



Workshop Proceedings

BUS RAPID TRANSIT WORKSHOP

“Action Plan for a Thriving BRT Market”



Los Angeles, California
April 8-9, 2002

U.S. Department of Transportation
Federal Transit Administration
Office of Research, Demonstration, and Innovation



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The participants including FTA officials, community transit representatives, manufacturers and suppliers, and other industry stakeholders all contributed ideas, suggestions, viewpoints and perspectives on the workshop topics. CALSTART paraphrased those contributions during the sessions and combined them with FTA notes. CALSTART appreciates the reviews and clarifications of their remarks provided by the participants.

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FOREWORD

This report represents one part of an effort by the Federal Transit Administration to provide information to the U.S. transit authorities on activities related to Bus Rapid Transit (BRT). The purpose of this report is to disseminate the information from workshops to U.S. transit authorities and other interested parties.

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1.0 Introduction to the Workshop Proceedings

1.1 About the Workshop

A Bus Rapid Transit Workshop was held in the Los Angeles County Metropolitan Transportation Authority Board Room in the LACMTA Headquarters Building on April 8th and 9th, 2002. The purpose of the two day workshop was to get industry comments and suggestions on an FTA developed strawman “Action Plan” for BRT and, through moderated discussions, capture suggestions for actionable items. The participants included key representatives from the FTA, community transportation authorities, U.S. and international manufacturers, suppliers and other industry stakeholders.

The FTA “Action Plan for a Thriving BRT Market” addressed several key areas for industry aimed at fostering innovative BRT vehicles in the United States. The Workshop discussions were structured around five strawman topics as follows:

- 1) Special Vehicle Testing,
- 2) Partnerships and Outreach to U.S. Bus Manufacturers,
- 3) Proactive Vehicle Deployment,
- 4) Conveying the BRT Message to the Public and Other Transit Agencies and
- 5) Streamlining Project Development.

The two day agenda began with opening remarks and addresses that set the stage for the Workshop. Five working sessions followed sequentially addressing the strawman topics, three the first day and two plus wrap-up the second day. Each session had a Moderator and a panel of speakers that provided introductory comments and questions. The participants, through roving microphones, addressed the panel and the other participants with comments, ideas and perspectives on the session topic. A special luncheon briefing on clean alternative fuel opportunities for BRT was also presented on the first day. A reception was held at the Mayor’s Mansion the evening of the first day. After the closing remarks in the wrap-up, the participants went on a tour of the LACMTA Metro Rapid facilities. The Action Plan Agenda can be found in Attachment A.

1.2 Organization of the Proceedings Document

This document has an executive summary, a synopsis of the introductory remarks and the key results of the participant comments by session. Following the summary are sections that provide more detail on the Workshop discussions. Sections have titles that correspond to the Sessions identified on the Agenda. These will be distilled in the following weeks to create action activities and delineate products for the Action Plan.

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2.0 Executive Summary

2.1 Synopsis of Introductory Remarks

Mr. David Armijo, Service Sector General Manager, LACMTA, opened the Workshop by welcoming the participants. Then, he introduced Brian Williams, Deputy Mayor, City of Los Angeles who conveyed the Mayor’s greetings to the participants.

Next, Mr. Roger Snoble, Executive Officer, Los Angeles County MTA talked about the LACMTA. He suggested that BRT is all about mobility, an option that fills a gap between conventional bus service and light rail or Metro. Success in Metro Rapid, essentially Stage I of BRT, is a result of innovation and partnership with federal, state and local entities. Challenges remain but it is a viable model.

Mr. William P. Sears, Chief Counsel, Federal Transit Administration provided the Keynote Address, “An FTA Perspective,” emphasizing that the FTA is hear to listen. He noted that Washington DC is not entirely prepared for BRT, as exemplified in the capital programs and the regulatory regime such as “Buy America”. Even more basic are messaging issues, since very few members of Congress know what BRT is, especially the appropriations staff. Mr. Sears pointed out that next year we re-write the largest discretionary bill in the US, making re-authorization a critical issue now.

Mr. Rex Gephart, LACMTA Metro Rapid Project Manager, then, provided a presentation on the successes and challenges of LA’s Metro Rapid program. He attributed the many successes to the team approach, led by planning, with operations, the City and consultants.

The focus turned then to the “Action Plan for a Thriving BRT Market” with Mr. Edward Thomas, Associate Administrator for Research, Demonstration & Innovation, Federal Transit Administration introducing the topics. Mr. Thomas pointed out that the importance of this BRT Workshop is reflected in the composition of the participants: the industry and government. The purpose of this workshop was for the FTA and the industry to apply the lessons learned from introduction of new technology in the past in the context of the global industry. He stressed that the FTA action plan needs the participants’ inputs and ideas to move from a plan to action activities.

2.2 Special Vehicle Testing

Mr. Bert Arrillaga, FTA, set the stage for this session. Then, the moderator, Mr. John Powell, ETVI introduced the assembled panel of Mr. Joe Calabrese, GCRTA, Mr. John Marino, Irisbus, Mr. Cliff Henke, NABI, Ms. June DeVoll, RTCSN and Mr. Paul

Szilagyi, TransTeq. Each panel member addressed the group, followed by open discussion. The following highlights the key remarks:

- Cost of BRT platforms is significantly higher, testing provides positive value.
- Operating environment provides challenges not found in a formal testing.
- Testing protects investments by FTA and agencies.
- Testing also adds to cost and extends deployment time.
- Research should be done to determine proper testing for BRT.
- Considering the cost and the value of testing, the industry needs to make efficient use of all data sources including manufacturers, government and private.

2.3 Partnerships and Outreach to U.S. Bus Manufacturers

Mr. Walter Kulyk, FTA, led off this session. Then, Mr. Brian MacLeod, Gillig, introduced the panel members Mr. John Andrews, MCI, Mr. Cliff Henke, NABI, Mr. Rick Brandenburg New Flyer, and Mr. Paul Szilagyi, TransTeq. After the panel discussions the participants made remarks with the highlights captured below:

- Public/private partnerships could reduce the risk and hasten the introduction of BRT products.
- The challenges: - Buy America (waivers are a limited time/number solution),
- procurement regulations (specifically the RFP process), and
- making partnerships work.
- Companies are competitive, and regulations against collusion impede manufacturers.
- “Timing is everything”, it can take 4 years to introduce a new system.
- Some of the ideas offered to improve the situation are 1) tax incentives for manufacturers, 2) innovation incentives, and 3) third party assist, such as a CALSTART, to help broker alliances, risk sharing and funding.

2.4 Proactive Vehicle Deployment

Mr. Leslie Rogers, Region IX Administrator was both the FTA speaker and moderator for this session. The panel included Mr. Joe Calabrese, GCRTA, Mr. John Andrews, MCI, Ms. Susan Williams, Ballard, Mr. Laks DeSilva, Detroit Diesel, and Mr. Jerry Trotter, APTA. The following highlights the remarks from that session:

- The procurement process needs improvement.
- The current worksheet makes it difficult for the communities to piggyback.
- No or limited progress or advanced payments are available prior to Altoona testing to manufacturers who innovate.
- Part of the solution is to get the people who plan the projects and the people that supply the equipment together to encourage collaboration and innovation.

