

Meeting Notes

Meeting Date: February 17, 2010
Subject: Commuter Rail Stakeholders Group Meeting #4

Introduction

Marc Pearsall, MAG, initiated the meeting by reviewing the meeting format and introducing Rick Pilgrim of the MAG Study Team, who outlined the agenda and gave the presentation:

- Project Background and Overview
- Ridership Forecasting Results
- System Study Corridor Technical Recommendations
- Short and Long-Term Implementation Steps
- Next Steps
- Questions and Answers

Project Background and Overview

Rick Pilgrim recognized and thanks those who participated in the Project Management Team and on the Review Teams, as well as the individuals and companies that participated on the MAG Study Team.

Rick presented background on commuter rail. Commuter rail is larger, heavier and roomier than light rail. It also has a higher maximum speed, slower acceleration and deceleration than light rail, but still has good travel time and reliability. Commuter rail uses the latest in clean diesel technology, and typically has longer station spacing (3-5 miles on average) than light rail (1-2 miles) with emphasis on park-and-rides. It meets federally mandated structural requirements for rolling stock, and can share right-of-way (ROW) and track with freight (does not need exclusive ROW like light rail). Finally, commuter rail has lower cost per mile (\$10-\$20 million) than light rail (\$40-\$60 million).

Rick review potential future urban growth patterns and travel demand requirements for the region, showing where potential commuter rail lines could be included

Previous transit studies showed that commuter rail service operating on freight rail lines could offer an alternative transportation mode in congested primary corridors in the region. Proposition 400, approved by voters in November 2004, allocated a portion of sales tax revenues to study the options for commuter rail. The Commuter Rail Strategic Plan was initiated by MAG to define the steps needed to be taken for Maricopa and Northern Pinal Counties to plan for and potentially implement commuter rail service. As

a result of the Strategic Plan, MAG initiated the Commuter Rail System Study and two Corridor Development Plans for Grand Avenue and Yuma West Corridors.

The objectives of the Commuter Rail System Study are to:

- Evaluate commuter rail options for the MAG region and the potential connecting routes immediately adjacent to the MAG region.
- Establish priorities for implementing commuter rail service through the evaluation of ridership potential, operating strategies and associated capital and operating costs.
- Evaluate existing freight corridors and possible rail extension areas identified in the Commuter Rail Strategic Plan.

The objectives of the Corridor Development Plans for Grand Avenue and Yuma West are to:

- Review and document existing and forecast demographics, land use, and travel characteristics in each corridor.
- Identify barriers and opportunities for implementation of commuter rail service in the corridor.
- Assess alternative implementation or operating scenario and associated costs and ridership.
- Recommend a conceptual path forward for funding and implementation.

Ridership Forecasting Results

The MAG Study Team completed modeling for individual, stand-alone corridors as well as interlined corridors. Sensitivity tests were conducted to evaluate different scenarios, such as the elimination of some highway projects. The team also considered whether future extensions might be viable.

Overall Most Productive System

Rick Pilgrim review the map of the System Study Corridors, along with the 2030 projected ridership for each of the five stand-alone corridors and the daily boards per revenue mile. For both measures, the Southeast Corridor had the highest numbers. Rick also reviewed the daily ridership and boardings per revenue mile for several interlined scenarios. All but one of these scenarios exceeds the national average for boardings per revenue mile. Finally, Rick reviewed other commuter rail systems and their daily ridership figures for comparison.

After a review of all of these results, the MAG Study Team identified the overall most productive system, consisting of the Yuma West corridor interlined with the Southeast corridor and the Grand Ave corridor interlined with the Tempe corridor. This system results in estimated 2030 total daily boardings of 17,960.

Key Sensitivity Tests

Sensitivity tests were also run to see what might happen if certain scenarios for the future changed from the original plans used in the base model runs. The team evaluated the results of the sensitivity tests based on differences of 10% or greater. Changes of less than 10% are considered nominal and generally within normal model variation.

