

Public Transportation Division

Review of Texas' Regionally Coordinated Transportation Plans

July 2012

Prepared by the Texas Transportation Institute for the Texas Department of Transportation Public Transportation Division



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TECHNICAL MEMORANDUM

Task Report #1, Regional Transportation Coordination Summary TxDOT IAC Project 409145-00101, Review Regional Transportation Coordination Plan Updates

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TASK REPORT:

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EXECUTIVE SUMMARY

Stakeholders in regions throughout Texas recently updated (or are in the process of updating) regionally coordinated transportation plans according to Federal Transit Administration guidance. Initial plans were presented to the Texas Department of Transportation Public Transportation Division (TxDOT-PTN) in 2006 and 21 of the 24 planning regions presented updated plans in 2011 or 2012. TxDOT-PTN expects updated plans from other regions later in 2012.

The process for developing each region's plan included taking an inventory of transportation resources, conducting a comprehensive needs assessment (of the public's transportation needs) and gap analysis, and then as part of an inclusive process, setting priorities and determining goals, objectives and strategies for addressing these identified needs.

Diverse stakeholders participated in an inclusive process to update the plans. These included urban and rural transportation providers, workforce development agencies, metropolitan planning organizations, councils of government, regional planning commissions, health and human services providers, cities and counties, educational institutions, members of the public, and many others.

The regional stakeholders selected a variety of approaches for conducting the needs assessments. While all regions used surveys to capture information on needs, there was a range of other approaches used for needs assessment, including the use of focus groups, public meetings, workshops, and one-on-one discussions with stakeholders.

In addition to using surveys for needs assessments, several regions used demographic data and analytic tools to document transportation needs. Every region presents a unique set of needs and challenges; however, several common needs emerged across the state. The top five needs throughout the state are:

- Greater public and stakeholder education of available transportation services.
- More commuter and employment related transportation services.
- Coordination between the regions, not just within a region itself.
- Need to increase the span of service to include evenings and weekends.
- More service provision and connections in rural areas.

The regional stakeholders established diverse goals and presented varied strategies to address needs identified in the respective assessments. The research team found that each region had slightly different approaches to the strategy and planning component of the coordinated transportation plan updates.

The coordination of transportation planning and services is an iterative process; therefore, stakeholders have opportunities to build on past plans and projects. To this end, some regional plans made note of past strategies, tactics, and initiatives that addressed various concerns such as recruiting non-traditional partners, analyzing service levels, marketing, cohabitating services, and developing commuter services. Some of these past projects are mentioned in this report.

INTRODUCTION

This technical memorandum provides an overview of the updated regionally coordinated transportation plans prepared in 2011-2012. The Texas Department of Transportation, Public Transportation Division (TxDOT-PTN) requested researchers from the Texas Transportation Institute (TTI) to review these plans. The goal of this report is to provide a summary of content of the newly updated plans, the process used to create them, and highlight some examples of past projects mentioned in the plans.

BACKGROUND

Texas House Bill 3588, signed into law in 2003, amended Subtitle K, Title 6 of the Transportation Code by adding Chapter 461 (Statewide Coordination of Public Transportation) which emphasizes maximizing the benefits of the state's investment in public transportation service through coordination.

The Texas Transportation Commission tasked TxDOT-PTN with assisting the 24 state planning regions (-see Figure 1) in developing coordinated public transportation and human service transportation plans in order to provide services more efficiently and effectively, reduce waste and maximize transportation resources. More specifically, Chapter 461, Section 461.004 of the Transportation Code states that TxDOT is responsible for identifying:

- Overlaps and gaps in the provision of public transportation services, including services that could be more effectively provided by existing, privately funded transportation resources.
- Underused equipment owned by public transportation providers.
- Inefficiencies in the provision of public transportation services by any public transportation provider.

The above public transportation goals are reflected in the individual regions' goals and objectives of the first round of coordinated transportation plans, developed in 2006. Subsequently, the individual regions began carrying out their respective plans.

Each planning region has a designated lead agency responsible for leading and facilitating the partner agencies and stakeholders in identifying transportation needs and viable solutions for addressing these needs, as well as developing and monitoring the regionally coordinated transportation plan. Lead agencies include metropolitan planning organizations, councils of government, transportation providers, cities, counties, and other entities.

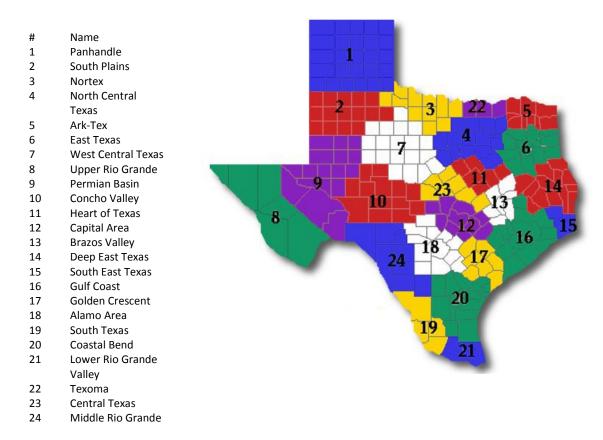


Figure 1. Texas State Planning Regions.

As TxDOT-PTN prepared to carry out its Transportation Code Chapter 461 responsibilities, the federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law in 2005. This law required locally developed, coordinated public transportation and human services plans for many federal-aid transportation programs. The 24 planning regions in Texas developed regionally coordinated transportation plans consistent with state and federal requirements. In addition, the Federal Transit Administration's guidance states that regional transportation coordination plan updates occur every four years for non-compliant areas and every five years for compliant areas. Figure 2 depicts a timeline of dates for the regional transportation coordination process.



Figure 2. Timeline of Texas' Regionally Coordinated Transportation Planning Effort.

Table 1 lists regions with updated plans as of May 2012 and the respective lead agency for each region. The full plans can be found under the Texas Regions tab at www.regionalserviceplanning.org. This website serves as an information clearinghouse for planning regions and contains information on statewide regional planning efforts.

Table 1. Regional Transportation Coordination Plans Received as of May 2012.