2.5 Developing and Delivering the BRT Message to Key Audiences

Ms. Elaine Dezenski, FTA, kicked off this session summarizing Washington marketing efforts. The moderator, Ms. Martha Welborne showed a video then introduced the following panel members for comments Mr. John Powell, ETVI, Ms. Gail Charles, MARTA, Mr. Steve Hirano, METRO Magazine and Mr. Kurt Brotcke, OCTA. A lively discussion followed their comments with highlights summarized below:

- Getting the message out is really marketing, education and selling.
- BRT image is mobility and should be complementary, not competitive, with LRT.
- Educating legislators, local officials and the public is equally important.
- LRT has been shown to work, but BRT still needs to get the facts on its fiscal and performance advantages to “sell”.
- BRT is another important tool just as LRT and other modes are tools.
- Successes are the “facts” that provide a basis for buzz and education.
- Education and selling requires use of resources such as an informative website, forums, institutes and, most importantly, champions among the stakeholders.

2.6 Streamlining Project Development

The session moderator was Mr. Mark Pangborn, Lane Transit. He opened this session but then introduced Mr. Ron Fisher, FTA, who talked about the New Starts program history and possible future. The panel members, Mr. Steffano Viggiano, Lane Transit, Mr. David Mieger, LACMTA, Mr. Paul Steffens, Honolulu, Ms. Katrina Heineking, Charlotte DOT and Mr. Jon Twitchell, AC Transit, followed with remarks. The discussion and remarks are highlighted in the bullets below:

- Planning and community involvement are keys to streamlining development.
- There are a pipeline of projects and a funding program that works.
- The projects in operation are attracting new ridership so we should be proud of this fact.
- Project modeling and integration, criteria for the various families of BRT are important to acquire and make available to the transit properties.

2.7 Wrap-up

Mr. Edward Thomas, FTA closed the workshop, stating that the common theme is a need for action. More detailed themes will be extracted from the suggestions from the participants. He said the plan was to turn those themes into action items before the next workshop in May. He also said that closure on testing issue by a meeting at the APTA Conference in May was an important goal.

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3.0 Opening of the Workshop

3.1 Introductory Remarks

On the first day, the Workshop began with a Welcome by David Armijo, Service Sector General Manager, LACMTA. David introduced Brian Williams, Deputy Mayor, City of Los Angeles who welcomed the participants on behalf of Mayor Hahn who was called out of state unexpectedly. Mr. Williams said that the City of Los Angeles is proud of the partnership with the MTA, with Caltrans and with MetroLink who, together, carry over 25 million passengers per year.

David then introduced Mr. Roger Snoble, Chief Executive Officer, Los Angeles County MTA. Mr. Roger Snoble provided an overview of the LACMTA operations. He feels that LA is the biggest transportation Lab in US. The MTA has many areas of responsibility. With a fleet of over 2100 buses, BRT is just one aspect. LACMTA has the largest CNG Fleet in world and, as such, are now getting costs down comparable to diesel.

The MTA transportation system is divided into three tiers of service. Tier 1 are Trunk routes, rail lines, and Metro Rapid. Tier 2 provides local community routes transporting 40-60% of the passengers inside local sectors. Tier 3 is smaller neighborhood routes, shuttles, and Special Access Services.

The regional rail system is served by MetroLink, a 5 county system focused at Union Station. The Redline Heavy Rail service has 150,000 boardings per day. The Blue Light Rail, serving Long Beach, and a Green Light Rail, serving “near” the Airport are in the system. MTA and Muni County operators partner on local operations with 1,750,000 boardings per day.

LA’s basic problem is US’ worst traffic congestion. Most of the area is auto dependent. Freeways are known as lineal parking lots (Roger’s average speed over last 6 months is 12 mph). The MTA is trying to provide better mobility to address the anticipated growth in population of 3 million over the next 20 years.

Working with the LADOT, LA has the largest network of HOV Lanes. Not all are connected and buses don’t always run on them. However, carpooling has doubled. Better ways are needed to move people. BRT is one of the more innovative systems to come around.

He provided their perspective on BRT, suggesting that BRT is all about mobility. He made the point that BRT is an option that fills a gap between conventional bus service

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and light rail or Metro. Success in the LACMTA’s Metro Rapid, essentially Stage I of BRT, is a result of innovation and partnership with federal, state and local entities. The average “system” speed on streets is 10 mph. Metro Rapid bus has proven to be 25% faster, which improves efficiency. If the system will save money and time, you will get ridership. Rapid bus demand is exceeding supply. He felt that challenges remain but it is a viable model.

3.2 Keynote Address: “An FTA Perspective”

William P. Sears, Chief Counsel, Federal Transit Administration provided the Keynote Address, “An FTA Perspective”. Mr. Sears began by emphasizing that the FTA was there to listen. Specifically, the FTA wants participants’ thoughts and ideas on BRT in a number of areas, for example, how we define BRT.

Mr. Sears made the point that Washington DC is not entirely prepared for BRT, as exemplified in the capital programs and the regulatory regime such as “Buy America”. Even more basic are messaging issues. Very few members of Congress know what BRT is, especially the appropriations staff. We need to work together to educate the Hill. He pointed out that next year, we re-write TEA, the largest discretionary bill in the US. This makes re-authorization a critical issue now, to be addressed immediately in the upcoming weeks and months.

After these initial statements, Mr. Sears turned to the participants to address direct questions or issues of specific interest. Responding to a question regarding the possibility of lowering the 60% content threshold from the '82 bill, he stated that politics are fierce on the hill. It would be tough to lower the content now, but now is the time to try. Staff thoughts are not focused on Buy America, they are looking to other areas. Whether such requests would make it through Congress is difficult to answer.

Responding to how can we all work together to get more out of each dollar that California sends to Washington, he stated that the Secretary of Transportation thinks predictability and stability are paramount in next iteration. State by state allocation is unclear, but will be studied by Congress with FTA available as a resource. It’s too soon to make any predictions. We need to remember that 50% of the members of the House were not in office when TEA 21 was enacted. Outcome of major issues is hard to anticipate.

In responding to a question if the FTA sees BRT as the next great program, he suggested that there is a possibility that FTA can advance BRT as a new technology. There is a new perspective on reauthorization. But there is not a lot of new money to develop new programs.

Regarding a question about FTA priorities, he stated that TEA 21 reauthorization issues are priorities. Highest priority, according to the Secretary and Administrator is to

communicate that TEA 21 has worked well. The significance of ISTEA is the I, Intermodalism, and the E, equity, of TEA 21. This will be key, putting infrastructure on level with education and other great social arenas. It is too early to dive in at FTA right now with specifics, because they don't exist.

DOT for 2.5 months has been going through grass roots review of programs in each transit mode sitting down to see what's worked or not under TEA 21 and reporting that up the ladder. That's being evaluated now. Within FTA, William said he has set up group to do the same thing internally. At the Administration level in surface transportation, gas tax revenues are down and AMTRAK is an issue.

Mr. Sears closed with a statement about financing BRT initiatives. He suggested that enhancing innovative finance programs, and coming up with new ones are possibilities. Initial steps are modest, only \$14 billion out of \$218 billion are leveraged with private dollars. He said that there needs to be ways to get more private funding into the process. The Department of Treasury testified in hearings about gas tax revenues, with indications that they appear to have a shakier future than they have in the past. What will replace that in the future? Other hot issues, beyond highway issues, are safety and security in the aftermath of 9/11.

