



Southeast Tennessee Transportation: *Positioning the Chattanooga Region in the Global Economy*

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This report was researched and written by freelance writer Fred Baldwin, with guidance from NADO Executive Director Matthew Chase, Deputy Executive Director Laurie Thompson and Program Manager Carrie Kissel.

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Center for Transportation Advancement and Regional Development

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Cover photos: Top: Rail service provides an important link for the region's economy. Bottom left: Trucking is a major economic sector in Southeast Tennessee, with two of the nation's top trucking companies located there. Bottom center: The Chickamauga Lock allows for freight and recreational water use. Bottom right: The region's interstates allow for both freight movement and travel. Images courtesy of Norfolk Southern Corporation, U.S. Xpress, the U.S. Army Corps of Engineers and Tennessee DOT. Opposite page: Photo by Dan Reynolds.

Southeast Tennessee Transportation: *Positioning the Chattanooga Region in the Global Economy*

This special report explores how public and private sector leaders are working together to enhance the multi-modal transportation system of Southeast Tennessee, including Chattanooga, to remain competitive in today's global economy.

What do you call a regional transportation system that includes three Interstate highways, two national railroads, seven airports and an inland waterway? In southeast Tennessee, the region around Chattanooga, that's called a good start.

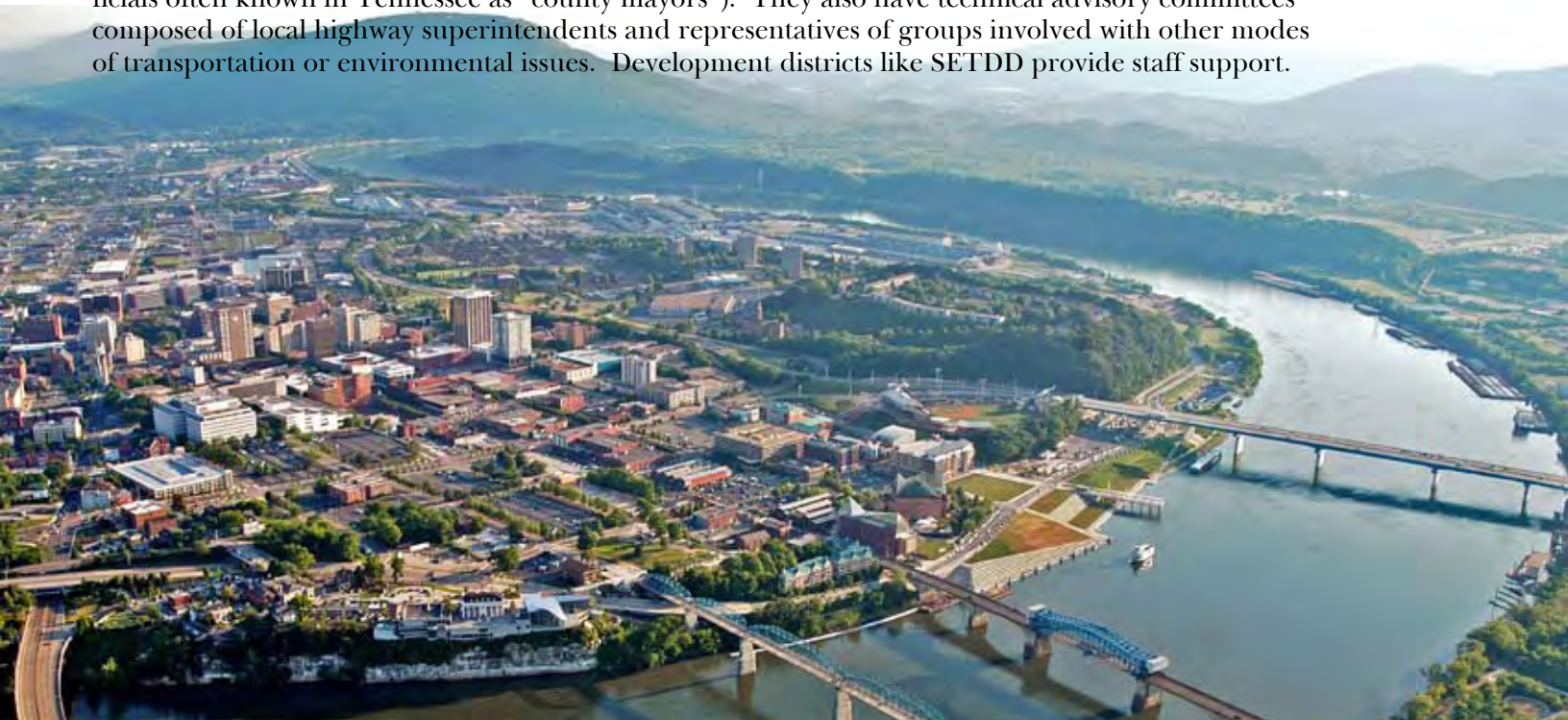
"Any time you think something is good enough, you're not serving your region," says Beth Jones, executive director of the Southeast Tennessee Development District (SETDD). "If you don't change, you're not ready for the future, and it's going to pass you by. We're trying to prepare this region for the global economy and to be good stewards of the environment. And that doesn't happen without regional cooperation."

