

7.0 Summary of Findings

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7.1 Summary

It was determined within the study that certain transportation-related problems and needs for the I-70 corridor could be addressed through transit improvements. The identified problems and needs include the following:

- Congestion on I-70 and the parallel street system is decreasing travel mobility.
- There is a low level of existing transit service (i.e. low frequency, long travel time, number of transfers and limited availability) within the study area that does not meet current demand
- There is a percentage of the population that does not have access to the auto-oriented transportation system.
- There is a need to create potential land use advantages to help support sustainable development in suburban settings.
- Increased travel and congestion have contributed to the negative effects on air quality in the region.
- There are increased costs for expanding and maintaining the highway system given statewide, regional and local financial constraints for transportation projects.

The planning process identified and refined an Express Bus Alternative and a Commuter Rail Alternative for assessment of how well they address the purpose and need defined for the corridor. A TSM Alternative that reflects the “existing + committed” transit network was also developed to provide a baseline against which the proposed alternatives are evaluated. The two alternatives that were assessed are:

Express Bus Alternative – The Express Bus Alternative reflects new commuter bus service from Odessa, Oak Grove, and Grain Valley; expanded and modified commuter bus service from Blue Springs and Independence; and new and expanded local bus service in Blue Springs and Independence. This alternative also includes new park & ride lots in Grain Valley and Oak Grove, and an upgraded park & ride lot in Odessa.

Commuter Rail Alternative – The Commuter Rail Alternative is reflected as a new commuter rail service between Odessa and downtown Kansas City adjacent to the River Market area, along with modifications to corridor commuter express and local bus service. The alternative also includes the associated infrastructure such as stations and layover facilities. Stations are provided at Odessa, Oak Grove, Grain Valley, Blue Springs, eastern Independence, central Independence and downtown near the River Market.

Two candidate downtown terminal locations were evaluated. One location was at Kansas City Union Station and the other location was a Riverfront terminal at 3rd Street and Grand Boulevard adjacent to the River Market area. The proposed Riverfront terminal location at 3rd Street and

Grand Boulevard is the recommended downtown terminal location. Neither downtown terminal candidate site provides ideal access to the CBD area. Both will require other transit service to provide access to the CBD area. The primary reason for the Riverfront location preference over the Union Station location is better commuter rail access. Possible conflicts at Union Station with a high volume of freight traffic and Amtrak passenger service have a significant likelihood of negatively impacting commuter rail reliability, which is not acceptable when building ridership.

Capital cost and annual operating costs were estimated for the three alternatives. The range of capital costs for implementing the Commuter Rail Alternative results from whether or not a phased improvement plan will be acceptable. The phased improvement plan would have the lower initial capital cost. Chapter 4.0 provides details of the phased improvement plan. Table 7-1 summarizes the costs.

**Table 7-1
Alternatives Cost Summary
(Year 2006 Millions of Dollars)**

Alternative	Capital	Annual O & M
TSM	\$0.0	\$1.6
Express Bus ¹	\$10.8	\$5.6
Commuter Rail	\$102.8 - \$168.9	\$11.0

¹ Costs increased 2 times to reflect higher than expected ridership demand requiring more vehicles than originally planned.

Ridership estimates for the proposed alternatives were developed using the regional travel demand model. The estimated ridership for the express bus serving Grain Valley, Blue Springs and Independence was estimated to attract 1,302 daily riders and the express bus providing service to Oak Grove and Odessa attracted 269 daily riders. The Commuter Rail Alternative attracted a maximum daily ridership of 1,425. The main reason that the Express Bus Alternative attracts a similar number of riders is the superior access provided to employment destinations in the CBD area. A much larger number of Commuter Rail Alternative riders must make a transfer to access employment destinations. The Aggregate Rail Ridership Forecasting sketch planning application also forecasted Commuter Rail Alternative ridership levels consistent with the regional model.

The comparison of alternatives showed that the Express Bus Alternative more cost effectively met the need for improved short or mid-range transit service in the I-70 corridor. Related to meeting the purpose and need defined for the project, both alternatives similarly address the needs. The one aspect of the purpose and need that the Commuter Rail Alternative addressed and the Express Bus Alternative did not is the ability to assist in growth management by encouraging transit-oriented development. Fixed guideway transit has been demonstrated to have the ability to promote both new development and redevelopment in the vicinity of station locations. Express bus service has limited potential to promote development.

Table 7-2 offers a comparison to commuter rail projects in other metropolitan areas that either currently are, or recently were, in the New Starts process. Of those projects in other locations that were subject to New Starts criteria, the lowest daily future year ridership is 3,000. This is twice as high as the ridership forecast for the I-70 corridor Commuter Rail Alternative. Two projects that were exempt from New Starts criteria, because the amount of New Starts funding

was less than \$25 million, had forecast daily ridership of 2,300 and 1,900. The average annual cost per rider for the comparison projects is \$117.10. The annual cost per rider for the I-70 corridor Commuter Rail Alternative, depending on whether a phased or full-build approach is implemented, ranges from \$282.90 to \$464.81, respectively.