The first sensitivity test looked at what might happen to ridership if selected highway projects are not built. Several projects were removed from the network and the model was re-run to compare results with and without the selected highway projects. Conclusions show that in general, the planned highway projects do not substantially compete with commuter rail service, with the exception that the Southeast corridor might see slightly higher ridership if the SR-802 project is not constructed.

Another key sensitivity test looked at what might happen to ridership between 2030 and 2035. The initial base model was run based on 2030 socioeconomic data, and then the model was re-run with 2035 socioeconomic data and the results were compared. Conclusions show that Grand Ave and Yuma West Corridors are likely to see a noticeable increase in ridership (17% and 19%, respectively) between 2030-2035 if development occurs as predicted.

Potential Corridor Extensions

Rick reviewed a map of potential corridor extensions in the region. In considering potential extensions, the Study Team used forecasting for a Post-2035 scenario as another method for analyzing extension viability. The forecast was based on the latest available MAG Future Land Use data from 2007. For each corridor, total projected households within 8 miles and employment within .5 mile of target station areas were correlated with ridership potential. The team normalized values for comparison across corridors by calculating households per mile and employment per station target area.

Rick reviewed the results of post-2035 ridership extensions. Conclusions show that higher ridership potential exists for future extensions in eastern Maricopa County and Northern Pinal County. The Superstition Vistas extension is the most productive. Ridership potential in the far West Valley is more viable in the longer term based on available projections and plans. Lower ridership potential is observed along the Hidden Waters extension to Gila Bend.

System Study Corridor Technical Recommendations

Stand-Alone Corridors

Rick reviewed the evaluation criteria for stand-alone corridors:

- Travel time savings*
- Boardings per revenue mile*
- Connections to activity centers

- Land use compatibility
- Impact on regional travel and air quality
- Capital cost per mile*
- Annual O&M cost per rider*
- Ease of implementation*
- Compatibility with freight railroads

The key discriminators among these criteria are marked with an asterisk (*).

The evaluation results for the stand-alone corridors show the Southeast Corridor in the top tier, Grand Ave, Tempe and Chandler corridors in the middle tier, and Yuma West in the lower tier.

The major discriminators for each stand-alone corridor show:

Top Tier:

Southeast Corridor

- 2-4 times the number of boardings per revenue mile as all other corridors
- 18 minute end-to-end travel time savings
- Second lowest capital cost per mile
- Lowest O&M cost per rider

Middle Tier:

Grand Ave

- Boardings per revenue mile are close to the Western States average
- 24 minute end-to-end travel time savings
- Moderate capital costs per mile
- Second lowest O&M cost per rider

Tempe and Chandler Corridor (borderline middle tier)

- Low to moderate boardings per mile
- High O&M cost per user
- Moderate to high capital cost per mile

Lower Tier:

Yuma Corridor

- Lowest capital cost per mile with relatively few infrastructure improvements
- But has lowest boardings per revenue mile
- Minimal travel time savings
- Highest O&M cost per rider

Interlined Corridors

The evaluation criteria for interlined corridors, with a focus on cost-effectiveness, are:

- Boardings per revenue mile
- Capital cost per mile

- Annual O&M cost per rider

The evaluation results show Yuma West-Southeast and Grand Ave-Southeast in the Top Tier, Yuma West-Southeast & Grand-Tempe and Grand-Southeast & Yuma West-Tempe in the Middle Tier, and Grand Ave-Yuma West-Southeast in the Lower Tier.

The major discriminators for the interlined corridors show a finding that each interlined alternative increases overall ridership over the stand-alone alternatives:

Top Tier

Yuma West-Southeast

- Moderate boardings per mile
- Lowest capital cost per mile
- Moderate O&M cost per rider

Grand Ave-Southeast

- Highest boardings per mile
- High capital costs per mile
- Lowest O&M cost per rider

Middle Tier

Grand/Southeast/Yuma/Tempe combinations

- Low to moderate boardings per revenue mile
- Moderate capital costs per mile
- Highest O&M cost per rider

Lower Tier

Grand/Yuma/Southeast

- Lowest boardings per mile
- Moderate capital cost per mile
- Highest O&M cost per rider

Corridor Prioritization and Phasing Options

Segment #1

Which corridor is recommended for start-up commuter rail service?