SETDD, one of the state's nine economic development districts, serves 10 Tennessee counties and, for some functions, nearby counties in Georgia and North Carolina. In 2005, the Tennessee Department of Transportation (TDOT) contracted with development districts across the state to facilitate TDOT's transportation planning with rural counties. According to Jeanne Stevens, TDOT's director of long-range planning, that decision was a natural outgrowth of local public officials' participation in developing a statewide transportation plan. "Many of the participants," Stevens says, "asked if it could become an ongoing process, rather than every few years when the plan is updated."

The decision also gave TDOT a way of complying with January 2003 federal requirements to involve rural officials in project planning and selection, a decades-old mandate for metropolitan areas. Although the new rules did not specify any particular means of rural involvement, TDOT chose to encourage the creation of 12 Rural Planning Organizations (RPOs). Modeled in many ways after their metropolitan predecessors, RPOs have an executive board composed of county executives (elected officials often known in Tennessee as "county mayors"). They also have technical advisory committees composed of local highway superintendents and representatives of groups involved with other modes of transportation or environmental issues. Development districts like SETDD provide staff support.

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– Beth Jones, Southeast Tennessee Development District Executive Director



A Family of Government Officials

The Southeast Tennessee RPO has nine counties. They include Bradley County, whose county seat is Cleveland, about 20 miles northwest of Chattanooga and the center of a separate metropolitan statistical area. The other eight are largely rural – five with populations under 16,000. Hamilton County, home of Chattanooga, is part of SETDD’s service area but not the RPO.

Howell Moss, mayor of Marion County (west of Chattanooga), says that regional cooperation with support from the SETDD is nothing new for most of the RPO participants. “We’ve basically become a family of government officials,” Moss says. “You may be at the table with some guy you thought you didn’t like and find out that you have so much in common you become close friends. [And] when 10 counties and cities walk in together and say, ‘We all need this,’ it’s a pretty strong political force.”



Local officials and transportation stakeholders discuss transportation needs through the region’s RPO. Photo courtesy of TDOT and the state’s RPOs.

Rural and small-city elected officials often know quite a bit about road building and road maintenance, and all of them know important things about their own areas, such as where people in their areas work and shop and where schools and hospitals are located. However, there’s nothing parochial about the outlook of the elected officials on the RPO executive board. They think in regional and even global terms. In the process of making tough choices among potential highway projects, they have helped the state reframe some of its projects in the broadest possible terms.

The Southeast Tennessee RPO held its first decision-making meeting in January 2006. Its mandate was to select a top-priority potential project to send to TDOT with a “request for study.” These studies clarify issues, identify potential solutions, discuss potential envi-

ronmental impacts, and develop very approximate cost estimates. Once a study is completed, the project becomes eligible for funding consideration, and the RPO executive board can formally vote on whether it tops their list of priorities. TDOT solicits this input annually. After considering the options offered by TDOT, the RPO executive board chooses one and submits a “request for funding.” TDOT will then either include the RPO’s endorsement in its own request for federal funds or explain in detail why it believes some other option is preferable. If the project is not ultimately included in the state program, TDOT and RPO officials discuss the reasoning.