3.3 Los Angeles Metro Rapid

Mr. Rex Gephart, LACMTA Metro Rapid Project Manager, provided a presentation on the successes and challenges of the Metro Rapid Program. He attributed the many successes to the team approach, led by planning, with operations, the City and consultants. His presentation is found in the attachments Mr. Gephart's presentation can be found in Appendix B.

Mr. Gephart said that MTA BRT has increased speed of transit by average 25%. Metro Rapid, a Phase I BRT, is implemented on the Ventura Route (16 miles) and the Wilshire Route (25 miles). Ridership is up on those corridors by as much as 38%. Bus stacking is sometimes a problem, but coordination with traffic control is helping. Currently, 40' and 45' low-floor buses are serving the routes, but single- and double-articulated low-floor buses are being reviewed.

He stated that the elements to their success in this program are:

- MTA and City Partnership
- Political support from Mayor and MTA Board
- Media Support - innovation makes news
- Impact on travel time due to implementing all attributes at the same time
- Simplicity of station design and operating environment
- Team approach - design/build led by planning with operations, the City and consultants, all participating.

3.4 An Action Plan for a Thriving BRT Market

Next, Mr. Edward Thomas, Associate Administrator for Research, Demonstration & Innovation of the Federal Transit Administration discussed the BRT Demonstration Program and introduced the topics for the Workshop in the “Action Plan for a Thriving BRT Market”. These and other identified concerns and options were addressed during the workshop in the context of the Action Plan strawman. Mr. Thomas’ presentation can be found in Appendix C.

Mr. Thomas pointed out that the importance of this BRT Workshop is reflected in the composition of the participants: the industry and government. The purpose of this workshop is for the FTA and the industry to apply the lessons learned from introduction of new technology in the past. We need to do this in the context of the global industry. He stressed that the FTA action plan needs the participants’ inputs and ideas as they identify activities and products.

4.0 Special Vehicle Testing

Moderator: John Powell, ETVI
FTA Speaker: Bert Arrillaga

Panel: Joe Calabrese GCRTA
John Marino Irisbus
Cliff Henke NABI
June DeVoll RTCSN
Paul Szilagy TransTeq

4.1 Background

This session on Special Vehicle Testing was intended to identify issues that can impact government and industry test processes and identify acceptable options. It was intended to solicit ideas, comments and feedback from the transit industry on ways we can minimize the collection of data and yet meet the current law and regulations. Also we wanted to explore on-site collection and the relation to the needs for Altoona testing.

BRT cities are acquiring vehicles with unique designs and new technologies. In the U.S., the present system of certified FMVSS compliance and comprehensive Altoona testing appears sound, since the transit bus is among the safest modes of transportation. The challenge faced by the industry is accommodating the test and certification of the new class of BRT vehicles now developing in the market place. The new designs may present issues for FMVSS certification. The features such as low clearance, dedicated busways and guidance infrastructure raises issues for Altoona testing. As the BRT vehicles emerge we need to understand these issues.

For example, categories for testing protocols being discussed include: 1) conventional bus, 2) Special Performance Vehicle (SPV) and 3) Not a Bus. The latter two classifications may be helpful in expanding vehicle definitions so as to include some features of the newer BRT vehicles.

The special performance vehicle may be a bus-type vehicle or may be based on rail design but are modified to operate on rubber tires, with or without guidance. An SPV could be designed for a mix of dedicated route and conventional route service. But classification of this type of vehicle is more difficult and may depend on the intended market. The “not a bus” class may be more based on a light rail vehicle that is modified to operate on rubber tires. This type of vehicle is always guided and never leaves the dedicated service route. Both types of vehicles can be powered by either internal or external power delivered to the wheels through electric traction motors.

4.2 Bert Arrillaga, FTA Speaker

Bert opened this session with a brief perspective on Special Purpose Vehicles, which include guided vehicles, dedicated guideways, auto-docking, and other features. There is a sense of urgency for deployment in US. Irisbus and Las Vegas have received a 10 vehicle exemption. A Eugene request is under review.

FTA wants to see demonstration results in operational environment. Review of special purpose vehicle testing criteria is underway as is data collection process during demo projects. The FTA would like to meet with manufacturers on issues and data. We are interested in data gathered from other governments such as France, Netherlands, etc. On-site data gathering in Las Vegas and Eugene is important. We are looking at analysis of testing for BRT, to see what's appropriate and what works.

4.3 John Powell, Moderator

John Powell, the Session One Moderator, made the point that testing at Altoona in Pennsylvania has resulted in 5,000 defects discovered, 100 potentially serious. As a result he feels testing is of value to FTA, and to grantees, because of data gathered and money saved. Manufacturers have benefited from finding problems prior to service. Since the cost of BRT platforms is significantly higher, testing provides positive value.

4.4 Panelist Comments

Joe Calabrese, Greater Cleveland Regional Transit Authority, led off the Panelist comments by stating that BRT isn't really a bus and doesn't fit with current testing. He suggested that we determine the acceptable level of risk regarding special vehicles deployment without Altoona style testing. Timing is critical, for example, buses must be ordered by June this year to be in service in '06. He also raised the following questions: 1) if the initial demand is relatively low, how will R&D be funded, 2) how will the risk be shared and 3) Can manufacturers shoulder more of the testing?

Mr. John Marino, Irisbus North America, followed Mr. Calabrese and discussed the Las Vegas purchase. According to Mr. Marino, Las Vegas supported Irisbus with their waiver request. Timing was critical. Las Vegas will be the first, but cannot absorb all testing costs. Irisbus is testing in France. Las Vegas will provide a different and significant testing environment that would not be found in Altoona. John provided excerpts from the Irisbus waiver letter.

Mr. Cliff Henke, NABI USA, repeated the developing theme that timing is critical because of required lead-time. He also made the point that BRT is flexible, as flexible as LRT was! Regarding waivers and exemptions, they should be limited and definite. If dedicated route is part of definition, much of the cost benefit may be sacrificed. He felt strongly that the testing regime should reflect actual operating conditions, including

mixed use with traffic. Data from other governments is positive, but should be subject to understanding and definition. He suggested to the participants that decisions need to be made regarding which Altoona tests are applicable and which others are needed.

Ms. June DeVoll, Regional Transportation Commission of Southern Nevada, echoed the message that BRT is low-cost alternative to LRT. She felt that transit must balance the value of testing against potential protectionist tendencies and impeding of new technology. Testing adds to cost, extends deployment time, and ignores the testing on systems already in service in other countries.

The last pane list to speak, Mr. Paul Szilagyi, Transportation Techniques, LLC, commented that the law currently requires testing, because in past some vehicles did not perform properly, or safely. New vehicles, such as hybrids, have had arduous times passing these tests, but the outcome can be considered positive. Testing cannot be revised to cover all technology, and should not be a barrier to adopting innovative designs.

4.5 Participant and Panel Discussion

After the comments from the panel, Mr. Powell and the panelists responded to comments, issues and questions raised by the participants. The following bulleted list summarizes those important comments from this session:

- The issues related to testing special purpose BRT vehicles need to be addressed quickly because of the need and demand for these vehicles. What can be done to speed this process?
- BRT vehicles aren't really buses and don't fit with current testing procedures.
- FTA's bus testing regulations increase the barriers to entry into the U.S. of new technology vehicles from Irisbus and others, particularly guided vehicles. FTA's bus testing regulations should not be extended to these light rail-like alternative technologies.
- The legislation creating the bus testing program needs to be changed or eliminated. The current method of testing the new emerging technologies adds significant delay and cost, and is a real disincentive to manufacturers making product changes.
- Replace Altoona's SPV testing with manufacturer and in-service testing.
- Specify the NPRM and related policies for Altoona testing, including protocols for BRT vehicles.

