Boxed Lunches

11:30a – Leadership group boards bus for southern Orange County, California

12:30p – Guided tour of SR 73 Toll Road and Catalina Vista Toll Plaza
- Mike Leahy, Chief Toll Operations Officer, Transportation Corridor Agencies
- Sheila Rasmussen, Marketing Coordinator, 91 Express Lanes, Cofiroute

1:30p – Leadership group boards bus for return to San Diego County

Part III – Final Alliance Leadership Tour Agenda (continued)

Friday January 7th (continued)

Session XI – Transit and Transportation Alternatives, Part 3
Encinitas Train Station

2:45p - Walkable Communities and Transit Oriented Development
- Peter Aadland, Communications Director, NCTD
- Peder Norby, Downtown Encinitas Merchants Association (DEMA)

Session XII – Transit and Transportation Alternatives, Part 4

3p - Leadership Group boards Coaster to San Diego

3:07p – Guided tour of Coaster Regional Commuter Rail
- Tom Kelleher, Director of Marketing and Communications, North County Transit District

4p - Coaster arrives at Downtown Santa Fe station (arrival time approximate due to track work)

Session XIII

XIII-A - Transit and Transportation Alternatives, Part 5

4:15p - **Optional guided walking tour** - **Martin Luther King, Jr. Promenade**
- Stephan Vance, Senior Regional Planner, SANDAG

4:30p - return to Hilton Hotel

XIII-B – for those not taking tour of King promenade

4:15p - board orange line trolley

4:30p - return to Hilton Hotel

Evening dinner
Peohe's, 1201 First Avenue, Coronado

6p – Leadership group boards bus in front of hotel

6:15p – Thank you reception

7p – Farewell Dinner

8:45p – Leadership group boards to hotel via bus

Part III – Final Alliance Leadership Tour Agenda (continued)

Saturday January 8th

Return to North Carolina

5a – Leadership group boards bus in front of hotel

6:55a – Leadership group departs San Diego (SAN) airport (America West # 347)

9:10a – Leadership group arrives in Phoenix (PHX)

10a – Leadership group departs PHX airport (America West # 841)

4:03p – Leadership group arrives at Raleigh-Durham (RDU) airport

Part IV – Final List of Alliance Leadership Tour Participants

TOTAL attendees: 45

Elected Officials
1. NC State Representative Jennifer Weiss
2. NC State Senator Katie Dorsett
3. County Commissioner Ellen Reckhow (Durham County)
4. County Commissioner Moses Carey (Orange County)
5. County Commissioner Joe Bryan (Wake County)
6. County Commissioner Kenn Gardner (Wake County)
7. Durham Mayor Bill Bell
8. Chapel Hill Mayor Kevin Foy
9. Cary Town Councilor Jennifer Robinson

Transportation
1. Ed Johnson-Capital Area MPO
2. Mark Ahrendsen-Durham-Chapel Hill- Carrboro MPO
3. Julie Woosley-SmartCommute@RTP
4. Carter Worthy-Triangle Transit Authority
5. Robb Teer-NC Turnpike Authority
6. David Bonk-Town of Chapel Hill

Business and Organizations
1. Duane Long-Longistics
2. Peter Anlyan-Capitol Broadcasting
3. Joe Freddoso- Cisco Systems
4. Ed Willingham-First Citizens Bank
5. Mike Keohane-Blue Cross Blue Shield of NC
6. Rick Weddle- Research Triangle Foundation
7. Liz Rooks-Research Triangle Foundation
8. Marty Clayton- Progress Energy
9. Roger Henderson-Kimley-Horn and Associates
10. Jeff Merritt-KB Homes
11. Susan Clarke-IBM
12. Jeff Stocks- Manpower
13. Scott Gardner-Duke Energy
14. John Powell- Powell Properties
15. Brian Reid- Paragon Commercial Bank
16. Tom Bradshaw, Citigroup
17. Scott Hooton, TransCore
18. Darius Irani- PBS&J

continued

Part IV – Final List of Alliance Leadership Tour Participants (continued)

Media

1. Rusty (Marc) Jacobs- WUNC Radio
2. Mark Roberts, WRAL-TV 5
3. Ed Wilson, WRAL-TV 5
4. Bruce Siceloff, Raleigh News & Observer

Chambers of Commerce and RTA staff

1. Harvey Schmitt-Raleigh Chamber of Commerce
2. Drew Mortez-Raleigh Chamber of Commerce
3. Aaron Nelson-Chapel Hill-Carrboro Chamber of Commerce
4. Diane Rupprecht-Durham Chamber of Commerce
5. Mary Heath- Cary Chamber of Commerce
6. Katie Rivett-Regional Transportation Alliance
7. Keith Everett- Regional Transporation Alliance
8. Joe Milazzo II-Regional Transportation Alliance