The Southeast corridor is recommended because it has significantly highest ridership, offers substantial travel time savings, and is cost-effective.

However, if use of railroad right-of-way is a fatal flaw, due to costs and agreements to get through rail yards in Central Phoenix, than options include:

- Building Grand Ave Corridor first; or
- Build Southeast segment between Tempe and Queen Creek and transfer to LRT in downtown Tempe or at the airport
- Build Tempe or Chandler segment in lieu of Southeast
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Segment #2

If Southeast is built as segment #1, which corridor is recommended to interline with Southeast?

While Yuma West-Southeast may be more *cost-effective* (low capital cost for Yuma coupled with high ridership on Southeast), Grand Ave-Southeast is more *effective* because it carries more riders. Ridership is greatest when most productive East Valley and West Valley Corridors (Southeast and Grand Ave) are combined. Therefore, Grand Ave-Southeast is recommended as the first system interline.

System Build Out

How should the remainder of the corridors be phased?

No one outstanding performer in the other three corridors – Tempe, Chandler, Yuma. Considerations for future phasing and system build-out will include development patterns, changes in travel demand, community support and potential integration with inter-city rail and other modes.

Short and Long-Term Implementation Steps

Rick Pilgrim review the short and long-term implementation strategies, which include governance options, funding options and near-term implementation and next steps.

Governance Structure

Governance structure considerations include that the commuter rail service area will expand beyond political boundaries of existing local transit service areas and potentially beyond MAG boundaries. The governance structure should reflect financial, political and representational patterns of the areas served by commuter rail. Success factors include the ability to of the institutional arrangement to (1) balance local control with the need for regional system performance; and (2) provide stable funding opportunities.

Rick Pilgrim did a quick review of some different types of models for governance structure:

A Regional Transit Authority or District that would be responsible for multi-modal services has the advantage of greater efficiencies and coordination between all transit modes. Disadvantages include a lack of focus, a cumbersome political process to expand taxing authority, and a learning curve for RPTA to manage a rail program. Examples of a multi-modal Regional Transit Authority include Sound Transit District in Washington and Tri-County Metropolitan District in Oregon.

A single-purposed Regional Rail Authority or District would be a single provider of rail service. Advantages include elimination of competition for resources being distributed among various transit modes, and all funding partners are equally represented. Disadvantages include adding another entity to the mix, requiring close coordination with METRO and RPTA. A Regional Rail Authority would be unable to serve jurisdictions which do not vote to join, leaving gaps in representation/service, and have a greater costs and start-up time to form the new authority. The Sonoma-Marín Area

Rail Transit in California is an example of this type of structure.

A Joint Powers Authority (JPA) would consist of sub-regional agreements among cities to contribute to the management of rail service in a common corridor. Advantages include maximum flexibility, does not require legislative authority, and if METRO's mission is expanded, a JPA would benefit from similar rail expertise with light rail. Disadvantages include potential overlapping responsibilities within representative entities, each entity would be required to secure its own funding source and funding may be less stable, it may start a "turf war," and would present a learning curve. Examples include the Peninsula Corridor Joint Powers Board in California, South Florida Regional Transit Authority and the Virginia Railway Express.

A Division of the State Department of Transportation (ADOT) is more common in small states with one dominant metropolitan area, such as the Maryland Transit Administration. Advantages include the ability to apply for funding from Federal programs that local entities may not be able to obtain, and it could empower a single railroad negotiator and greater coordination for unified statewide passenger rail service. Disadvantages include an institutional learning curve, funding may rely primarily on state legislative appropriations, may bring into question equity between regions of the state, and increases state influence over local/regional decisions.