- Need to identify the level of risk associated without Altoona-type testing.
- Which Altoona tests are applicable and what new ones are desirable? Can we incorporate testing done outside the U.S. to speed certification process?
- Testing regime should reflect actual operating conditions, including mixed use, traffic and other service environments.
- Test data from foreign governments is important to consider but should be subject to understanding and definition.
- It is difficult to revise testing to cover all new technologies. Testing should not be a barrier to adopting innovations.
- There needs to be a balance in regard to foreign vehicle waivers to encourage innovation within U.S. bus manufacturing industry.

5.0 Luncheon Briefing: BRT - An Opportunity to Re-Think Transit

Presenter: John Boesel, President, CALSTART

During the noon hour on the first day, Mr. John Boesel, President of CALSTART, briefed the Workshop participants on the opportunity offered by clean drivetrain technologies and the implications for BRT. Mr. Boesel’s presentation can be found in Appendix D.

Mr. Boesel began the briefing by introducing CALSTART, a non-profit corporation involved with advanced transportation technology and alternative fuels. It is a virtual organization, with diverse participant group which spurs technology, working with fleets to provide clean fuel solutions.

Through the partnership with FTA, CALSTART has been involved last year in a BRT Design Competition. This year there is increased involvement in the BRT and support of FTA and industry activities. John then went into the drivers for cleaner, more efficient vehicles. He talked about the world vehicle registrations spiraling upward, growth in cities and population and the effects of worsening air quality. Green house gas emissions growth is closely tied to vehicle growth. Even energy insecurity is impacted by transportation as most of the US reserves are drained. OPEC will control up to 70% of the world’s fossil fuel energy supply in the future.

Then, Mr. Boesel launched into the heart of the topic: BRT is an emerging opportunity for clean drivetrain and including hybrid propulsion system technology. European BRT systems use new designs and propulsion systems. Currently, the U.S. uses fairly conventional drivetrains. Natural gas as a fuel has proven value in fleets of many kinds. But to attract riders, BRT will have to move toward more quiet and clean propulsion. He then highlighted a variety of systems in development and the programs related to these technologies.

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6.0 Partnerships and Outreach to U.S. Bus Manufacturers

Moderator: Brian MacLeod, Gillig
FTA Speaker: Walter Kulyk

Panel: John Andrews	MCI
Cliff Henke	NABI
Rick Brandenburg	New Flyer
Paul Szilagyi	TransTeq

6.1 Background

This workshop session was intended as an outreach to U.S. manufacturers to propose strategies that strengthen U.S. BRT manufacturing through cooperation with the global industry. This served as a kick-off meeting with U.S. vehicle manufacturers. The FTA intended to identify more effective ways to supply U.S. made BRT style vehicles to the U.S. market in a global context.

BRT vehicles and related technologies have been slow to emerge in the U.S. This session sought ideas and potential actions that provide opportunities to invigorate the U.S. BRT manufacturing capability. It looked to illuminate impediments to vehicle introduction that affects primarily the U.S. manufacturers but in the context of the global market place. One aspect of the situation suggested already is the scope of the community demand/supply in the U.S. market. There is an effort underway already to seek answers. But the issues surrounding the state of U.S. manufacturing appears deeper than supply and demand. The complex issues inter-relate government policy, community and transit customer needs, funding and approaches to manufacturing that makes business sense

6.2 Walt Kulyk, FTA Speaker

Mr. Kulyk led off by stating that the U.S. Bus manufacturing industry is not responding quickly enough to meet demand for BRT projects. He said that the Federal Government must also respond. Waivers are being reviewed for testing, foreign-built products are under consideration because domestic suppliers are not moving ahead quickly with similar offerings. Local and regional transit agencies want the clean transit option BRT offers.

He briefly explored this situation. Perhaps the U.S. Industry doesn't understand BRT, which can be addressed with education. Government regulation may be stalling the movement, and must be addressed. He said maybe the U.S. Government needs to involve itself in public-private partnerships to support R&D, education and commercialization. Direct U.S. Government assistance may be another avenue. Procurement and policy

regulations and grants policy procedures need to be revisited, particularly regarding new/innovative technologies.

Mr. Kulyk set the stage for the afternoon’s discussions by identifying FTA proposals:

- Meetings for feedback - mixed audiences and directly with manufacturers
- Joint partnerships for development
- Follow-on from the competition
- Coordinate with Industry Groups
- Revise existing procedures and develop new programs to benefit BRT and bus industry,

and related issues:

- Buy America
- Procurement Regulations
- Partnerships: Making them work
- Standardization: Leadership needed
- Cost-effective approach: more technology for the buck
- Moving forward, in a timely fashion to address needs
- Partnering with domestic and foreign partners to bring technology and practices to the market.

6.3 Brian MacLeod, Moderator

Mr. Brian MacLeod, Gillig Corporation, responded to Mr. Kulyk’s remarks from the manufacturer’s perspective by state that BRT needs are for Advanced Technology, Speed, Comfort, and Quiet. Perhaps the product needs definition, because U.S. manufacturing can meet most of those criteria and, with some time, can bring them to market.

He made the point that Curitiba and LACMTA have used fairly conventional Phase I vehicles. Phase II vehicles, hybrids, with enhanced interior and technology, can be provided in short order. Phase III vehicles need to be defined in terms of the specific needs.

It is difficult to make this happen. Transbus was tried 20 years ago, and it didn't work. ATTB was attempted 5 years ago, and it was not successful. On the other hand, E-Bus manufacturing small electric buses and trolleys and turbine-powered vehicles has been successful. They have invested in R&D for specific market vehicles, with advanced technology. However, mega-transit properties are not the best prospects for such a company.

Perhaps a two-stage approach is workable. Realities exist: 1) Buy America is a law, 2) supply side is weak, 3) heavy-duty suppliers are in low ebb, 3) BRT does not lend itself to commodity typing or pricing, and 4) larger manufacturers cannot abandon profitable lines to pursue advanced technology with considerable risk. The RFP process is problematic. Partnering is may be a solution, but is not supported by current process.

6.4 Panelist Comments

Mr. John Andrews, Motor Coach Industries, opened the panelist comments of Session Two by saying that MCI is an intercity bus manufacturing company. They have been in and out of transit market. In last five years, MCI has grown in the commuter bus market. MCI's commuter buses are used extensively in the BRT/New Jersey market. What customers want is comfort, visibility (cruiser windows) and a superb ride equivalent to the train. MCI is open to partnering and learning.

NABI's Mr. Cliff Henke then followed John. He stated that manufacturers are able to deliver some newer technology and designs right now. For example, NABI will intro 3 new models in fall, which are responsive to their customers. NABI has a BRT style compo-articulated bus on the drawing board. That artic probably won't be deliverable in next two years because of barriers, including regulation/testing process and economic considerations. Cliff offered that the Joint Partnership Program, with modifications, may have appeal to get advanced designs off the ground. Changes in the RFP process also could be helpful.

Next up was Mr. Rick Vandenberg of New Flyer. He noted that New Flyer introduced low floor buses to North American market. New Flyer has learned a lot about making the bus the market wanted. A next generation bus is in process, but it took 1.5 years to get that into development.