REGION	REGION NAME	LEAD AGENCY
NUMBER		
1	Panhandle	Panhandle Regional Planning Commission
2	South Plains	City of Lubbock/Citibus*
3	NORTEX	Nortex Regional Planning Commission
5	Ark-Tex	Ark-Tex Council of Governments
6	East Texas	East Texas Council of Governments
7	West Central Texas	Central Texas Rural Transportation District
8	Upper Rio Grande	County of El Paso
9	Permian Basin	Midland-Odessa Transportation Organization
10	Concho Valley	Concho Valley Council of Governments
11	Heart of Texas	Heart of Texas Council of Governments
12	Capital Area	Capital Area Metropolitan Planning Organization
13	Brazos Valley	Brazos Valley Council of Governments
14	Deep East Texas	Deep East Texas Council of Governments
15	South East Texas	South East Texas Regional Planning Commission
16	Gulf Coast	Houston-Galveston Area Council
17	Golden Crescent	Golden Crescent Regional Planning Commission
18	Alamo Area	Alamo Area Council of Governments
20	Coastal Bend	Transportation Coordination Network of the Coastal Bend
21	Lower Rio Grande Valley	Lower Rio Grande Valley Development Council
22	Texoma	Texoma Area Paratransit System (TAPS)
23	Central Texas	Central Texas Council of Governments
E.		

^{*}South Plains Association of Governments is set to assume lead agency responsibilities for Planning Region 2 in the fall 2012.

Most regional stakeholders began updating the coordinated plans in 2011, iteratively building on the initial coordination work that began in 2005. In the past six years, Texas experienced rapid population growth, directly affecting many of the regions. In this round of plan updates, regional stakeholders looked to focus on new and/or updated goals and objectives, and revisited the initial planning process. TxDOT-PTN supplied the regional stakeholders with general guidance for updating the regionally coordinated plans. The guidelines, presented as a table of contents for the plan update, contained nine basic components, which were not intended to mandate the structure but to outline considerations for the update. The table of contents is as follows:

- I. Introduction.
- II. Transportation Resources in the Region.

- III. Comprehensive Assessment of the Public's Unmet Transportation Needs and Inefficiencies in the Delivery of Transportation Services.
- IV. Planning for Comprehensive Services.
- V. Efforts to Streamline Parallel Planning Processes.
- VI. Staff Structure and Process to Sustain Planning and Services.
- VII. Vision, Mission, Goals, and Objectives.
- VIII. Leveraging Resources/Sustainability.
 - IX. Performance Measures to Evaluate Effectiveness.

The majority of the plan updates followed the above table of contents. Those plans that did not still contained the basic components, and some regional stakeholders provided additional information. For example, the Heart of Texas region expanded the outline to include specific descriptions of regional projects being planned or in progress, and plans for the Concho Valley and Permian Basin regions included detailed information on the region's history.

OVERVIEW OF PLANS

Twenty-one of the 24 planning regions completed an update of their respective regional plan between the summer of 2011 and spring of 2012. Completed plans from other regions are expected later in 2012.

Diverse stakeholders participated in the process to update the plans. These included urban and rural transportation providers, metropolitan planning organizations, regional planning commissions, workforce development agencies, councils of government, health and human service providers, cities and counties, educational institutions, and many others. Some of the regional stakeholders used consulting firms to assist with updating the plans; however, the majority did not.

The TTI research team reviewed the plans in two separate phases. In phase one, the team quickly scanned the plans to get a feel for content, common themes, and overarching goals. The initial findings from phase one were provided in support of the rural transportation needs documented in the Texas Rural Transportation Plan, which is the rural component to the Statewide Long-Range Transportation Plan 2035.

In phase two, the research team reviewed the plans in more detail, looking in depth at the content of the newly updated plans, the process used to create them, and examples of past projects. For the review, the team utilized the table of contents provided by TxDOT, as well as an online Google advanced search tool, which allowed the team to search for common words and phrases used throughout the documents. The sections that follow highlight the main observations from the research team.

STAKEHOLDER ENGAGEMENT

Stakeholder engagement is a significant component to the regional transportation coordination planning process. Stakeholders were to be a part of the comprehensive plan updates, included in

the resource inventories, needs assessments, strategies, and planning to ensure a fully inclusive process. Stakeholders include transportation providers, representatives of those who use transportation services, health and human services, workforce, councils of government, and metropolitan planning organizations, etc. One example comes from the Alamo Area, where the regional steering committee established six different subcommittees in addition to the steering committee to focus more closely on the region's needs. The subcommittees included additional representation from the following groups:

- Health and human services.
- Rural senior transportation.
- Transit agencies.
- Urban senior transportation.
- Veterans.
- Workforce.

The plans suggest that regional lead agencies and other regional stakeholders worked diligently to bring non-transportation providers as well as transportation providers to the table. In 2006, the inclusion of non-transportation partners in the regional planning process was one of the biggest challenges. However, based on the recent plan reviews, all of the plans updates had representation from non-traditional partners including social services agencies, health care agencies, work force agencies, faith-based organizations, and educational institutions, among many others. For example, the Golden Crescent Regional Planning Commission incorporated input from Victoria College, a key stakeholder in the region. Many of the college's students rely on public transportation to get to classes. Additionally, a representative from the college was present at all of the regional transportation coordination meetings and was involved in the development of the regional goals and objectives. The Upper Rio Grande transportation coordination steering committee included representatives from the local cab company, the Frontera Womens' Foundation, and the Big Bend Community Action Committee, further examples of partner diversity.

TRANSPORTATION RESOURCES INVENTORY

A transportation resource inventory is a critical step in the regional coordination planning process. In order to proceed with the needs assessment, the regional stakeholders conducted an inventory of all transportation resources throughout the region. The inventory was to include all agencies responsible for transportation planning in the region as well as a thorough listing of transportation providers, including public, private, non-profit, community-based, health and human service, and workforce agencies. The regional stakeholders varied their respective approaches to the transportation resource inventory, but all of the plans included a listing of resources in the region. For example, the Ark-Tex region list included the council of governments, the MPO, transportation providers, non-profit organizations, health and human services agencies, and representatives of veterans' affairs and the *Veterans' aAdministration. South Plains took a slightly different approach, providing a comprehensive listing of all of the transportation providers in the region in a vehicle inventory table. Permian Basin embraced both of the approaches, including a listing of the transportation planning agencies and the transportation providers in Planning Region 9, and then capturing a complete inventory of all available vehicles in the region by agency.

The Coastal Bend region did a thorough job in listing and discussing transportation resources. The region also provided locations of trip generators to aid in the needs assessment and service analysis. In addition, the Coastal Bend regional plan provides detailed operating information on the public transportation providers in the region. This allows stakeholders to gain a better understanding of the performance of the provider and know if the provider could improve efficiency or effectiveness and in turn improve transportation in the region.