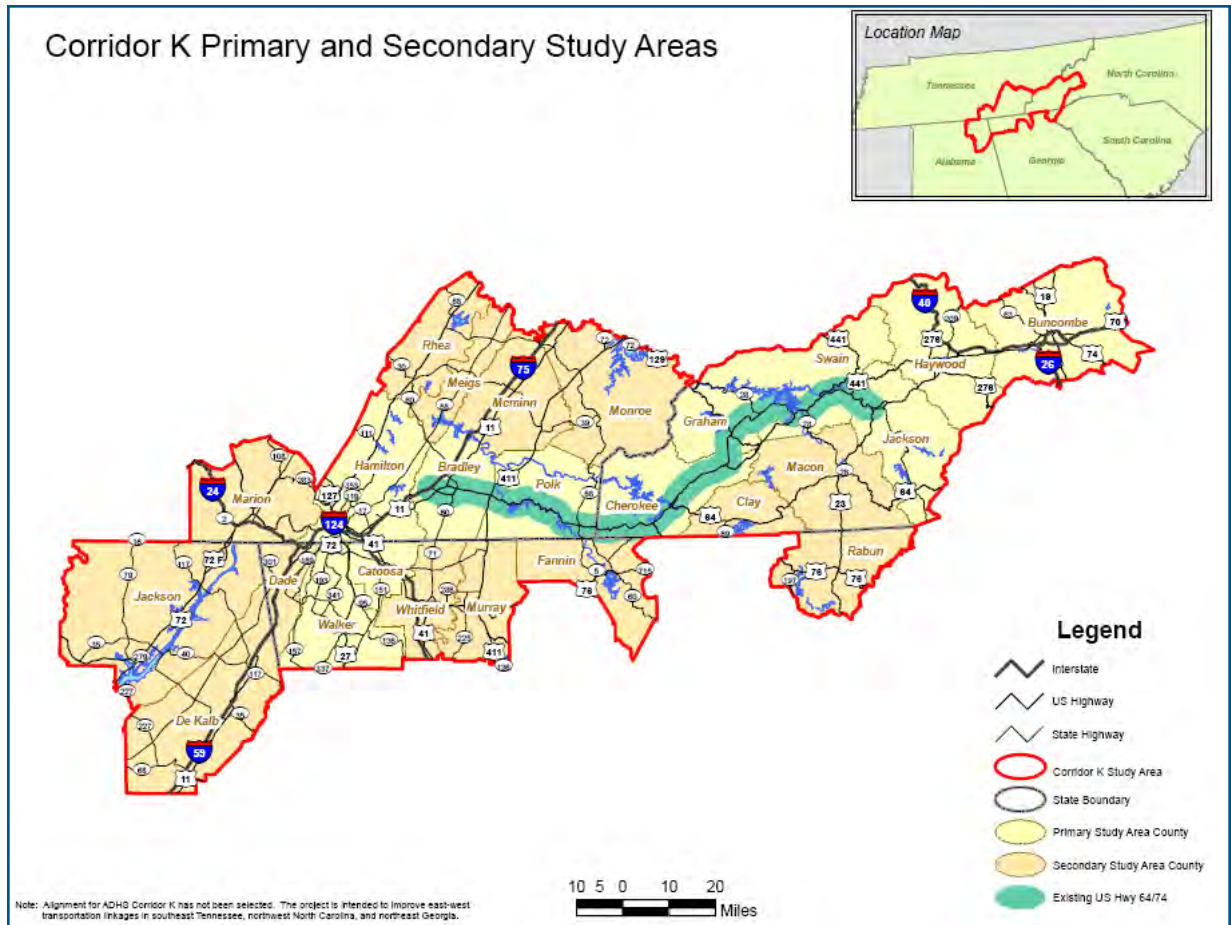
By the end of the 2006 planning cycle the RPO winnowed an initial list of 27 potential projects down to one. It asked for a study on how best to eliminate a bottleneck at an eight-mile stretch of State Highway 30. The decision was based on the local officials’ sense of what would best serve regional economic development.

The bottleneck in question is located in Rhea County, near Dayton, but many of the direct benefits of eliminating it will be realized in Bradley County, part of the Cleveland Metropolitan Statistical Area, about 30 percent of whose workforce is employed in manufacturing. An upgraded Highway 30 will facilitate the movement of freight northwest from Bradley County manufacturing plants to customers near Nashville, the state’s capital, without the necessity of circling around Chattanooga to the southwest along already crowded Interstate highways. At its northwestern end Highway 30 joins “Corridor J” of the Appalachian Development Highway System (ADHS), a network of four-lane, limited-access

highways whose routes were shaped by economic development priorities, as distinct from serving more densely populated areas.

