

Financing Strategy

In order to implement the long-term strategy of DMU, a specific funding source will need to be identified. While a number of financial strategies and tools exist, for the purpose of the LPA the goal was to ensure there was a feasible financial strategy to support the implementation of the LPA recommendations. Based on an analysis of multiple funding sources the Project Partnership Team has identified that a county-wide sales tax increase as a feasible mechanism for supporting the construction, operations, and maintenance of the services in question.

Revenue Sources	Use	Considerations	Revenue Estimate
Sales Tax	Operating and Capital	<ul style="list-style-type: none"> Significant revenue at low rates Easy to administer Subject to county-wide voter approval Successfully implemented by many transit agencies Revenue needs determine size the rate Subject to economic cycles 	1-cent sales tax = \$80 million in Jackson County (annually)
Property Tax	Operating and Capital	<ul style="list-style-type: none"> Broad coverage (business and individuals) Easy to administer Generates significant revenue at low rates Subject to county-wide voter approval Competes with school districts and other beneficiaries of the tax 	One mill generates \$82,500 annually
Farebox Revenue	Operating	<ul style="list-style-type: none"> Direct users pay for the project Ease of revenue collection Limited revenues available 	Dependent on the system and service type – generally supports 20% of operating costs
Federal Funding	Capital	<ul style="list-style-type: none"> Helps jump start programs Reduces needs for local revenue Competition nationally for such programs Funding is being reduced 	The New Starts Program could provide 30-50% of construction costs.

Next Steps:

With an LPA identified, the Project Partnership Team is now working on the following tasks that will continue the implementation of the LPA:

- **Completing the U.S. 71 Transit Study:** The U.S. 71 Transit Study is currently in the second tier of evolution of potential enhanced transit along or parallel to the U.S. 71 corridor between downtown Kansas City and Grandview. The Locally Preferred Alternative for this study will be identified in early 2013.
- **Finalizing Negotiations with Partner Railroads:** Agreements will be required with partner railroads in order to implement the LPA. The Union Pacific Railroad currently owns the Rock Island Railroad (Southeast Corridor) and the Neff Yard (East Corridor – common segment with Southeast). The Kansas City Southern owns the KCS line traveling east from Kansas City (East Corridor). Negotiations continue with the railroads and will be finalized in 2013.
- **Initiating Further Project Development:** With an LPA identified, the Project Partnership Team will now be moving the project further into implementation by starting any required environmental study and conceptual engineering.
- **Planning for Circulation Services in Suburban Communities:** Access to stations along the LPA in suburban communities may require enhancements. The Project Partnership Team will coordinate with local communities regarding enhanced transit circulation.

Questions or Comments:

Study documents are available at the Smart Moves website: www.kcsmartmoves.org. Additionally, you can provide comments at the Jackson County MindMixer website: www.imagnetransit.com.



The Jackson County Corridors Alternatives Analysis
Locally Preferred Alternative

November 2012

Locally Preferred Alternative

A Project Partnership Team made up of the Mid-America Regional Council (MARC), the Kansas City Area Transportation Authority (KCATA), the City of Kansas City, Missouri, and Jackson County, Missouri sponsored an Alternatives Analysis (AA) for two Jackson County Commuter Corridors originating in downtown Kansas City, Missouri and extending east of the downtown area. An alternatives analysis is a detailed study of all reasonable transportation alternatives within a corridor that address locally identified needs. The East corridor generally parallels Interstate 70, crossing downtown Kansas City (MO), Independence, and Blue Springs. The Southeast corridor generally parallels Missouri Highway 350, serving downtown Kansas City (MO), Raytown, and Lee's Summit. The AA process began in the summer of 2011. The final step, the acceptance of a Locally Preferred Alternative (LPA) is documented in this summary.

A Transit Solution to Meet Our Needs

During the planning process, the project partners, stakeholders and the public concluded that a successful transit solution for the East and Southeast corridors must meet needs for transportation, economic development and sustainability.