NEEDS ASSESSMENT/GAP ANALYSIS

Identifying transportation needs of individuals is a necessary step in developing a transportation plan that is relevant and strategic. Once needs are identified, then stakeholders can establish or reaffirm goals and objectives, identify viable solutions to these needs, set priorities, and determine strategies and specific activities to address these needs.

Many factors contribute to the public's need for transportation services. One factor is population growth or decline. Texas experienced rapid overall population growth since the 2000 census (see Table 2). As of the 2010 census, the population in Texas was more than 25.1 million, a 20.6 percent increase over the 2000 population. Texas' population growth was almost double the national rate of 9.7 percent. Despite the fact that the rural population as a percent of overall state population was less in 2010 than in 2000, some rural areas of Texas also experienced growth.

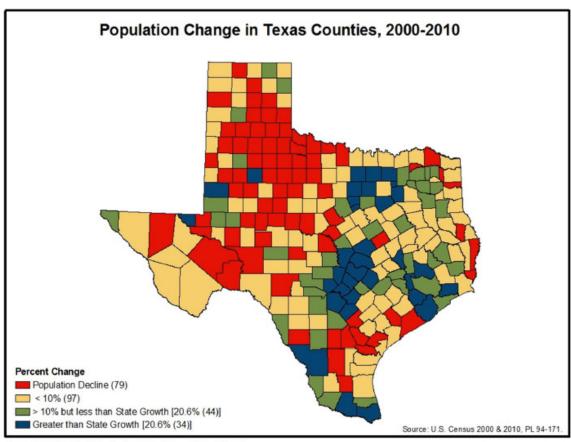
Table 2. Texas Population Growth as of the 2010 Census

			<u>Percent</u>
	<u>2000</u>	<u>2010</u>	<u>Growth</u>
United States	281,422,000	308,746,000	9.7%
Texas Total	20,852,000	25,146,000	20.6%
Urbanized Population	15,089,000	19,192,000	27.2%
Rural Population	5,763,000	5,954,000	3.3%

Population growth or decline presents distinct and critical challenges concerning the public's access to health care services, employment services, and efficient transportation services in both urban and rural areas. People who live in rapidly growing urban areas as well as those in rural areas need transportation services that are not only efficient, but also accessible.

People who live in rapidly growing urban areas, may find themselves in housing areas with weak service links to common destinations. Distance to a stop, infrequent schedules and multiple transfers become barriers. In areas with extreme traffic congestion, the provision of timely and efficient services may prove to be a challenge to the transit agency.

Approximately 20–25 percent of the regions experienced population *loss*, especially parts of West Texas. Figure 3 depicts population change in Texas counties.



Prepared by the Hobby Center for the Study of Texas at Rice University.

http://hobbycenterrice.edu

Figure 3. Population Change in Texas Counties, 2000-2010.

Remote and rural areas with declining populations typically have a disproportionate number of individuals who are most vulnerable and most dependent on public transportation—people with low incomes, older adults, and individuals with disabilities. Here transportation agencies are challenged by long distances between their headquarters and customer origins and destinations. Affordability, to both the agency and the customer directly impact transportation options.

Approach to Regional Needs Assessment

The regional stakeholders used a variety of approaches to conduct needs assessments. All of the regions used surveys to capture information on needs, however some used other approaches, such as focus groups, public meetings, workshops, and one-on-one discussions with stakeholders.

Surveys

Surveys were a popular means of collecting information on regional needs. Data and information collected through the survey process afforded regional stakeholders opportunities to plan strategically and with confidence as planners used data to design activities to meet specific needs identified through the survey process.

Planners and researchers distributed questionnaires to stakeholders through a variety of media, including web-based, paper, and telephone calls. Several regional stakeholders also published and delivered the surveys in English and Spanish. The surveys were administered in two basic ways: a) some regions distributed questionnaires to representatives of social, health and human services providers, asking these representatives to respond on behalf of their clients, or b) regions distributed the questionnaires directly to individual customers, potential customers, and other stakeholders.

Several of the smaller regions struggled with the information gathering process due to limited resources. A few of these regions leveraged local resources to complete the needs assessment. For example, the Panhandle, South Plains, and Coastal Bend regions tapped local universities (Texas A&M University—Canyon, Texas Tech University, and Texas A&M University—Kingsville, respectively) for assistance with developing and testing the survey tools. The universities were able to provide assistance with developing statistically valid surveys, including designing meaningful questionnaires, developing sound methodologies for distributing and retrieving the questionnaires, and compiling and analyzing the data so that the regions could be confident that the activities being planned are data-based and will address local need.

Focus Groups

Focus groups allow a more intimate setting, where participants are able to freely express thoughts, opinions, and comments on specific topics related to transportation need within a particular region. A few of the regional stakeholders opted to use focus groups to gather information for the needs assessment. The South East Texas region, for example, collaborated with the Veterans Administration to hold focus group sessions to garner input on specific veterans' transportation needs.

Some regions used a variation of focus groups. The Permian Basin region, for example, utilized a larger public meeting setting to form focus groups for input. As excerpted from the plan, in August 2011, regional stakeholders, along with representatives of the health and human services community and other interested participants met for a daylong session to assess the status of transportation in the Permian Basin region. The attendees were broken into groups to reflect the categories that required discussion, and then gave their vote as to the status of each evaluation question. The meeting also helped in the arena of "Open Discussion of Ideas" between transportation providers and non-transportation providers.

Meetings and Workshops

Several of the regional stakeholders held public meetings and workshops in order to learn about the public's transportation needs. The lead agency in the Gulf Coast region hosted a local workshop in order to address the challenge of creating a more coordinated and comprehensive transportation service delivery system. The workshop was organized through the United Way of Greater Houston. The purpose of the workshop was to better understand stakeholder agencies' transportation needs and to get acquainted with their representatives and staff from various non-profit organizations. In addition, the participants discussed transportation related challenges and potential solutions to address those challenges.

The Golden Crescent region stakeholder steering committee adopted the philosophy that the stakeholders should not wait for the public to come to them. Instead, the steering committee reached out to members of the public who have transportation needs, targeting potential stakeholders through customer service calls.

Most meetings across the state were traditional information-gathering and information-sharing events, but some regions tried different approaches to accommodate customers. For example, Ark-Tex, Capital Area, and Lower Rio Grande Valley regional stakeholders hosted meetings on buses to gain input from riders who might not otherwise attend a traditional meeting or workshop.