Manufacturing in North America, New Flyer funds its own R&D, and takes the risk. We would like to see more Federal funds pushed to the private side, to assist in R&D. He indicated that they would like to see 5 year projections for demand, to give a longer view. On the vehicle side, what are the criteria? How do you define it? He made the point that lack of standardization contributes to cost. Establishing product standards will result in better product and a lower cost.

Last up was Mr. Paul Szilagyi from Transteq. He described Transteq as a private company that pushed technology. Transteq has a fleet in Denver, serving substantial ridership.

Paul pointed out that the system has built-in incentives and disincentives. Technology has a cost curve that is steep in beginning, which then decreases as adoption increases. The market curve does not reward the innovators. The question is will our society reward innovation, or will slowness in innovation continue to be rewarded?

6.5 Participant and Panel Discussion

After the panel comments, the moderator moved to the participants. Questions and issues were raised and discussed as various participants addressed the workshop through roving microphones. The essence of the comments were captured and combined with the panelist comments resulting in the bullet items below:

- BRT “product” needs better definition.
- Phase I (conventional) vehicles are now in BRT use (Curitiba & LA)
- Phase II vehicles – hybrids, with enhanced interior and technology can be produced by U.S. manufacturers now
- Phase III vehicles need to be better defined in terms of needs.
- R&D risks are a major concern for bus manufacturers
- Federal funds are needed to assist in R&D
- FTA should investigate funding an R&D program for transit technology including vehicles, signal systems and passenger information systems. This will make U.S. manufacturers more competitive in world market for new transit technologies.
- Product standards are needed, without them costs increase.
- Partnerships are key but are not supported by current processes.
- In the U.S. there is no incentive for manufacturer to take on the risk of developing new bus designs for BRT. Incentive funding or tax incentives would help defray R&D costs. Stable funding is critical for agencies and manufacturers.
- Nothing is being achieved through Buy America, except substantially higher prices. The free market place will provide greater competition, innovation and cost savings, and transit operators, taxpayers and the riding public will benefit.
- Vehicle visual appeal is important but the performance in traffic and at the bus stop is paramount.
- Preference surveys show public wants more attractive, clean, quiet, articulated vehicles.

- Different manufacturers and agencies have widely differing needs. How do we get consensus?
- The European designs now favored are developed in partnership with manufacturers and agencies.
- No one design will “win” the U.S. BRT market. Different designs for different needs can be supported.
- FTA should champion tax incentives and creative ways to promote R&D
- U.S. manufacturers are looking for incentives, shared risk, standards, stable funding, joint partnerships, regulatory relief and changes in the procurement process.

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7.0 Proactive Vehicle Deployment

Leslie Rogers, FTA Speaker and Moderator Regional Administrator Region IX Federal Transit Administration	Panel: Joe Calabrese John Andrews Susan Williams Laks DeSilva Jerry Trotter	GCRTA MCI Ballard Detroit Diesel APTA
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7.1 Background

This workshop session was intended to identify procurement, cost, performance, vehicle life issues, payment, liquidated damages and other requirements or regulations (eg ADA) that affect BRT vehicles. The anticipated outcome was a robust list of issues and suggestions for procurement process upgrades and useful policy innovations that may benefit modern BRT vehicles.

As new needs emerge for BRT communities we need to examine issues that affect vehicle procurement practices and the evaluation of cost, performance, vehicle life and requirements such as ADA features. This session looked at the introduction of BRT type vehicles from the perspective of the transit properties, the communities that they will serve and the procurement process.

A key element of BRT design is appealing, high quality rapid transport within the city. A high level of performance and quality of service may be necessary to compete for appeal to the city resident with their own private transportation. But that same quality and performance level may lead to higher prices. Higher prices create a dilemma for a transit property that is required to procure with low bid criteria. These higher costs may be offset by a change in vehicle life requirements. The infrastructure needs of dedicated busways or even guideways create other difficult issues. This session dealt with the issues surrounding procurement of BRT vehicles.

7.2 Leslie Rogers, FTA Speaker and Moderator

Mr. Rogers began by introducing himself and his office. Region IX includes Nevada, California, Hawaii and the Pacific Islands. San Diego, BRT Honolulu, Phoenix, Las Vegas and others are all supported through this office.

He stated that BRT means different things to different communities. For example, in the procurement process let's look at Las Vegas. A Buy America waiver was issued prior or absent a formal solicitation document. They did a market analysis, including vehicle characteristics which indicated a need for an articulated vehicle, wider

doors, auto-guide, normal operations in mixed traffic, and an advanced propulsion. Only one manufacturer, Irisbus, could supply that combination. A similar process was conducted internally at Lane Transit.

Since mid 90's, the government procurement process allows local decisions on procurement, seeking a competitive process. The FTA seeks to allow the community to get the vehicle they want. FTA procedures allow progress payments, and will allow advance payments with prior FTA concurrence.

Where possible, FTA will encourage partnering between communities. Under piggybacking, one grantee will include an option that includes an assignment clause, allowing for another party to join.

Regarding lifecycle, Mr. Rogers stated that a BRT should fall between 12 and 20 years. He mentioned that inclusion of liquidated damages, and tax incentives are being addressed. After these comments, Mr. Rogers turned to the panel for their remarks with Joe Calabrese to lead off.

7.3 Panelist Comments

Mr. Calabrese, began by focusing on procurement barriers. Vehicle deployment is critical. You must get funding and let the other issues work themselves out. For example, GCRTA is putting new 40' low floor vehicles into service in Cleveland. The New Starts process is a hindrance and has delayed implementation and deployment. Vehicle testing criteria still to be determined.

In talking about image he raised the question: how do you assign points or dollar value for image? Consumer interest is important, but FTA doesn't allow pricing assignment. Wheelchair restraints, accessibility issues also are important.

Flexibility on joint/shared procurement is needed. Cleveland is seeking partners on a procurement that would boost a 20 bus order to 50.

Mr. John Andrews of MCI then spoke about industry relationships. MCI has a working relationship with NJ Transit which dates back to early 80s, procuring 1244 units over five years. Also, MCI entered into agreement for CNG cruisers, and now diesel-hybrid vehicles with ISE. M. Milan of NJ Transit was supportive of CNG, hybrid projects, bringing in sub suppliers and OEMs. NJ Transit helped bring suppliers together for pre-production meetings, encouraged collaboration and buy-in. They set up a program of progress payments prior to delivery of vehicle related to each step of construction/completion. Putting engineering staffs together was important, as no one knew all aspects which also encouraged collaboration. Flexibility after the contract is awarded also supported successful collaboration. Competitive negotiation is an effective strategy.

Next, Ms. Susan Williams of Ballard Power Systems provided a suppliers perspective. She is with electric drivetrain group of Ballard. Even for suppliers, sharing risk is critical. Advanced drivetrain development involves significant investment, and a low bid approach does not support success. Competitive negotiation with communities, allowing for amortization of R&D costs, is important.

Ms. Williams also touched on drive train technology. Posing the question: what do riders want? – she offered a expansive answer! They don't want noise, large vehicles (perceived), advertising or a 'bus' image. Hybrid and electric drivetrains can be part in reducing noise.

Mr. Laks DeSilva of Detroit Diesel closed the initial panel discussion with comments on Procurement from the vendor side. He stated that vendors are often asked for recommendations in a number of areas. Many times they are asked to join discussions on engineering, technical or diagnostic aspects, as well as training for maintenance and repair. For example, Detroit Diesel trained 250 mechanics in LACMTA on a CNG project. Business specifications for training should be part of agreement. As a final remark, Mr. DeSilva stated that vendors benefit from feedback too because it helps improve product.