Stevens notes that TDOT, in deciding where to develop its most detailed project reports, must focus largely on near-term considerations – for example, how manufacturing plants or housing developments that either exist or are on the drawing boards will affect traf-

fic patterns. By contrast, thinking of highways as corridors for the movement of goods must focus on their long-range potential to contribute to the economic growth of a substantial part of a region. Stevens indicates that the Southeast Tennessee RPO’s corridor-level emphasis is stimulating TDOT to give more emphasis to corridor-related planning.



It’s about Globalization

Everyone agrees that the Southeast Tennessee RPO has drawn attention to the importance of completing the last remaining Tennessee segment of ADHS “Corridor K,” which would provide a fairly direct east-west connection between Chattanooga-Cleveland and Asheville, North Carolina. Largely in response to Southeast Tennessee RPO advocacy, TDOT has funded a major study of improvement options. Results of the study are expected by the end of 2007. Stevens and Jones each emphasize that the consultants conducting the study have been challenged to think creatively, especially since Highway 64 provides a textbook case on the complexity of regional transportation planning.

Kim Harpe, a SETDD planner who serves as the district’s liaison with the RPO and its committees, explains the importance of this highway for regional economic development.

“Imagine that you are looking at the face of a clock. If Chattanooga is at the center, we have transportation at one o’clock, five o’clock, seven o’clock and 10 o’clock. But between one and five, we don’t have a thing.”

– Kim Harpe, Southeast Tennessee RPO Coordinator



Roads and waterways are significant freight corridors, and they contribute to the scenic qualities of the region. Barge image courtesy of TDOT.

“Imagine that you are looking at the face of a clock,” Harpe says. “If Chattanooga is at the center, we have transportation at one o’clock, five o’clock, seven o’clock and 10 o’clock. But between one and five, we don’t have a thing.”

From this Chattanooga-centric perspective, Asheville lies slightly past two o’clock on the far side of the Great Smoky Mountains. On a highway map, it’s linked to the Chattanooga area by an existing east-west highway along the Corridor K route – U.S. Highway 64/74. This route has been designated as part of the national strategic highway network since the Eisenhower administration. But no one would consider Highway 64 adequate for long-haul trucking or even heavy tourist traffic.

For about 16 miles on the Tennessee side of the state boundary, the highway consists of two narrow lanes that wind along the Ocoee River. This stretch of road offers a beautiful drive in good weather. On weekends it is clogged with people out for a day of kayaking or whitewater rafting. (The Ocoee

River Gorge was the site of the 1996 Olympic Whitewater events.)

Even on a pleasant weekday when traffic is light, it can be unnerving to travel downhill just ahead of a logging truck or to meet one coming around a curve, some of which have almost no road shoulders. Most wouldn’t be surprised to hear that two trucks have already overturned this year. In late 2005, a rock slide closed the road entirely for almost two weeks.

This segment of Highway 64 lies within rural Polk County, over half of whose land area is national forest. Improving the road through the Ocoee River Gorge would be a godsend locally. Mountains split the county into two parts that are connected only by that sometimes impassable section of highway. Although its population is only about 15,900, Polk County has to pay for duplicate personnel and equipment in areas like road maintenance, law enforcement and education. It is the only Tennessee county without a public library – because its officials cannot afford two libraries and are unwilling to build one that a substantial number of residents would find very hard to use.

So it is no surprise that Mike Stinnett, Polk County Executive, would like to see Highway 64 upgraded as soon as possible, but he’s under no illusions that anyone would spend the kind of money this project will

cost to help any single small county save money on public services. “Polk County will benefit from this road,” Stinnett says, “but if this were just a Polk County issue it would never be built. Corridor K is more than a Polk County issue and more than a southeast Tennessee issue. It’s a Tennessee, north Georgia, and western North Carolina issue. It will benefit Chattanooga and Asheville even more than it will benefit us.”

“Polk County will benefit from this road [Corridor K], but if this were just a Polk County issue it would never be built. It’s a Tennessee, north Georgia, and western North Carolina issue.”

**– Mike Stinnett,
Polk County Executive**



Bridge and railway photos courtesy of Dan Reynolds Photography.

Jerry Bohannon, president and CEO of the Cleveland-Bradley Chamber of Commerce, strongly agrees. He explains that goods moving anywhere to the east from Bradley County must travel either through Atlanta or Knoxville, restricting local companies' ability to reach customers in North Carolina via Asheville. An improved Corridor K would also provide an alternative four-lane route to Atlantic seaports to the north of Savannah, Georgia. All such road traffic now goes via Atlanta.