One-on-One Meetings

Some regional coordination efforts found personal interviews to be an effective way to collect data and gain insight on stakeholder transportation needs. For example, Upper Rio Grande regional transportation planners in Far West Texas obtained information through numerous one-on-one meetings with representatives of human services agencies throughout this vast region. These face-to-face meetings augmented other data gained through surveys, meetings, and telephone conversations. In addition, the meetings turned into an information sharing opportunity. In some cases, the representative from the coordination effort was able to directly solve human services transportation needs brought up in the meeting.

Transportation Need Index

To enhance the needs assessments, many of the regional stakeholders used demographic and geographic data to create a transportation need index. A transportation need index is used to determine the areas within a region with the highest transportation need based on economic and sociodemographic analysis. Planners in the South East Texas region, for example, identified transportation needs by overlaying demographic data. Planners used the data to establish criteria to define what makes an efficient transfer between transportation services in the region. As a result, the South East Texas planners were able to better measure service levels for underserved populations.

Identified Needs

Assessments revealed or affirmed many of the public's pressing transportation needs. Needs varied to some extent by region; however some needs were common across regions. The regionally coordinated transportation effort is intended to aid in serving the transportation needs of the entire community, especially the priority populations who are the most vulnerable and most dependent on public transportation. These priority populations include persons with low incomes, older adults, individuals with disabilities, veterans, and persons with limited English proficiency (LEP). Some regions have a high percentage of the population that does not speak English as a first language (32 percent in South Plains, for example). The majority of the regions mentioned the development of limited English proficiency plans; however, it is important for these regional stakeholders to be aware of the implications of demographic characteristics while planning for the future.

The priority populations were addressed in all 21 updated plans, and many of the plans directly stated how the needs of these populations were addressed throughout the region. The majority of the regional stakeholders stated a continuing desire to further address the needs of these populations throughout rural areas, specifically. For example, the regional stakeholders in West Texas expressed a growing concern over the aging population that is spread out across vast expanses of rural lands, making the provision of transportation a challenge to provide for more than one reason. In some cases, transportation provision simply becomes less and less cost effective as vehicles must traverse long distances to be accessible to customers. Also, population is decreasing in these same areas, creating new challenges to providing efficient transportation. This issue emphasizes the importance of continuing coordination among the region's transportation and human services providers.

All regional stakeholders committed to continuing coordination with social, health, and human service providers, including workforce. In some instances, funding is a barrier to providing more services to older adults, individuals with disabilities, and persons with low-incomes. Table 2 lists the five most frequently mentioned needs identified throughout the regions. Additional needs are discussed later in this section.

Table 2. Top 5 Needs Identified by Planning Region.

REGIONAL NEED	PERCENT OF REGIONS REPORTING
Increase awareness of available services	50
Provide more commuter/employment related transportation services	45
Coordinate inter-regional trips	40
Increase span of service (nights/ weekends)	40
Increase affordable transportation services in rural areas	30

Increase Awareness of Available Services

A continual challenge is simply addressing the lack of awareness about existing services. Over half of the regions reported that lack of awareness of available services is an issue, and that services provided in the region would be used if customers were knowledgeable of transportation options in the region. Many regions took the first step to combating this by working to establish a brand and create informational pieces for the public on the coordinated effort, goals, and available services, discussed further in the projects section.

Commuter and Employment Services

Approximately 45 percent of the regions recognized that the development of commuter services is a great need, second only to increasing awareness of available services. Commuter services may consist of express buses in urban areas and cities, but may also include Job Access Reverse Commute (JARC) routes or employer sponsored shuttles. As the population in Texas continues to grow, people are not only moving further away from city centers, but also have a need to access transportation that will take them from suburban neighborhoods to jobs in the central business district of the city. In rural areas, people from all over the region have a desire to access major employers that are potentially located miles from where they live.

Inter-Regional Connectivity and Gaps in Service

Stakeholders in many regions identified a need to better coordinate transportation services inter-regionally, among border regions and even across state borders. Many of the regional transportation coordination efforts are finding that with rapid growth and new destinations, there is a demand for inter-regional connectivity.

Although the regional stakeholders have made an effort to coordinate transportation within the region, specific service gaps still remain, especially to major destinations. Several regions expressed a need to provide access to institutions of higher learning. For example, the Panhandle region expressed a desire to provide transportation to the airport and the local community college based on customer feedback. Both locations are major destinations for the region, yet there is no transportation to either location. Panhandle was not the only region that expressed concerns over lack of public transportation to major destinations such as colleges and major employers.

Couched within the need to coordinate regionally is the need to coordinate fare systems, especially in urbanized areas. Some of the regional stakeholders portrayed a need to better coordinate fare systems based on customer feedback. Multiple fare systems are still seen as a barrier to coordination, especially in and around major cities, such as Austin, Dallas/Fort Worth, Houston, and San Antonio.

Span of Service

Stakeholders in many regions expressed a need to increase span of service to include additional evening and weekend services. This need ties into the desire for additional employment and commuter service as second and third shift workers seek to have access to public transportation for employment beyond traditional hours of service. Additionally, several plans identified the need for transportation services during the weekends—on Saturdays for access to retail and social needs, and Sundays for retail, social, and faith-based customer travel.

Affordable Transportation in Rural Areas

The majority of the regional plans indicated a need for affordable transportation in rural areas. Rural transportation delivery involves a unique set of issues in that origins and destinations are often miles apart, creating lengthy deadheads for transportation vehicles and additional vehicle maintenance, adding to the overall cost to provide service. These issues are compounded in areas of the state that are extremely rural, especially in west Texas, where a single deadhead may be up to 80 miles one-way. In addition, many of the customers and clients in these areas are persons with low-incomes and/or individuals with disabilities who rely on public transportation to and from doctor's visits and other appointments.

Jurisdictional Boundaries

All of the regions, whether urban or rural, struggle with jurisdictional boundary issues. To further define the issue, transportation providers typically have a pre-determined boundary, which are mutually exclusive. However, a region may have multiple providers, each serving a specific area within the region. Transportation needs cross these boundaries—individuals need

to make trips that may involve two or more transportation agency service areas. Complicating this challenge are multiple health and human services transportation providers that also have varied service areas, almost always inconsistent with public transportation jurisdictions. To combat the barrier issue, many regional stakeholders set to work planning and developing collaborative services.