7.4 Participant and Panel Discussion

After the Panel speakers' comments, Leslie turned to the participants and opened the discussions. Lively interchanges were passed on to the attendees through roving microphones. The essence of those comments are captured in the following bullets:

- New Starts is a hindrance and has delayed implementation and deployment of BRT.
- Flexibility on joint/shared procurement is needed.
- Competitive negotiation with communities is an effective strategy.
- Sharing development risk is critical. Low bid approach will not encourage the innovation needed.
- Need to bring together FTA, local transit agencies, engineering staffs of subsystem suppliers and OEMs to encourage collaboration and buy-in on new designs/technologies.
- Vehicle requirements should drive the design and procurement of vehicles not the image factor.

- Training for maintenance and repair of new systems/vehicles will be critical.
- FTA can reduce the risk of new products by reducing the “useful life” of these vehicles.
- Can the U.S. bus industry partner with foreign companies to bring products from overseas that have been tested and proven as a stimulus to developing similar products here?

8.0 Developing and Delivering the BRT Message to Key Audiences

Moderator: Martha Welborne
FTA Speaker: Elaine Dezenski

Panel: John Powell ETVI
Gail Charles MARTA
Steve Hirano METRO Magazine
Kurt Brotcke OCTA

8.1 Background

The purpose of this workshop session was to develop a balanced message supporting BRT as a viable transit alternative. The goal was to identify key elements of the BRT message and ideas for the development of a comprehensive strategy to frame the BRT image. A balanced view of the advantages and challenges of implementing BRT will provide the essential information that communities need to make an informed decision. In a broader context, the results of this effort support the FTA’s goals to make public transportation a mode of choice in America.

8.2 FTA Speaker, Elaine Dezenski

Ms. Elaine Dezenski, FTA, opened the session by saying we don't have a fundamental agreement on the marketing of BRT. The themes heard yesterday were that a definition is needed but an agreement is not established on that definition. It's difficult to market without agreement on the definition. It may not be one-size fits all, we may need a variety. One-size also may limit our ability to market successfully.

Image is key, and we have an opportunity with BRT. People want something better and different and that's what we can offer. We can “sell” better service, more service, style and something new.

Yesterday, we spoke about the cost of a BRT vehicle. But, since we don't know what kind of vehicle that is, we need to be careful in our marketing approach. If what we're offering is a cost-effective alternative to LRT, we need to be careful. If the price approaches LRT, how is it better than LRT?

How can we, in FTA, work with you and with Congress to get out the word? There are efforts at FTA to capture good news. Administer Dorn has created a strategic communications team to market the BRT concept to stakeholders. Our responsibility is to assemble a cohesive strategy. We’ve brought together communicators at top transit agencies in the aftermath of 9/11.

The Communicators Task Force addressed those issues and has moved on to marketing activities and concepts. The Task Force is also helping generate marketing materials, using local success stories to disseminate in media. My role is to take charge of legislative outreach, and particularly in the reauthorization effort. She closed by saying that in the next few months, we will be reaching out on the hill and in the media, and we hope to get ideas out of this conference. Ms. Dezenski then turned the podium over to Ms. Martha Welborne.

8.3 Moderator, Martha Welborne

Ms. Welborne opened by saying that marketing or selling transit is not easy, and BRT is challenging because it's not understood. It's a brand new idea. Marketing, educating and selling are different concepts. Educating legislators is important, as is local marketing. Who are we marketing to, what are the tools and what are we marketing? Is there an approach needed, like creating a vehicle?

Six years ago she got a grant to go to Curitiba to see the new mode of transit, and to see if it made sense for Los Angeles. Martha undertook a visual study, using drawings and ideas, countless slide shows, and then eventually a video, actually several videos. She handed out a brochure in the participant packet which identified some ideas of what was being developed. It was eye-opening to see what they were doing in Curitiba, and she showed a clip from a video, a computer simulation. She said “a picture is sometimes worth a thousand words, so I'm sure you should be using drawings.” After the video, she turned to the panel for comments.

8.4 Panel Comments

Mr. Steve Hirano, METRO Magazine, led off the Panel comments by mentioning an article on BRT which outlines various BRT projects around the country. He is a supporter of BRT. As such, he is building a BRT resource website, with an archive of articles, a forum, research information and other items. He encouraged industry contributions.

Next up was Mr. John Powell of ETVI. John observed that “We’ve spent a lot of time discussing the vehicle.” He chided the participants a bit by stating that many are “toasters on four wheels”. There is nothing that captures the public imagination like seeing these (BRT) vehicles. BRT Vehicles have great opportunity. They are unique and futuristic. It is the uniqueness of the vehicle that has the draw. Electric and hybrid electric buses are new and exciting, and part of BRT is as well. They're almost LRT on tires, with new propulsion systems, and that's important.

Ms. Gail Charles then gave MARTA’s BRT perspective. With MARTA, there're looking at BRT internally and externally, and they want to be on the same page. Externally, meeting with stakeholders is important. Nationally, we should all be on the

same page, so that we can all promote it. We need to educate our public and political leaders, and enlist the stakeholders. Different areas will have different needs, and the marketing approach needs to reflect those differences.

The last panel speaker was Mr. Kurt Brotcke, Orange County Transportation Authority (OCTA). He stated that OCTA is pursuing a seven-city BRT project, following MTA’s Rapid Bus model, focusing on Harbor Blvd. As far as pre-marketing, they hired a consultant to develop a bare bones BRT plan for 1 or 2 corridors. A key aspect was educating these cities on signal priority. Priority is different from pre-emption, more complex but less impacts, and the cities needed to be educated, or you could lose a key BRT piece.

Turning to the definition, Kurt suggested that BRT should just not be conveyed as a "train on tires". OCTA doesn't see BRT competing with our LRT, but as complementary. Before BRT, high-frequency local bus service was seen as the feeder/distributor for our planned LRT project. OCTA is now revising future plans to use BRT as a key feeder/distributor for LRT. BRT will allow OCTA to extend the reach and coverage of LRT using the new BRT concepts. They also are looking at it as a feeder for the MetroLink commuter rail system. He then turned the microphone over to the moderator for the Participant and Panel Discussion.

8.5 Participant and Panel Discussion

Ms. Welborne and the panel had a lengthy period of open discussion as the participants interacted, speaking through roving microphones. The session was lengthy and dealt with many issues which are combined with the earlier remarks and provided below in bullet format:

- Avoid bus versus rail arguments in marketing and promotion materials.
- FTA should take the lead in educating stakeholders about BRT such as sponsoring trips to expose more officials to BRT systems worldwide.
- Different strategies are needed for marketing, educating and selling BRT to Congress, local agencies and end users.
- Market segmentation analysis should be applied to potential BRT services to identify a ridership base that has a history of regular transit use as opposed to attempting to lure the occasional user with a snazzy image.
- Use of video is a powerful tool for disseminating the benefits of BRT.

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- There is a need for a central repository for printed, photographic and video material from local BRT campaigns to model from.
- Marketing BRT requires a U.S. success story. We need more data from local programs as they are implemented.
- Creating buzz re: BRT is important, more market research is needed to design the product both visually and performance-wise. The federal process doesn't encourage that part of the process.
- Bus manufacturers need to dialogue with customers at transit agencies re: design considerations.
- Focusing on the vehicle may not be the best sales approach to stakeholders who are more concerned about how BRT operations will affect existing traffic.
- BRT is just one option along with LRT and Rail.
- How can the New Starts pot be increased to accommodate BRT for communities not in the top 30 markets?