A Division of a Municipal Planning Organization is a less common structure. The New Mexico Mid-Region Council of Governments is an example. Advantages include that MAG could continue its role as lead implementation agency and pass-through funding entity. Disadvantages include requiring continued/greater collaboration and coordination among existing transit authorities. Northern Pinal County is part of the Central Arizona Association of Governments (CAAG) and not within the MAG Region. There is the potential for confusion within the MAG and CAAG transportation planning processes. This structure would require expansion of the MAG charter, and requires the establishment of a new operational division within MAG.

Funding Options

There are a variety of funding options that could be explored:

State Funds:

- Highway User Revenue Funds
- Statewide Transportation Acceleration Needs (STAN) Account
- New dedicated State Transportation Funding (e.g., statewide tax)

Federal Funds:

- FTA Section 5307, Urbanized Formula
- FTA Section 5309, New Starts
- FHWA Congestion Mitigation and Air Quality (CMAQ) Funds
- FHWA Surface Transportation Program (STP)
- FRA Section 130, Grade Crossing Safety Improvements
- New Federal funding via Transportation Bill Authorization

Regional and Local Funds:

- Maricopa Count Transportation Excise Tax (e.g., currently a regional half-cent sales tax)
- Potential New Funding Opportunities
 - Payroll Tax
 - Motor Vehicle Sales Tax
 - Vehicle Rental Tax
 - Local Gas Tax
 - Vehicle Registration Fee

Public Value Capture:

- Benefits Assessment Districts
- Tax Increment Financing

Public Private Partnerships

Near Term Implementation Steps

Rick outlined a Five-Year Plan between 2010 and 2015:

- Passage of enabling legislation relative to liability and indemnification (important for coordination with the railroad companies)
- Coordination with the Railroad
 - Developing partnerships and investigating options for an MOU
 - Advancing the design and operating costs
- MAG will coordinate with ADOT on the upcoming Phoenix-Tucson Alternatives Analysis, which will help guide future planning activities in the southeast valley.
- Initiate collaborative local planning efforts
- Identify funding commitments
- Initiate the process for federal funding
- Develop and implement governance plan
- Preserve future options

Long Term Implementation Steps

On the longer horizon, 2015 and beyond:

- Formalize partnership with railroad
- Initiate process for federal funding
- Design, construct and operate initial commuter rail system
- Further planning to develop a seamless transportation system and meet regional sustainable goals.

Next Steps

Rick Pilgrim reviewed the next steps for the study. The Study Team is working to finalize project reports; and to present information related to study work to the MAG committee structure.

Q & A

Audience members were given the opportunity to submit written questions to Rick Pilgrim on provided cards. Rick provided the answers below.

Q: Did the study look at the number of vehicles each corridor removes from surrounding freeways?

Eric Emmert, Southwest Rail Corridor Coalition

A: The study did look at this, however travel time savings were a more accurate measure than cars on the freeway. Travel time savings range from about 18-25 minutes.

Q: Are presentations available for download?

Anonymous

A: Yes, the PowerPoint will be available on the MAG website.

Q: Do the capital cost estimates include adding a track where needed? e.g. Through downtown Phoenix or along Grand? Three of the future extensions reach UP mainline. Would there be service connecting these?

Gene Holmerud, ARPA, Coalition of Arizona Bicycles, AZ Operation Lifesaver

A: Yes, there are estimated for adding track in at least some parts of all five corridors. Future extensions are estimated only, but it is anticipated service would be connected to all corridors.

Q: How often will ridership be “re-forecasted” based on changes in existing conditions and future land use designations along each of the corridor and could changes in ridership projections affect corridor prioritization?

Ken Galica, City of Avondale

Q: We believe your ridership forecasting is not close to being accurate, because you are using old land use plans and data. What mechanism is built in to remedy this issue? Ridership drives all other numbers.