Bohannon is especially gratified that the rural counties in the RPO have backed the eastern corridor concept almost as strongly as those in the east. "Not to be trite," Bohannon says, "but it's about globalization. The western counties see the connection. They are part of the global scheme of things. We've got companies in Grundy County [a small rural county on the western edge of the region] that are Japanese-owned. We're trading around the world."

We Are All Environmental Stakeholders

But decisions on how to improve Highway 64 involve more than evaluating its potential to help Tennessee's manufacturers reach national and international markets. The Ocoee River Gorge has not only magnificent scenery but wilderness, wetlands and historic mining areas. Stevens points out that while many participants in the planning process emphasize the economic importance of an east-west corridor for the movement of goods, others believe that the Ocoee River area should be kept as pristine as possible, preserved for tourism and low-impact economic activities like rafting. "These are not necessarily mutually exclusive visions," Stevens says. "You can build a facility with four lanes and a slightly reduced design speed that still serves the need for freight movement. For all we know at this point, we could end up preserving the old route and building an additional alternative that has a smaller footprint."

Jones, speaking from the SETDD regional perspective, agrees. "We are all environmental stakeholders. There isn't anyone working on the project that wants to see the environment adversely affected."

Some cost estimates for improving Highway 64 exceed \$1 billion, but Stevens points out that those numbers are based on assumptions that may prove irrelevant. She adds that Tennessee has unspent ADHS funds but also has obligations for unbuilt segments of Corridor J. "We sometimes hear that Tennessee is sitting on the money and just needs to make a decision," Stevens says. "That's not the case at all. We don't have a clear idea of what the cost will be until we determine what the corridor will look like. It's not even worthwhile speculating until we've got the overall vision. Everybody says, 'I understand the other guy's view.' We just need to reconcile them."

Preserving wetlands and providing overlooks for viewing mountain scenery are not the only environmental concerns that both state and regional planners must consider. Most of the population in the Chattanooga area lives in the long Tennessee River valley between mountain ridges, through which



RPO coordinators from across the state meet together on a regular basis. Photo courtesy of TDOT and the RPOs.

“Modes of transportation should not be considered individually – as if it were an airport project vs. a road project. The two need to complement each other.”

*– Jeanne Stevens,
TDOT Director of
Long-Range Planning*

nooga. Colby explains vehicles burn fuel less efficiently at high speeds, resulting in more exhaust pollution per mile traveled. High speeds are also associated with accidents that can turn long stretches of Interstate highway into something like parking lots where everyone’s engine is idling.

run Interstates 75 and 59. Bob Colby, director of the Chattanooga-Hamilton County Air Pollution Control Bureau, explains how traffic and coal-fired power plants in the region affect air quality. “Here’s what happens geographically,” Colby says. “As frontal systems move from northeast or southwest of us, they sweep all this stuff like you’re sweeping the front of the house. They sweep it under the doormat – the foothills of Appalachian Mountains. And that’s us.”

Colby notes that until about 20 years ago “very few people gave any thought to air quality and how transportation affects what we have to breathe.” One piece of evidence that this is changing, he says, is a recent decision to lower speed limits for large trucks passing through the area immediately around Chattanooga.

What would be better still, of course, is to reduce the number of vehicles on the highways – or at least keep their numbers from increasing faster than roads can be improved. This is one reason the state of Tennessee’s long-range transportation plan is multi-modal. It includes sections on all the large-scale transportation modes – roadways, rail, waterways and aviation facilities.

RPOs are charged with taking all these modes of transport into account when identifying needs and recommending priorities to TDOT, even though road construction projects absorb most of their attention in practice. Although railways, waterways and air transport are primarily regulated by independent agencies – with some oversight by TDOT – the Southeast Tennessee RPO holds regular briefings on these topics.

For example, both Norfolk Southern and CSX run freight lines through Chattanooga. Stevens notes that RPO discussions on improving U.S. Highway 64 stimulated discussion on how short-line rail transport can contribute to economic development. On a more speculative scale, Jones mentions that a high-speed passenger train

connecting Chattanooga to Atlanta (and someday to Chicago) is high on the region’s wish list. It might, she says, eliminate the necessity of building a second airport near Atlanta by taking pressure off that city’s super-busy Hartsfield International Field.