Health-Related Transportation

Many of the regional stakeholders indicated a continuing need for improved transportation services for persons needing to get and from health care appointments. In some areas, provisions set forth by the Medicaid Medical Transportation Program (MTP) create coordination challenges for transportation providers in the region. In other areas, health and human services agencies and transportation providers are struggling to meet the increasing need for health-related transportation services for individuals who are not eligible for MTP, but who still need transportation services. For example, there is still limited coordination in the Panhandle region among the medical service provider and other transportation providers. The Upper Rio Grande region has a rapidly growing population that relies on dialysis treatment. The population requiring transportation services to access appointments is increasing at such a pace that providers are having difficulty meeting the growing demand.

Funding Issues

Funding issues observed within the plans include not only limited and reduced funding for transportation in general, but also the ability to sustain transportation services established through specialized formula funding, and programs such as JARC and New Freedom. Regions are awarded federal grant funding through either program to operate new services on the premise that the service itself will become sustainable for the agency. However, some of the regions have difficulty justifying the sustainability of services established through JARC and New Freedom funding because they serve extremely rural areas with lengthy travel times and limited ridership.

In addition to previously highlighted needs, the research team compiled a comprehensive list of all other needs identified in the plans (see Table 3). Due to the length of the list, the top five needs are excluded from this table because they were discussed in paragraphs above.

The research team observed some inherent challenges to addressing the needs that were not directly mentioned in the regional needs assessments. For example, approximately 25 percent of the regions are struggling with population loss. Although regional transportation coordination may be an ideal solution to solving the problem, some of the services previously offered are no longer cost effective. Thus, the regional stakeholders need more creative solutions to providing effective and efficient transportation to areas of declining population.

Table 3. List of Needs (Excluding the Top Five Needs), by Region.

REGION	NEEDS NEEDS
	Reduction of duplication of services
(1) Panhandle	Additional funding; funding sustainability
	State restrictions too rigid in determining eligibility
	Service in gap areas of the city of Amarillo yet not served by a provider
	Operating assistance shortfall
,	Fixed route service expansion—to specialized locations and downtown transfer center
,	Regional travel training
•	Consistent training programs for regional providers
(2)	Maintenance of 5310 vehicles
South Plains	High Health and Human Services agency trip costs
	Accessible Taxis
·	 Central facilities for regional maintenance, training, operations or administration
·	Enhancing communications across regional service area
'	Centralized information system
(3)	A need for more transportation services
NORTEX	Affordable transportation services
	Expand upon efforts to coordinate all transportation services, including Medicaid
(5) Ark-Tex	Expand Greyhound feeder services
AIR-IEX	Coordination between Arkansas and Texas
	Additional specialized needs transportation
(6)	Provide optimal locations for passengers to make easy transfers
East Texas	Regional vehicle maintenance
•	Incorporate transit considerations into and-use patterns
(7)	Coordination for health-based and medical transportation programs
West	"Same day" trip coordination for transit agencies
Central	Better coordination to prevent overlaps
Texas	Passengers need a common place where they can connect to other transit agencies
(8) Upper	Recruitment and retention of drivers (operators)
Rio Grande	Better accessibility to information, schedules, and transit stops/stations
	Support for an organized transit network assisting veterans
(9)	More health-related transportation
(9) Permian	Additional general public transportation and transportation for special populations
Basin	Process of project identification and utilization must be developed
	Need for additional accessible vehicles
(10)	Accessible and safe transportation for individuals with disabilities
Concho	Need to address the language barrier for those with limited English proficiency

REGION	NEEDS
Valley	Limited funding
(11) _ Heart of	Increased efficiency to meet transportation needs in the region
	Transportation to meet the needs of special populations
	Create measures to avoid going into non-attainment regionally
Texas	More frequent transportation services
_	Land use and transportation planning considerations
(12)	Public transportation services (general)
Capital	Expanded transportation for elderly and persons with a disability
Area	Coordinated human service transportation
(13)	Reduction in the duplication of service
Brazos	Reduced restrictions on transporting riders of other agencies
Valley	More service options directly outside of Bryan/College Station
(14)	Better coordination amongst health and human service agencies
Deep East	Service to educational opportunities
Texas	Need for more amenities
(15)	Centralizing sources of information as the main areas of unmet needs
South East Texas	Gaps in communication
	Lack of public transportation for youths
_	Better meet seniors' needs
(16) Gulf Coast =	Investments in transit priority measures to reduce the impact of traffic congestion
Guii Coust	Greater coordination
	 Options for homeless individuals or those making a transition from homelessness
(17)	 Services for persons with low-incomes, individuals with disabilities , the elderly
Golden Crescent	Interagency coordination
	Training on how to assist clients/customers with transportation information or services
_	Reduced wait times for return trips going into San Antonio from rural counties
(18)	 Locations for health and human services, medical, and social services not on fixed route
Alamo – Area	Aging transportation fleets and maintenance of vehicles
_	Additional mentoring and support efforts in coordination among providers
	No universal dispatch software or technology
(20)	Comprehensive coordinated transportation services
Coastal	Rural Transit Districts need to undergo a infrastructure/management assessment
Bend	Transportation Coordination; more transfer points in the region
(21)	Colonias need regularly scheduled service throughout the day
Lower Rio Grande Valley	Transit funding sustainability for Mexican Nationals served

REGION	NEEDS
	More health-related transportation
	Transportation for unemployed and low-income individuals
	Accessible vehicles
(22)	Affordable taxi service is needed when other transit options are not available
Texoma	Neighborhood connectivity
	The need for streamlined fare collection
	A one-call/one-click transportation information center
	Improved and additional intelligent transportation systems
(23)	Easier client scheduling for trips
Central	
Central Texas	

STRATEGIES TO ADDRESS REGIONAL NEEDS AND GAPS

Regional stakeholders developed plans based on information collected from the regional needs assessment and transportation resource inventory. Some regional stakeholders linked these plans with other relevant transportation plans in the region. For example, some lead agencies worked with staff from MPOs to include regional transportation coordination in both short and long range local transportation plans. To address the needs identified in the assessments, all of the regions developed annual work plans in order to break down the work to be accomplished annually.