9.0 Streamlining Project Development

Moderator: Mark Pangborn Lane Transit	Panel: Steffano Viggiano David Mieger Paul Steffens Katrina Heineking Jon Twitchell	Lane Transit LACMTA Honolulu Charlotte DOT AC Transit
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9.1 Background

This workshop session was intended to identify the problems that BRT project sponsors are having in project development. The focus was on lessons learned and challenges to BRT project implementation. This session also solicited ideas, comments and feedback from the transit industry on organizing expertise within the government and the industry. The goal was identifying ways for funneling that expertise to the communities.

9.2 Ron Fisher, FTA Speaker

Mr. Mark Pangborn, Lane Transit, opened this last Session which focuses on BRT in the community. He stated that “nothing happens without money” then introduced Ron Fisher from the FTA, TPL.

Mr. Ron Fisher talked about the New Starts program history and possible future. He stated that the program is for fixed guideways: busways, rail heads, people movers. There is a problem with New Starts for some BRT. Congress recognized a need that many communities could not afford, and yet demand has grown. There are \$20 billion projects under consideration with 40 projects in consideration, 6 over a billion dollars in preliminary design and 2 in final design.

It’s a popular program, but it’s hard to get money now. Congress has levied rules such as requiring alternatives analysis and an FTA rating. Requirements under TEA21 are more rigorous. The requirements for alternatives analysis has been around for 20 years. Congress has been supportive of finding cost-effective alternatives, but there is no mention of a BRT solution, specifically.

The political aspect is of great interest in how projects are rated. The Administration is looking for cost-effective projects, and historically, he said, we have done well with BRT. The FTA doesn’t determine the alternatives; that is a local issue. So we are interested in consideration of all alternatives generated by the community.

The requirement for the analysis is an opportunity. The future is threefold:
1) Amount of funding – get BRT funding, 2) Eligibility – get BRT included and
3) Criteria – Get a new pot for new projects, and get BRT included. There are many challenges in getting a dedicated pot and growing the pot.

9.3 Panelist Comments

Mr. Stefano Viggiano from Lane Transit provided some lessons learned, stating that LTD first started talking BRT in '95, as a concept. They spent 3 years educating the community. Project development started in '98 and they are looking at deployment in '04. That time seems long, but it turns out not to be. Focus on period before final design to speed up the process. Explore interaction, traffic control, geometrics, community support and involvement to gain political support before proceeding toward funding and vehicle procurement.

BRT is really a local issue, but Federal government can play a big role. Centralization of information could help on engineering and technical resources would be helpful. LTD took our traffic engineers to visit their peers in cities where the traffic interaction system was in use, on an FTA scan tour.

Much of the community wondered what it was, and we didn't have many examples. Looking at other success stories helps validate concept to community. Document successes as they occur, share with community. FTA could provide access to resources.

Lane is considering the New Start process for upcoming projects. Perhaps part of the New Start pot could be for projects of common BRT scope. He suggested that there should be lesser requirements for smaller projects, less rigorous analysis.

Mr. Pangborn then introduced Mr. David Mieger, Los Angeles County MTA, who opened by thanking Lane Transit of Eugene for use of their graphics. David then launched into a discussion of the MTA experiences. Initial enthusiasm for BRT came at a bad time, coinciding with LRT problems in Hollywood. Voters said no to more taxes for subways, and required the MTA to look at surface transit.

A decision was made to lift elements of BRT that didn't require major actions to institute quickly, to run up a project and to hold on to funding from previous rail funding. The results include BRT Metro Rapid projects, which are dropping out of Federal New Starts funding and going to bus funds.

In SF Valley, an EIR has been completed on a BRT project from the end of Redline out to Warner Center on an abandoned rail right-of-way. It could have been a New Start/fixed guideway, but was funded out of other funds.

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Expanding Wilshire Rapid was to include a dedicated lane. The challenge was to preserve successful service while expanding in a new mode. LA DOT's job was to fit BRT in without disrupting traffic. The prospect of a dedicated lane encountered strong resistance from business and community, even though Rapid bus was popular.

An incremental approach worked here and emphasizing the bus aspect was received well. We proposed an LA to Santa Monica project which would get two BRT lines (30 miles) for cost of 2 miles of subway. Resurfacing, acquiring vehicles and expanding maintenance will be required, as well as agreements with cities along the line for maintaining the stops and routes. This project still doesn't fall under New Starts.

Mr. Paul Steffens from Honolulu was next up from the panel. He thanked the FTA for forming the BRT Consortium, and MTA for conference. He stated that their basic bus system hasn't been changed in 30 years, except for expansion. Trans2K is an aggressive program to revamp it and it includes BRT.

We went to communities to determine traffic patterns, commuter needs, commuter wants/desires. After drawing up proposals, we went back to community for additional feedback. We made changes, then went back to get approval/buy-in. The message was: don't want rail, don't want overhead power, do something now! That led to BRT, four transportation centers for the inner city and outlying routes.

Problems arose in appropriating surface lanes for buses. Researching with customers showed it would not have the predicted negative impact on business. In outlying areas, resistance was countered with education on the hub-spoke system. The community process worked.

Other obstacles that were overcome: the State DOT accepted limitations on highways and became supportive. The new head of DOT wasn't as supportive and other local politicians likewise. Education is possibly bringing them around. Centralized sourcing of information from other communities and research entities would be helpful.

Next up was Ms. Katrina Heineking, Charlotte, NC. She said that Charlotte has county funds from sales tax for transit. Five corridors identified. One is an LRT, projected for 2005 service. Four other corridors must compete with the success of LRT to be selected as the best alternative, since funding is finite. Decisions were anticipated by end of the summer.

Charlotte has a dedicated busway, but BRT is not understood clearly in community. Regular buses use the busway, and they are just the same as buses in mixed traffic. The dedicated service did capture public interest and generate increased ridership for a time but that has worn off. Lack of existing “Cadillac” domestic project is an obstacle to getting local buy-in. An unusual problem with busway was encountered when a rare snowstorm obstructed the busway.

The last panel member was Mr. Jon Twichell. He said that AC Transit serves 100,000 people a day on 5 trunk lines. AC Transit is not so interested in spending \$1M for image. Operating costs are more important but he noted that increasing ridership by 25% it's a big deal for their constituency.

Internally, AC Transit just hired a traffic engineer to help plan projects. Also, their internal marketing committee is a "working group all the way down to drivers". For example, they shifted \$1.3M into traffic signalization for priority. "We" are writing the software for this capability. We've made this commitment because when you spend \$250,000 a year to put another bus out there you need to make the investment in signalization to get the service. It is important for the FTA to realize, the community needs the signal money to help the bus service.

Mark then made some comments, stating that there are two tracks a community can use for BRT 1) start quickly but not a full blown system or 2) something with exclusive ROW. Around that there are: 1) money issues: 2) signal priority - you need to form partnerships with traffic departments and you may have to pay for that, and 3) you also need an internal component to sell it you your staff even the bus drivers.

On the political end even though it works, you still run into problems like "bring me the customers but don't take my parking lot". Back to money again, how you choose what funding source impacts what you do.