Harpe notes that smaller counties throughout SETDD’s area are actively pursuing plans to upgrade their airports. Stevens adds that federal and state planners increasingly recognize the role that small airports can play in attracting industries that need delivery of critical parts on short notice or regular visits by corporate executives. An RPO, she says, can evaluate local road improvements that are strategically important to air traffic. “Modes of transportation should not be considered individually – as if it were an airport project vs. a road project,” she says. “The two need to complement each other.”

U.S. Congressman Zach Wamp (R-TN) represents Tennessee's 3rd Congressional District. A member of the House Committee on Appropriations, he has been an advocate of improvements to the Chickamauga Lock on the Tennessee River, near Chattanooga. He responded to questions in a phone interview conducted in August.

Q. How do rivers fit into the national transportation system?

A. About 85 percent of the product that leaves this country travels at some point on an inland waterway. I believe in surface transportation. I believe in trucking. Two of the nation's top 10 trucking companies are in my district - U.S. Xpress and Covenant Transport. And clearly rail has played a big role in the history of our country. But the cleanest and most efficient way to transport these goods is through the river.

Q. What does that mean for southeastern Tennessee?

A. If the Tennessee River closed - and it's not even one of the largest tributaries in the inland waterway system - it would put about 150,000 more trucks on the road in the Tennessee Valley region. We can't afford any more trucks on the road than we have right now because our infrastructure has not been upgraded. Many of the accidents on the road are caused by congestion and too many trucks, and it's not as environmentally responsible as taking the cargo on the river.

Q. Why do you say, "If the river closed...?"

A. The aging Chickamauga Lock has a phenomenon called concrete growth, which was identified almost 20 years ago by the Tennessee Valley Authority. It has holes and cracks in places where the concrete is falling apart. We've maintained it at an average cost of about \$1.5 - 2 million per year for the last 15 years. At some point around 2012 we must have a new lock, or this will become a choke point. It's

already a bottleneck because all the other locks in the river can accommodate side-by-side barges.

Q. If the lock closed, wouldn't most barge cargo move by rail, not trucks?

A. You don't have a lot of leeway in negotiating new contracts or additional shipments with the railroad industry. But you do with over-the-road trucking.

Q. Isn't the lock in the process of being replaced?

A. Yes, the new lock will accommodate two barges going through side by side, instead of one barge at a time. It's a seven-year, \$300-million project. We're in our third year of funding. The funding for fiscal year 2008 will let us begin building a coffer dam below the lock, and you'll see part of the river drying out to prepare for construction. We believe that meeting our schedule of having the new lock by 2012 is necessary to avoid any possibility of closure.

Q. Is there any doubt about the ability of the U.S. Corps of Engineers to meet that schedule?

A. We don't fund these water projects like we fund battleships, where all the money is put in a pot, and then you go build it. It's an annual construction fund project. If all of a sudden Congress would stop funding it, construction on the Chickamauga would end. The Corps of Engineers is spread thin. It takes political leadership and cooperation to make sure that the Corps has resources and priorities to keep major projects like the Chickamauga lock going.

Q. Does a major river construction project raise concerns about adverse environmental impacts?

A. We're disrupting the natural environment of the Tennessee River to avoid the emissions, the congestion and all the problems associated with forcing this much commodity traffic over to the roads. When we said, "We are going to have to dry it [a section of river bed] out," environmentalists didn't complain because they know that the cleanest way and most efficient way to transport goods is by the river.



Left: The Army Corps of Engineers tests models of potential lock upgrade features. Right: An inspection shows some leakage at the current lock.

Images from the U.S. Army Corps of Engineers.

NEXT-GENERATION TRANSPORTATION TECHNOLOGY

When you're working on transportation for the long term, it's nice to have a world-class research laboratory in town. Local planners see the Advanced Transportation Technology Institute (ATTI) and its affiliate, the Advanced Technologies for Transportation Research Program (ATTRP) on the campus of the University of Tennessee Chattanooga (UTC), as major assets to the region, and professionals on staff return the compliment.

ATTI is a national nonprofit organization that advances clean transportation technologies to promote a healthy environment and energy independence. Founded in 1992 as the Electric Vehicle Transit Institute, it has since broadened its mission to include technologies like hybrid vehicles, biofuels and hydrogen-powered fuel cells. Its staff has advised on projects across the nation - solar-powered applications at an airport, a "green" residential development whose developer plans to offer an electric vehicle along with every house, and public transit projects in cities, campuses and National Parks.