The following examples include observations from the research team in terms of approach to developing strategy work plans. The Capital Area Regional Transportation Coordination Committee approves an annual work plan that matches specific tasks with the agencies responsible for accomplishing those tasks, which establishes accountability for achieving the plan. In addition, the region also establishes target dates for each deliverable and task, keeping the work focused and timely, which is important for both stakeholders and the public. Alamo Area's plan includes addressing needs as they relate to varying federal funding streams, including JARC and New Freedom, as well as other programs such as Sections 5310 and 5311, and Rural Transit Assistance Planning. All of the plans submitted by the regions included some level of discussion on strategies to address the regional needs and gaps; however, some coordination groups, such as the one in the Heart of Texas (HOT) region, developed very specific planning activities that will be undertaken. In addition, the HOT region included activities that are also tied to specific timelines: some planning activities have shorter timeframes, such as one to two years, while others have five to 10 year horizons, especially those projects that depend on funding availability. Table 4 highlights the top five needs and some ways regional stakeholders plan to address these needs.

Table 4. Top 5 Needs and Selected Strategies for Addressing These Needs.

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REGIONAL NEED	STRATEGIES	REGION	#
Increase awareness of available services	Organize an "Interconnectivity Day," whereby residents can board one form of public transportation provided in East Texas and ride free for the day, as long as their travel includes two complementary services at local businesses.	East Texas	6
	Update a directory of rural transportation services in both Spanish and English to be available at courthouses and nutrition centers.	Upper Rio Grande	8
	Promote transportation options at area meetings (PTA, Lions Club, Rotary, VFW, etc.) and events (job fairs, health fairs, etc.), the use of social media (Facebook, Twitter, Wiki-pages, etc.), and television and radio public service announcements.	Brazos Valley	13
	Provide transit-use training – take potential transit users for a ride on the system and teach the user how to ride transit. In addition, develop a plan to provide information on available transportation services at summer events and festivals that take place in Coastal Bend cities.	Coastal Bend	20
	Provide public education to include, but not limited to, what transportation services are offered, how to access the regional transportation systems, how to schedule a ride, and information to help the rider compare expectations versus demonstrated service.	Texoma	22
Provide more commuter/ employment	Expand hours in order to use transportation services to work. Potentially provide reimbursement for use of taxi service on Sundays to and from work.	West Central Texas	7
related	Develop a reverse-commute service in partnership with local employers.	Heart of Texas	11
transportation services	Develop funding mechanism for communities outside of the transit service area.	Capital Area	12
	Conduct travel pattern analyses of county-to-county flows for total trips (work and non-work trips). Conduct an analysis to evaluate the location of LEP households relative to transportation access.	Gulf Coast	16
Coordinate inter-regional	Invite representatives from the neighboring South Plains region to quarterly meetings to discuss inter-regional coordination needs.	Panhandle	1
trips	Undertake a feasibility study for inter-regional connectivity as well as a vanpool pilot project to Beaumont and surrounding area for employment purposes.	Deep East Texas	14
	Work together with regional partners to make getting to major population centers easier through expanded TRAX service, and; coordination between Arkansas and Texas.	Ark-Tex	5
Increase span of service (nights/	Establish new and expanded services including evening, late night, and same day non-emergency transportation services for low-income, elderly, and disabled patients and patients' families.	Texoma	22
weekends)	Develop a voucher program for evening and weekend demand response service.	Golden Crescent	17
	Identify sources of additional funding for expanded hours and days of service, and evaluate the feasibility of local transit in small cities to meet evening and weekend needs.	Coastal Bend	20
Increase affordable transportation in rural areas	Develop a regional plan to connect the entire region and all of the transit systems (including Starr County which is in an adjacent planning region). This planning effort will give all of the operators an opportunity to work together. This effort should include all of the transit systems and all of the metropolitan planning organizations in the region.	Lower Rio Grande Valley	21

REGIONAL NEED	STRATEGIES	REGION	#
	Begin Shopper Shuttles. The shuttles will target older adults and persons with disabilities with a central focus on livability by promoting transportation options for shopping, leisure, and personal activities. This service will also target low-income individuals and families, rural residents, veterans, and transit dependent populations.	Alamo Area	18
	Work with Wichita Falls 211 services to pinpoint transportation needs in the area based on the calls that come in requesting transportation services. Create a series of maps depicting where transportation need is to determine whether or not those needs are being addressed with the current services offered, and if not, how to address them.	NORTEX	3
	Use JARC funds to the maximum extent possible to sustain current transportation services.	South Plains	2

Following are additional examples of strategies (to address identified needs) included in the regional plans:

Service Expansion in Urban and Rural Areas

Central Texas is working to expand service hours and extend routes to much needed destinations. Additionally, the region is trying to keep fares low, costing less than \$1.50 for a one-way trip up to 10 miles.

To address the needs of rural areas, the West Central Texas region is putting together pilot projects to enhance transportation in rural counties. West Central Texas is planning on tapping into JARC funding in order to create new commuter/employment routes. In addition, the region is seeking to implement a fare media that can be used by all systems, which addresses the barrier of varying provider fares.

Regional Coordination

To address the need for shared passenger facilities, the Nortex region is working to support the development of a multimodal transportation transfer station in Wichita Falls. The station will serve as a regional transportation hub for the Wichita Falls Transportation System, area rural transportation providers, and intercity bus lines.

Commuter Services

The Panhandle region found through the needs assessment that many customers have a need to access jobs and health care appointments in the neighboring South Plains region. This prompted Panhandle planners to facilitate joint planning sessions between the two regions.

Non-Traditional Partners

All of the regions worked to bring non-traditional transportation partners—that is, groups representing end-users as well as transportation providers—to the table, including educational institutions, chambers of commerce, faith based institutions, and many others. Two regions considered the impact of a solid transportation system on local economic development. The

Capital Area region has a representative from the Greater Austin Chamber of Commerce on its committee. Recent research published in July 2011 by the University Center for Transportation Mobility and the Texas Transportation Institute explicitly discusses the economic development benefits under SAFETEA-LU's coordinated planning and human services framework. Alternatively, the Coastal Bend region is engaging in on-going discussions with churches throughout the region in order to develop creative strategies for providing access to transportation on Sundays.

The Heart of Texas region is partnering with the Veterans Administration to create the Veterans' Voucher Program. The premise of the program is that many veterans in the Heart of Texas region do not have dedicated sources of funding for transportation. The veteran population in the region needs access to education, job training centers, workforce programs, employment, and veterans' services. In the future, the Heart of Texas region is looking to fund the voucher program through the establishment of partnerships with veterans' groups and employer contributions. The payoff is that the voucher program will allow veterans access to reliable transportation, helping to build a trained workforce, and fuel the local economy.