For transportation, the LPA should provide:

- faster travel times
- service reliability, even as congestion worsens
- reverse commute opportunities

For economic development, the LPA should:

- support existing plans
- connect activity centers and redevelopment sites

For sustainability, the LPA should:

- improve the region's air quality
- provide environmentally-sensitive travel alternatives



To that end, express bus, bus rapid transit, enhanced streetcar and diesel multiple unit (DMU) alternatives were evaluated to determine their effectiveness at meeting the identified needs. The evaluation also included cost, potential ridership, constructability, environmental impacts, traffic impacts and equity. The screening process included two decision points where alternatives were reduced. In the end, a LPA including a long-term goal of DMU in both corridors was identified as the best at meeting the diverse needs for the two corridors. The tables on the following pages depict each alternative's effectiveness at meeting the need statements.

A Transit Solution to Meet Our Needs

The following tables depict each alternative's effectiveness at meeting the need statements.

Table 1: Alternative's Effectiveness at Meeting Need Statements

Transportation Need	Express Bus	DMU	Enhanced Streetcar	Bus Rapid Transit	Analysis
Improves travel times	Low	High	Medium	Medium	The DMU mode operates in an exclusive guideway for the entirety of the corridor. Average travel speeds are highest on this mode.
Improves on-time performance	Low	High	Medium	Medium	The DMU mode operates in an exclusive guideway for the entirety of the corridor. Average travel speeds are highest on this mode.
Provides reverse commute options	Medium	High	Low	Medium	The DMU alternative travels furthest into the suburban areas and therefore can meet the most reverse commute demands. The availability of reverse commute is contingent upon the hours of service offered.

Table 2: Alternative's Effectiveness at Meeting Need Statements

Economic Development and Land Use Need	Express Bus	DMU	Enhanced Streetcar	Bus Rapid Transit	Analysis
Support Existing Plans	Low	High	High	Medium	Numerous land use and economic development plans throughout the study area identify the need for enhanced transit and transit amenities. The Enhanced Streetcar is supported in plans identified for Linwood Blvd. The DMU is supported in plans in Blue Springs and Lee's Summit.
Connect activity centers and redevelopment sites	Low	High	High	Medium	The rail-based strategies are best able to catalyze potential redevelopment at activity centers (the DMU in the suburban areas – the Enhanced Streetcar along Linwood Blvd.)

Table 3: Alternative's Effectiveness at Meeting Need Statements

Sustainability/Land Use	Express Bus	DMU	Enhanced Streetcar	Bus Rapid Transit	Analysis
Improve the region's air quality	Medium	High	Low	Low	Transit operations that travel longer distances offer the best opportunity for improving the region's air quality. The DMU and Express Bus options travel the longest distance. Because the DMU vehicle is in its own guideway, it will have the least dwell time, thereby providing a service that emits the least air pollutants.
Provide environmentally sensitive travel alternatives	Medium	High	Medium	Medium	All three build alternatives provide access to regional bicycle and pedestrian amenities, including the Rock Island corridor. These vehicles also accommodate bicycles and the stations will have enhanced bicycle amenities. The terminus of the DMU at 3rd and Grand provides connections to the downtown streetcar, bike share and local pedestrian amenities.

Table 4: Alternative's Technical Output

Technical Output	Express Bus	DMU	Enhanced Streetcar	Bus Rapid Transit	Analysis
Ridership	East: 600 Southeast: 350	East: 1,150-2,800 Southeast: 500-1,000	1,850 (most occurs on Linwood Blvd)	500 (most occurs on Linwood Blvd)	The DMU is most effective at serving the suburban market. Ridership for the Enhanced Streetcar and BRT is most effective along Linwood.
Capital Cost	\$35-39M per corridor	East: \$327 - \$434M Southeast: \$170 - \$225M	\$402 - \$538M	\$230 - \$283M	Of the build alternatives, the DMU is the most cost effective over the longest distance.
Operating Cost	\$3.6M per corridor	East: \$10.7 Southeast: \$4.3M	\$6.1M	\$3.2M	The bus alternatives are the most affordable to operate.
End to End Travel Time	Varies - separate origin and destination for each city	East: 35 min, 15 sec Southeast: 22 min, 59 sec	26 min, 22 sec	32min, 22 sec	All alternatives provide comparable travel times.