Rogene Hill, City of Avondale

A: (combined two questions) Forecasts do change; however the study uses only the MAG-approved data.

Q: Should we be trying to play catch-up OR should we leap frog into the future and not wait to build ridership one rider at a time to build a system.

Rogene Hill, City of Avondale

A: That decision is up to the MAG Regional Council.

Q: What is the level of cooperation/participation with the Union Pacific RR? Will the lines use the existing tracks to speed up development?

Mack Lake, citizen, Queen Creek/San Tan Valley

A: Union Pacific has said that the Yuma West and Southeast lines are part of their core system, and they have a policy that does not allow sharing of the track along the core

system. The study assumes building a second track for these corridors. UP is more flexible with respect to the Tempe and Chandler lines.

Q: Has an application been made for any ARRA funds or other federal stimulus for commuter rail?

Was Palo Verde considered for ridership?

Woody Thonts, self

A: Regarding Palo Verde, the initial forecast ran out to the generating plant. Right now there are 150 van pools going that directions, so a reserve trip could be an option at some point. (ARRA question combined with next)

Q: Is the project eligible for "Obama" fast rail funds?

Mack Lake, citizen, Queen Creek/San Tan Valley

A: There have been no applications to ARRA to date. The State rail plan will examine federal funding options.

Q: Why is Chandler route not included in interlined corridors?

Bob Bortfeld, City of Chandler

A: Chandler and Tempe lines are very close together, and forecast result showed that using the Tempe corridor results in higher ridership and a stronger combination with other corridors.

Q: Where is the Queen Creek termination for SE?

What is the anticipated population growth on the west side at 2030 as of today?

Who will maintain the track?

Is expansion planned from SE to Tucson?

John Lenio, interested citizen

A: The stations on the map are placeholders only; the cities will need to help decide exact locations during the implementation phase. For population growth, MAG 2030 data was used in forecasting. There are different options for maintaining the track; an individual agency or railroad can run it, or a combination. There are options for a line to Tucson; ADOT is looking into that prospect.

Q: What frequencies per day (# of trips) was used in the ridership numbers?

Number of trains? Train capacity?

Julie, Mesa

A: The forecasting started out with aggressive service. The overall most productive system has 10-minute headways in the central party of the system. Otherwise, there are 20-minute headways. For initial service, frequency would start around 30 minute headways on peak, with 60-minute headways off peak. Commuter train riders tend to know the schedule of when the trains leave to time their arrival for a few minutes before the train arrives.

Q: What consideration was given to station spacing and number of stations? The lines seem to contain too many stations; thereby negatively affecting performance.

J. Transit

A: The study identified station planning areas, so the station locations are not necessarily final. They are likely to move or evolve as implementation moves forward. Along Grand Ave, the stations are about 5 miles apart, and a little better along Southeast, but closer to downtown Phoenix more were added, while others were taken out.

Q: Doesn't interlining between 2 different railroads more difficult than interlining between one railroad?

Rogene Hill, City of Avondale

A: Yes, it's more complicated, especially with respect to operations.

Q: What are the land use assumptions?

Will there be new communities designed around the undeveloped commuter rail stops? And will they help pay for the system?

Anonymous

Q: Won't impact of rail line create high-density development around stops and result in higher ridership?

Mike Cartsonis, Litchfield Park

A: That is the hope. The model shows intra-corridor travel, as well as commuter travel.

Q: What was the capacity of train? (# of passengers)

What hours of service were assumed?

Maria, Mesa

A: Each car holds 150 passengers, and 3 cars can be run together. Our assumptions estimated about 500 passengers. Other systems (like Chicago) run 8-10 cars together. Hours of services are 5:00am-6:30pm.

Q: Are MAG and ADOT models the same? Is the data ADOT is using the same? Are they improved based on lessons learned?

Maria, Mesa

A: ADOT will use region-approved models in their studies for consistency in format.