Creative Funding Mechanisms

Dependable, sustainable funding is a challenge with which most, if not all, of the regions grapple. The regional transportation coordination efforts attempt to do more with less money, so the regions need to have a good understanding of revenues, expenditures, and funding streams. The Deep East Texas plan put emphasis on identifying matching funds for federal revenues. The plan provides a list of opportunities the region has to increase local match to draw down additional federal funds. Proposed pilot projects that are a part of the plan include interregional transportation efforts by the providers, potentially funded by JARC dollars. The region made a list of current funding sources, and outlined potential match funds, listed as follows:

- Direct assistance from the cities.
- In-kind.
- Private sector (advertising).
- University partnerships.
- Health and human service programs.
- Workforce programs.

The region created an additional list of sources (these are listed as alternative revenue sources), which are creative ideas for generating future revenues for transportation and regional transportation coordination:

- Property tax.
- Motor fuel tax.
- Public-private partnerships (P3s).
- Value capture.
- Vehicle safety inspection fees.

EXAMPLES OF PAST PROJECTS

This section presents examples of regionally coordinated transportation projects undertaken in previous years, but described in the updated regional plans. This section is broken down into sub-sections that categorize similar projects.

Shared Fare Systems

Some regional stakeholders are exploring the possibility of shared fare systems. For example, Capital Area Rural Transportation System is looking into a shared fare card for the providers in the Austin area.

Commuter Services

Stakeholders in the Golden Crescent region worked to establish a series of employer-sponsored shuttles in their region. The regional stakeholders worked with a major employer (Inteplast) to establish much needed commuter service for employees living throughout the region. Golden Crescent Regional Planning Commission worked to obtain a JARC grant, which provided the necessary funding to buy vehicles and hire drivers and Inteplast funds the operating costs for the service, which is paid on a monthly basis. Employees can access the plant for two shifts, and there are currently four routes: two running from Victoria, one in Jackson, and one in Matagorda County. Employees are charged \$30/month for the service; Victoria Transportation picks up the employees at local park and rides. The service has been successful all round. Ridership is high for the routes, and the employer, Inteplast, likes the service because it boosts the local economy in Lolita, where the plant is located. Both parties are planning to add more service in the future.

Jurisdictional Boundaries

Since Texas' population grew over the last six years, many regions now see a need to coordinate transportation beyond the region itself, and work with agencies and governmental entities outside of the regional boundaries.

The Heart of Texas region developed a regional connectivity project, based on the need to connect the surrounding rural communities to employment within the city of Waco. The starter route, dubbed 6 to Success, was a hit amongst the rural commuter population as it addressed a transportation need in the rural communities and has since been re-branded as The Link. The Link provides service in selected areas of Falls and McLennan Counties to access employment, educational, and quality of life opportunities in Waco. The service meets a transportation need for low income areas and those who are traditionally underserved. Additionally, the service has a well-established brand and is paid for in part by advertising revenues.

The Capital Area previously struggled with a gap in service to an Austin Community College branch that was located in the urbanized area, just outside of the Capital Metropolitan Transportation Authority service area. Capital Metro, worked to establish a service expansion plan where the college agreed to pay operating costs in order to receive transportation services so that Capital Metro could provide service outside its service area. The agreement was a win-win-win for all parties involved, and now all of the Austin Community College campuses have access to public transportation.

Some regions, like West Central Texas, have begun cohabitating transportation services. Cohabitative services are based on the concept that customers should be able to travel in and out of the invisible service area boundaries without changing providers. The purpose is to offer truly seamless services so that customers can simply stay on a single vehicle when crossing over boundary lines in order to access their destination without incurring a transfer penalty. Cohabitation benefits all parties involved in that providers do not suffer the transfer penalty, and passengers are more willing to utilize transportation when service provision is seamless and straightforward.

Public-Private Partnerships

Public-private partnerships, also known as P3s, are a means of establishing new business ventures among public and private agencies. P3s started in the early 1990s, but only recently spilled over into the public transportation realm. Regional transportation coordination could certainly benefit from the establishment of P3s, where plans and ideas to be implemented can be funded all or in part by a private partner. One region in particular, Ark-Tex, had a good example of a P3 in action. The transportation provider for Texarkana, TRAX, serves as an agent of change in the local community. As such, the agency has established partnerships for service provision with Wal-Mart, Lowes, and local community colleges. In the West Central Texas region, the coordinated effort worked to develop a partnership with City and Rural Rides (the rural transportation providers) to develop a new website and bus wrap advertising for the region.

Specialized Travel Training

Another means of reaching underserved populations is to provide travel training. Typically, travel trainers, or coaches, will assist potential riders with getting to know the transportation services, vehicles, and routes available in the region. Trainers can help passengers by riding the bus with them, helping to plan trips, and generally becoming more comfortable with the services. Lower Rio Grande Valley recognized a great need for travel training among the colonias in their region. (The Texas Secretary of State defines a "colonia" as a residential area along the Texas-Mexico border that may lack some of the most basic living necessities, such as potable water and sewer systems, electricity, paved roads, and safe and sanitary housing.) These communities are primarily Hispanic and residents speak limited to no English. The Lower Rio Grande Valley region instituted travel training to address this need.

Marketing and Communications

East Texas coordinated plan contains a chapter dedicated to marketing, which is unique among the other plans reviewed. The marketing plan contains strategies to support the implementation of the regional plan. It includes strategies such as new signage for transportation and website development, and all strategies are organized by short-, mid-, and long-term horizons. East Texas Council of Governments recently rebranded the service and painted the buses, to make the agency more recognizable in the region. In the Brazos Valley region, the human services transportation workgroup meets monthly to exchange ideas related to the coordination and promotion of transportation services. The Gulf Coast regional stakeholders recognized the need to educate and garner input, so the region created a regional transportation service guide to provide more info to the public about transportation options.

Several regions worked to better establish a brand for the regional transportation coordination effort. Forming a recognizable brand can be seen by some as a means to build public confidence and trust and a means to advertise services available in the region. While regional budgets and resources vary, some efforts worked with partner agencies that were able to provide in-kind marketing, communications, and graphics services. Some regional stakeholders established websites, which provide information on services available in the region, and depicting the regional brand, while others with more limited budgets worked to distribute fliers with regional service information in both English and Spanish. Other regions tapped social media to get the word out on the coordination efforts. Houston-Galveston Area Council developed a video on YouTube to tell customers and stakeholders about the regional transportation coordination plan. Figure 4 depicts some of the regional logos found in the review.