**Table 7-2
 Commuter Rail Cost Comparison**

Project Description	Location	FTA Overall Project Rating	Review Date	Length (miles)	Total Capital Cost (YOE)	Forecast Year Annual Operating Cost	Ridership (Ave. Weekday)	New Riders (Ave. Weekday)	Total Cost Per Rider
Seaside-Scondido rail corridor	San Diego, CA	A ¹	0 - 005 ³	0	351.5 M ⁵	A	1,000	A	7.6
Southwest corridor commuter rail	Chicago, IL	A ¹	0 - 004 ⁴	1.0	1.81 M ⁵	A	13,800	7,600	56.3
Deer to Salt Lake City commuter rail	Salt Lake City, UT	Medium	0 - 005 ³	43.0	611.7 M	15.5 M	11,800	6,100	103.3
North Central corridor commuter rail	Chicago, IL	A ¹	0 - 004 ⁴	18.6	5.5 M ⁵	A	8,400	A	105.3
Northstar corridor rail	Minneapolis-Big Lake, MN	Medium	0 - 005 ³	40.0	65 M	1.0 M	5,600	1,300	185.7
Union-Pacific West Line extension	Chicago, IL	A ¹	0 - 005 ³	8.5	134.56 M ⁵	A	3,000	A	135.3
Wilsonville to Beaverton commuter rail	Washington, OR	Medium	0 - 005 ³	14.7	117.3 M	8.8 M	3,000	1,000	136.1
South County commuter rail	Providence, RI	Small Start	0 - 005 ³	0.0	43.7 M	A	1,300	A	74.5
East corridor commuter rail	Cashville, TN	Small Start	0 - 005 ³	3.0	41.0 M	3.0 M	1,000	700	84.6
I-70 corridor - Phased Plan	Cashville, TN	Not Rated	A	40.5	10.8 M	6 M	1,450	A	8
I-70 corridor - S Plan	Cashville, TN	Not Rated	A	40.5	168 M	11.0 M	1,450	A	464.8

Notes:

- ¹ FFGA - Project under a Full Funding Grant Agreement
- ² Because the proposed New Starts share is less than \$25 million, the project is exempt from the New Starts criteria and is thus not subject to FTA's evaluation and rating (49 USC 5309(e)(8)(A)).
- ³ Published in Annual Report on New Starts Proposed Allocations of Funds for Fiscal Year 2007, FTA, 2006
- ⁴ Final New Starts funding was provided in FY 2006, so the projects were not included in the FY 2007 report.
- ⁵ The total project cost under the Full Funding Grant Agreement (FFGA)

An assessment of land use served by the Commuter Rail Alternative found that existing land use does not support commuter rail service. The station area communities within the I-70 corridor generally do not have plans or policies that are transit supportive, with the exception of Kansas City and Blue Springs. In terms of land use and development, one of the first steps towards creating a more favorable, appropriate environment for the eventual implementation of commuter rail service within the corridor is the adoption of policies that allow and encourage transit supportive development.

For the I-70 Commuter Rail Alternative, the likelihood of successfully competing for New Starts funding is minimal in light of the results of the study analyses: low ridership forecasts, high capital costs, and an environment that is currently unfavorable to achieving transit supportive development patterns (relative to other areas seeking funds for New Starts). Even if the capital costs to implement the Commuter Rail Alternative are reduced, the forecasted ridership is still

significantly lower than other projects that have received FTA ratings that allow the project to begin the New Starts funding process. The forecast demand for the Express Bus Alternative suggests that if express bus is enhanced in the corridor ridership will develop to support the service.

7.2 Recommendations

- 1) The Commuter Rail Alternative should be viewed as a longer-term proposition for the I-70 corridor, given the projected cost of deploying commuter rail compared to the level of forecasted ridership.
- 2) Enhanced express bus service should be viewed as the near-term strategy for the I-70 corridor. Ridership estimates show that it is warranted, and can be provided for a significantly lower initial capital cost and a lower operating cost than commuter rail service.
- 3) The area should work with MoDOT through their First Tier Environmental Impact Study of the I-70 corridor to further define short and long range transit and transportation solutions and strategies in this corridor.

7.3 Commuter Rail Viability in the Future

In order to continue working toward a future long-term commuter rail strategy in the corridor, the following enhancements should be made to attract additional riders and improve the corridor's competitiveness:

- Adopt or amend plans and zoning codes to foster transit supportive land uses in the area of proposed station locations.
- Consider connectivity between commuter rail and light rail in the current light rail planning process, as the direct connection by rail to downtown's concentration of employment would improve commuter rail ridership.
- Continue to examine opportunities to provide direct commuter rail service to Union Station from the east, which would attract additional riders to the commuter rail service.

Local funding to maximize the local match will be critical if or when a decision is made that ridership and land use issues have been addressed sufficiently to apply for New Starts funding. The percentage of local match is an important consideration in the FTA rating process. The minimum local match is 20 percent of the project cost. To receive a medium rating, local funding needs to cover 50 percent of the project cost. The high rating is received for a local match of 65 percent or higher.

With limited New Starts funding, the selection of appropriate projects to submit for New Starts funding needs to be coordinated on a regional level. From a regional perspective it makes the most sense to implement fixed guideway improvements in a strategic manner that will enhance the competitiveness of the next project chosen to pursue New Starts funding.

The need for a significant level of local funds to provide the local match and the need to strategically use limited New Starts funding in the region highlights the importance of the Smart

Moves regional transit plan. The Smart Moves concept of a regional funding mechanism will allow the local match to be generated by a larger base reflecting the regional benefit. The refinement of the Smart Moves regional transit plan will allow the concept of commuter rail in the I-70 corridor to be considered and evaluated on a regional basis to ensure that limit New Starts funding is used in the most efficient manner.