9.4 Participant and Panel Discussion

Mark, Ron and the panel had a period of open discussion as the participants interacted. The session comments are summarized below:

- Significant lead-time required to educate community re: BRT. Agencies should explore interaction, traffic control, geometrics, community support and involvement to gain political support.
- Centralization of BRT project information and technical resources would be helpful.
- New Start requirements for smaller projects should be less stringent.
- Expand the definition of the federal Section 5309 New Starts Fixed Guideway program to include BRT projects, even those without fixed guideways components.
- Early community buy-in is important as is regular communication for additional feedback as the project develops.
- Internal agency partnerships needed with traffic/highway departments to support project.

10.0 Workshop Wrap-Up

Mr. Edward Thomas, Associate Administrator for Research, Demonstration & Innovation, Federal Transit Administration did the Workshop wrap-up. He pointed out that BRT was coined by Stephano from Eugene Oregon. Ed paraphrased Mr. Snoble who talked about mobility which is what we are all about. BRT is an option. We want to avoid the bus versus rail issue.

Moderators, panelists and participants developed the themes during the session through remarks. The key themes are developed in each session topic although some themes were revisited in many sessions from different perspectives.

Some of these recurring themes include the concept of incremental changes in development, phasing of projects, and staging of technology. Another key theme is flexibility in terms of testing, getting the message out, the implementation process changes and the launch and growth of projects. The BRT concept of “higher capacity transit” through important features such as bigger vehicles, greater access, signal priority, reduced transit time, and the image of enhanced service was continually discussed.

The need for action was also a common theme. The participants by their sheer number, and the enthusiastic and thoughtful responses, demonstrated sincere interest in the Action Plan. Time is short. Those themes will be turned into action items before the next workshop in May. Closure on testing issue by a meeting at the APTA Conference in May is an important goal.

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Attachment A Workshop Agenda

BUS RAPID TRANSIT WORKSHOP
“Action Plan for a Thriving BRT Market”
Los Angeles, California
April 8th - 9th, 2002

Agenda
April 8, 2002

- 8:30 AM REGISTRATION AND CONTINENTAL BREAKFAST
- 9:00 AM Facilitator for Early Morning Welcoming and Presentations:
David Armijo, Service Sector General Manager, LACMTA
- Welcoming Remarks
Brian Williams, Deputy Mayor, City of Los Angeles
John Fasana, Chairman of the Board, Los Angeles County MTA
Roger Snoble, Chief Executive Officer, Los Angeles County MTA
- 9:30 AM **Keynote:** “An FTA Perspective”
Speaker: William P. Sears, Chief Counsel, Federal Transit Administration
- 9:45 AM Los Angeles Metro Rapid: LACMTA – Successes and Challenges for
Rolling out Metro Rapid Program
Speaker: Rex Gephart, LACMTA Metro Rapid Project Manager
- 10:00 AM FTA’s Bus Rapid Transit Demonstration Program and “An Action Plan
for a Thriving BRT Market”
Speaker: Edward Thomas, Associate Administrator for Research,
Demonstration & Innovation, Federal Transit Administration
- 10:30 AM BREAK
- 10:45 AM Facilitator for Discussion Sessions:
Walter Kulyk, Director, Office of Mobility Innovation, Federal Transit
Administration
- Session One: Special Vehicle Testing**
Selected transit authorities planning BRT systems are considering the
acquisition of vehicles with unique designs and new technologies to meet
their proposed BRT service needs. This session will address issues of

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potential testing and evaluation of these vehicles to ensure their adequacy for full production purchases in the U.S.

Outcome: Conceptual alternatives for BRT specialty vehicle testing, potential test categories, and data collection needs

Moderator: John Powell, Executive Director, Electric Transit Vehicle Institute

Speaker: Bert Arrillaga, Chief, Service Innovation Division, Federal Transit Administration

12:30 PM ***Luncheon***

Speaker: John Boesel, President WestStart-CALSTART
“Clean Transportation- An Option for BRT”

2:00 PM **Session Two: Partnerships and Outreach to U.S. Bus Manufacturers**
The involvement of the U.S. bus manufacturing industry in the design and ultimate deployment of the latest, state-of-the-art BRT vehicles is crucial to success of the BRT concept. Partnerships may be necessary between U.S. manufacturers and their foreign counterparts to ensure this success. This session will address ways to encourage such partnerships. It will also explore ideas to encourage the U.S. bus manufacturing industry to competitively meet the new technology needs demanded by the growing BRT marketplace.

Outcome: Identify ways to encourage a strong U.S. manufacturing role to meet the innovative BRT vehicle demand

Moderator: Brian MacLeod, Vice President, Marketing, Gillig Corporation

Speaker: Walter Kulyk, Director, Office of Mobility Innovation, Federal Transit Administration.

3:30 PM Break

3:45 PM **Session Three: Proactive Vehicle Deployment**
Some transit authorities indicate that some existing rules and regulations and administrative practices inhibit the quick purchase and deployment of buses that meet all necessary needs of BRT operations. This session will explore and help identify those rules and practices that could be changed to speed up the vehicle procurement cycle and improve the performance, life, and quality of buses while keeping costs to a minimum.

Outcome: A robust list of issues and suggestions for procurement process upgrades and useful policy innovations that may benefit the acquisition of modern BRT vehicles

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Moderator and Speaker: Leslie Rogers, Regional Administrator, Region IX, Federal Transit Administration

5:30 PM ADJOURN & Depart for Reception (Bus Transportation Provided)

6:00 PM Reception at Mayor’s Mansion

8:00 PM Departure to LACMTA (Bus Transportation Provided)

April 9th, 2002

8:30 AM CONTINENTAL BREAKFAST

9:00 AM **Session Four: Getting out the BRT Message to the Public and other Transit Agencies**

Necessary and carefully information dissemination to the transit industry on the characteristics of successful BRT operations is vital. The proper message must be balanced to adequately address the market and service niche that BRT systems fill. This session will include discussions on effective techniques to disseminate BRT system and program information on a nation-wide scale.

Outcome: Identification of key elements of the BRT message and the media alternatives and dissemination techniques for relaying that message to the transit industry

Moderator: Martha Welborne, Project Director, Surface Transit, California Community Foundation

Speaker: Elaine Dezenski; Office of the Administrator, Federal Transit Administration

10:30 AM **Break**

10:45AM **Session Five: Streamlining Project Development**

Some communities are underway in the process of planning and developing BRT systems that will require Federal aid. Some of these will require technical assistance to ensure that their proposed projects are being planned and developed to maximize their ultimate effectiveness. This session will discuss and identify problems that BRT project sponsors are having in the project development cycle with an aim of identifying

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recurring issues that could be resolved with technical assistance and/or by changing selected procedures.

Outcome : Identification of problems in project development and the application of lessons learned from these problems to help expedite BRT implementation

Moderator: Mark Pangborn, Assistant General Manager, Lane Transit District

Speaker: Ronald Fisher, Director, Office of Planning Innovation and Analysis, Federal Transit Administration

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12:30 Noon **WRAP-UP**
Speaker: Edward Thomas, Associate Administrator for Research, Demonstration & Innovation, Federal Transit Administration

1:30 PM Tour of Metro Rapid Facilities

3:30 PM Return to LACMTA

Attachment B Metro Rapid Presentation

Separate Document

Attachment C Action Plan Briefing by E. Thomas, FTA

Separate Document

Attachment D: BRT An Opportunity to Re-Think Transit

Separate Document