The Locally Preferred Alternative

In evaluating the potential alternatives, only one mode was able to effectively meet all three of the expressed needs (transportation, economic development, sustainability). While the DMU alternative is the long-term strategy for transit enhancement in both corridors, a phased approach will be necessary for implementation. This strategy will include implementation of enhanced express bus as an immediate step, acquisition of key corridors and, finally, implementation of the DMU strategy. The phased approach is as follows:

Phase 1

DMU on the Kansas City Southern Rail Line (Adjacent to I-70), Express Bus Enhancements on the I-70 and on the M-350 Corridor (Adjacent to the Rock Island Railroad)



East Corridor

Mode: Diesel Multiple Unit (DMU)

Route:

The first phase of development will operate from Oak Grove in eastern Jackson County to 3rd and Grand in the River Market. This route will operate on the Kansas City Southern rail line that is parallel to I-70 until west of Independence, where it will travel adjacent to the Union Pacific Neff Yard until it terminates in the vicinity of 3rd and Grand. Stations will be located in Oak Grove, Grain Valley, Blue Springs, Independence and the River Market.

East DMU Line at a Glance
Construction Cost: \$327M - \$434M
Annual Operating Cost: \$10,700,000
End to End Travel Time: 35minutes, 15 seconds
Estimated Daily Ridership: 1,150-2,800

Southeast Corridor

Mode: Express Bus

Route:

For the Rock Island Corridor, enhanced express bus service in the M-350 corridor will be implemented, similar to the currently offered services in Lee's Summit, but with the addition of routes from Pleasant Hill, Greenwood and Raytown. Services will also be offered more frequently and for longer spans during the day.

In addition to additional enhanced transit service, enhancements to park and ride facilities on both corridors will be part of the Phase 1 implementation strategy.

Mode: Bicycle/Pedestrian

Route: As part of a strategy to preserve the Rock Island corridor and extend the Katy Trail into Kansas City, Phase 1 would include the development of a recreational trail along or adjacent to the Rock Island Railroad from the Truman Sports Complex to Pleasant Hill. This trail would connect with trails throughout Jackson County and would be constructed to not preclude potential transit development in the corridor.



Diesel Multiple Units (DMU)

DMUs are rail cars that are self-propelled - no large locomotive engine is required. Using dual cab train set configurations, DMUs are capable of running in the reverse direction which eliminates the need for turnaround tracks. These vehicles are compliant with requirements from the Federal Railroad Administration (FRA) for trains operating on active freight tracks.

Phase 2

DMU on the Rock Island Corridor



Southeast DMU Line at a Glance
Construction Cost: \$170M - \$225M
Annual Operating Cost: \$4,300,000
End to End Travel Time: 22 minutes 59 seconds
Estimated Daily Ridership: 500-1,000

Southeast Corridor

Mode: Diesel Multiple Unit (DMU)

Route:

As an extension of the I-70 line, a segment that travels southeast via the Rock Island corridor is part of the Phase 2 implementation plan. In this phase, an extension would split from the main I-70 commuter line at Leed's Junction and would travel southeast along the Rock Island with stations at the Truman Sports Complex, Downtown Raytown, 350 and Noland Road, and I-470 and View High Drive in Lee's Summit.

In addition to improvements to the rail line and the acquisition of DMU vehicles, stations will be developed at each location that allow for parking, connections to other modes, and serve as landmarks in the community. Areas around transit stations will be planned to consider Transit Oriented Development (TOD) principles to best optimize the investment in transit.

Potential Future Extensions

Mode: Diesel Multiple Unit (DMU)

Route:

East Corridor

The I-70 corridor could potentially extend from the Phase 2 terminus of Oak Grove to Odessa. At this terminus point, a station would be located that allows for parking and multimodal connections.

Southeast Corridor

The Rock Island corridor could potentially extend from the Phase 2 terminus of northern Lee's Summit to Pleasant Hill. Access to the existing rail corridor would need to be secured and new stations would be located at south Lee's Summit, Greenwood and Pleasant Hill and will allow parking and multimodal connections.

South Corridor

The U.S. 71 Transit Study is ongoing and will develop an enhanced transit locally preferred alternative for the South Corridor.



The Katy Trail, which currently travels from Machens, Missouri on the east to Clinton, Missouri on the west, is the country's longest Rails to Trails project. Throughout the Jackson County Commuter Corridors Alternatives Analysis process, the public and stakeholders identified the Rock Island corridor as the potential corridor that could connect the Kansas City metropolitan area with the Katy Trail, and specifically with an extension that is currently under construction between Windsor and Pleasant Hill. As part of the locally preferred alternative, this trail connection will be developed along the Rock Island Corridor and will connect with existing regional trails.