Figure 4. Regional Transportation Coordination Logos.

Many of the regions struggle with lack of staff resources for plan implementation. South East Texas is working on a framework for sustaining coordination through the establishment of a regional transportation coordination council to work with South East Texas Regional Planning Commission staff. The South East Texas Regional Planning Commission, who is also the lead agency, would potentially hire a new mobility coordinator to monitor the progress of goals and objectives, and engage stakeholders to help improve regional mobility. This practice will allow a dedicated staff person to help with the coordinated process and updates, and will help to keep regional stakeholders focused on accomplishing their goals.

Miscellaneous Regional Coordination

The Gulf Coast region established several projects that included coordination amongst more than one agency:

- Start-up of the Baytown Express Park and Ride.
- Local bus services in Baytown and eastern Harris County.
- Pasadena Park and Ride service.

These projects included partnerships between the Harris County Transportation Services Division, Houston METRO, the cities of Baytown, Pasadena and La Porte, Lee College, the Pasadena Towne Square Mall and others. Additional examples of coordination were related to the implementation of new and expanded transportation services in Galveston County, Southern Brazoria County, and Austin County (Gulf Coast Plan, 2012).

Planners in the Golden Crescent region engaged representatives from Victoria College and included them at the table as a major stakeholder in developing the updated regional transportation plan.

CONSIDERATIONS FOR FUTURE UPDATES

As stakeholders in regions move forward to implement plans for their respective areas, it is important for the stakeholders to remember that transportation coordination is an iterative process; and regions should continue to build on the plans, sharing lessons learned and best practices. A major consideration should include more clearly identifying how transportation services for priority populations will continue to improve in the future.

The research team compiled the following list of considerations for future regional planning activities. The list is not all-encompassing:

- Transportation services for priority populations.
- Cost effective service analysis.
- Performance measurement.
- Marketing and communications.
- Public-private partnerships.
- Transportation services for veterans.

Transportation Services for Priority Populations

Although plans mention older adults, persons with low incomes, and individuals with disabilities, not all plans are explicit in laying out how transportation needs of these vulnerable populations will be addressed. Because these populations are often the most vulnerable and most dependent on public transportation services, it is imperative that regions routinely and meaningfully engage representatives of these groups as well as employers and agencies who serve them to develop viable solutions for addressing their transportation needs.

Cost Effective Service Analysis

Performing a service analysis in order to determine the effectiveness of service delivery is another recommended practice amongst providers. A service analysis will help the stakeholders to better understand assets, resources, and limitations. To conduct a service analysis, it is important to list local and regional transportation attractors and identify gaps. It also helps for providers to match the transportation need with what the service levels are, especially since resources are limited; and to maximize funding, it is important to know what the demand is and where the gaps are. Additionally, it is crucial for transportation providers to be aware of costs by service type. While there may be a huge demand for certain services, say, a flexible route, transportation providers need to be able to scrutinize whether the provision of such services is cost effective.

Through the service analysis, a region can work to create a toolkit of data on demographics, major destinations, and service costs to aid in planning and decision making process. Transportation Cooperative Research Program Report 144: Sharing the Costs of Human Services Transportationⁱ offers helpful guidance on collecting data for service analyses and how the data can be used to create performance measures.

Performance Measurement

Performance measurement is crucial to determining the success of the regionally coordinated transportation planning effort. For the successful adoption of performance measures, the purpose of measurement has to be clarified and recognized in the region and amongst the stakeholders involved. This should be followed by establishment of clear and simple goals and supporting objectives as a part of the development process. The latter should be aligned with the expected outcomes that a community aims to achieve through implementation of the plans. As with any process, however, it is important to consider outcomes, objectives, goals, and performance measures as part of an overall iterative process that may be changed as programs grow and developⁱⁱ.

Marketing and Communications

Communications and marketing are critical and inherent elements of the regionally coordinated transportation planning process. At the heart of this effort is the process of reaching out and engaging diverse stakeholders. This calls for considerable communication and outreach skills. Even so, regional stakeholders should always seek new and effective marketing, communications, and public involvement techniques, especially since public awareness is identified as one of the biggest needs. It is imperative for regional planners to understand respective markets being served, consider only strategically appropriate approaches for marketing, outreach, and public involvement activities, and seek expertise in how to effectively tailor these activities to best reach target audiences with specific messages. A scattershot, untargeted approach to public information is never advisable.

One of the struggles in creating information for the public is limited resources, both financial and otherwise. Throughout the plans, there are good examples of regions that used in-kind services from local institutions and stakeholders to create educational materials. For example, the Gulf Coast region relied on the Houston-Galveston Area Council to put information about the regional

transportation coordination efforts on a website within Houston-Galveston Area Council's site. Many regions may struggle with marketing and communications aspects of a transportation program, perhaps because they focus on other operational activities. However, it must be said that it may do the public a disservice to create services that the public does not use simply because they are unaware the services exist. Conversely, it may be unwise and counter-productive to promote services when a region lacks the capacity to provide additional or efficient services. In either case, strategic planning and decision-making is essential.

Public-Private Partnerships

Public-private partnerships, discussed in the previous section, are also another recommendation for future plan updates. Some regional stakeholders took advantage of opportunities with partners outside of the regional effort; and considering the uncertain future of transportation funding, it will become more important for regional stakeholders to seek project support from private partners in the region. The regions need to be able to emphasize the value that transportation adds and how it can help boost local economies.

Transportation Services for Veterans

The research team observed a few plans that directly addressed transportation services for veterans; however many regional stakeholders expressed a desire to better coordinate and design transportation services for veterans in the future. At the national level, there is a growing interest and desire to provide transportation services to the veteran population, and many agencies lack information on working with the Veterans Administration and providing adequate services to this unique population. More information on Veterans Administration policies, as well as coordination at the leadership level, would make great strides to providing more transportation solutions.

CONCLUSIONS

The plans reviewed in the latest update show progress, initiative, and the desire to pursue coordinated transportation services that are in the best interest of customers. A challenge for the regions will still be limited resources; however, the need to design a regional transportation system that is both effective and cost-efficient serves as strong motivation for the planning process.

ⁱ TCRP Report 144 may be accessed here: http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp rpt 144v1.pdf for the toolkit, and here http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp rpt 144v1.pdf for the report.

ii Report on Performance Measures for Public Transit Mobility Management may be accessed at the following location: http://tti.tamu.edu/documents/0-6633-1.pdf.