The ATTRP is a program of applied research housed in the UTC College of Engineering and Computer Science. Its focus is on testing, demonstration and education of environmentally-friendly transportation options. Its capabilities will soon be enhanced as a result of the university's acquisition of a dedicated vehicle test track and a 10,000-square-foot research facility from the Tennessee Valley Authority.

The long-range goal, says Dan Simpson, chief research scientist, is to create a "pull" market

rather than a "push" market - to create demand for alternative transportation technologies by demonstrating their real-world benefits.

Simpson notes that the fleet of electric buses operated by the Chattanooga Area Regional Transportation Authority (ARTA), maintained by technicians with 15 years of hands-on experience and performance data, "makes our job easier."

"Chattanooga's downtown is a tourist destination and a magnet for residents, so it's a good place to demonstrate what works," that is, clean, next-generation transportation. Simpson continues, "The living laboratory in Chattanooga and the can-do attitude make this a natural home base for us."

Although most of the ATTI work involves vehicles and fuels, system issues aren't neglected. For example, to increase ridership on the "Mocs Express" (a free-to-students ARTA campus route nicknamed for the college's athletic teams) the ATTRP staff is working on Intelligent Transportation System (ITS) applications. A prime example is a traveler information system accessible via handheld devices. "With this," Simpson says, "a student can look at a PDA and see when a bus will actually arrive. We're used to hopping in our own vehicles and driving off. What this system does is change the culture and experience of transit ridership."

For more on the Advanced Transportation Technology Institute, call 423.425.5454 or visit www.atti-info.org.



Like freight trains, river barges can also provide a partial substitute for truck shipping. Terah Huckabee, a vice president for Parker Towing Company, a regional marine transport company based in Tuscaloosa, Alabama, says that on average a fully loaded river barge takes 63 trucks off interstate highways. Parker Towing moves over a million tons of freight per year over rivers in Tennessee, Alabama and Mississippi, some of it on the upper (eastern) branch of the Tennessee River, which flows past Chattanooga to connect with the Tennessee-Tombigbee Waterway just south of Memphis. [For more details on the Tennessee River, see interview with Rep. Zach Wamp (R-TN), pp. 7.]



Image courtesy of Norfolk Southern Corporation

Huckabee is a member of the Southeast Tennessee RPO's technical committee. He says the organization has been “good at pulling in just about every interest that’s affected,” making it, of all the organizational entities that his company works with, probably “the broadest-based.”

“What we bring to the table,” Huckabee says, “is understanding the interaction of the waterways to the total transportation system. What we hope to get back is that we want everybody to be mindful of waterways when planning for other modes.”

Regional Economic Arteries

Finally, if the economy of a region depends on major transportation arteries like Interstate highways, railroads and rivers, the livability of a region depends on the health of its transportation capillaries – things like walkways, bikeways and urban transit system. The Tennessee state transportation plan addresses these less dramatic transportation modes, and in this respect, Chattanooga can consider itself ahead of most places. Colby, whose official concern is air quality, notes that Chattanooga “has been on the forefront of innovation where public transit is concerned.” The city has a fleet of 18 small, battery-powered shuttles that emit no exhaust fumes. Rides within the downtown area are free.

Looking toward the future, major assets to southeastern Tennessee planners include the University of Tennessee at Chattanooga (UTC) and the Advanced Transportation Technology Institute (ATTI), a private nonprofit organization housed on the university campus. The Institute gives regional planners easy access to experts who consult on projects around the world. [For more on ATTI, see box on pp. 8.]

The Institute is also a resource for the next generation of highway engineers and transportation planners studying at UTC. Their courses naturally cover the technical information required for building and managing safe and efficient highways. But Ignatius Fomunung, a UTC associate professor of civil engineering, says he emphasizes an additional point to his students: “You cannot divorce transportation planning, or engineering, from the political process.”

That reminder provides a capsule summary of the TDOT rationale for establishing Tennessee RPOs to encourage broad-based and regular input into transportation planning and project selection. And, as with the region’s transportation system as a whole, saying that the process is off to a good start may be something of an understatement. The TDOT initiative recently received an award for “best plan/program implementation” from the Tennessee chapter of the American Planning Association. “It’s gone fantastically,” Stevens says. “And using economic development districts to facilitate the program has helped us do better coordination between transportation planning and economic development.”

To contact the Southeast Tennessee Development District and RPO, call 423.266.5781 or visit www.sedev.org.



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