APPENDIX J
FINAL OPERATING
PLAN DETAILS

JACKSON COUNTY
COMMUTER CORRIDORS
ALTERNATIVES ANALYSIS

OPERATING COST METHODOLOGY

March 2013

MARC
Mid-America Regional Council

JACKSON COUNTY
MISSOURI

CITY OF FOUNTAINS
HEART OF THE NATION

KANSAS CITY
MISSOURI

kcATA
Kansas City Area Transportation Authority

As part of the analysis of the alternatives, planning-level operating costs were completed on each of the Tier 2 Alternatives (TSM, Express Bus, Bus Rapid Transit, Enhanced Streetcar and Diesel Multiple Unit). This report provides details on the methodology for this analysis.

GENERAL APPROACH

The first step in identifying the potential operating costs for enhanced transit is to have reasonable baseline costs to operate the service. The first input into the baseline costs are those provided by KCATA. Existing operating cost data was provided by KCATA and serves as the input for costs associated with local and express bus services. For those modes that are not currently being provided in Kansas City (including guideway Bus Rapid Transit, Enhanced Streetcar/Light Rail, and Commuter Rail via Diesel Multiple Unit vehicle) an analysis of systems throughout the United States identified a reasonable cost assumption. Once the initial cost inputs were identified, the following data was collected for the proposed modes:

Transportation Systems Management:

Local Bus Enhancements:

- Incremental difference in revenue hours for changed routes
- Incremental difference in revenue miles for changed routes
- Incremental difference in number of peak vehicles for changed routes

Express Bus:
- Intended operator (bus system or contractor)
- For contractor-operated, the payout details of the contract, along with revenue miles, hours, and number of peak buses
- For KCATA-operated, revenue miles, hours, and number of peak buses, along with whether its new service or a change to existing service

Bus Rapid Transit:

- Intended operator (KCATA or contractor)
- Number of revenue miles
- Number of revenue hours
- Number of peak buses
- Number of fixed guideway miles (only applicable if it is operating separately from regular traffic)
- Number of proposed stations, plus other details on how involved the stations will be:
    - Number and type of amenities
    - Size of platform
    - Will BRT have its own dedicated cleaning and security crews?
    - Anything else that will involve labor to clean, maintain, and secure the stations

Light Rail/Enhanced Streetcar:

- Intended operator (ATA, other public agency, or private contract)
- Number of revenue miles
- Number of revenue hours
- Number of peak trains (not vehicles, if using consists)
- Number of one-way track miles, broken up into street running and grade separated
- Number of proposed stations, plus other details on how involved the stations will be, same as BRT
- For the LRT cost model we will need to select a peer agency. The more details the better:
  - Vehicle seating size
  - How many cars will each train have –
  - Diesel vs electrified? If electrified will it all be catenary or will there be third rail in places? Embedded track or ballasted track? How much of each?
  - Type of rail signaling system
  - Type of traffic signal priority

Diesel Multiple Unit:

- Intended operator (Public or private)
- Number of revenue miles
- Number of revenue hours
- Number of peak trains and peak passenger cars
- Number of track miles
- Number and type of proposed stations.
  - Details on stations
  - Type of stations include terminal P&R, intermediate P&R, urban walkup
  - How will stations be monitored by ticket clerks and/or security?
- Information on fare payment methods, including labor on board the vehicle, TVMs at the stations, etc.
- Details on the trench embankment section for alt 4. Who will maintain this section of track?

Once all of inputs were provided, a spreadsheet costing model was developed for each mode. Costs were broken down by weekday and weekend services, with weekend serves including only the incremental costs of the additional services (it was assumed that all guideway maintenance and administration costs would be paid based on the weekday service estimates).

Output from this analysis was used for rightsizing efforts throughout the process and is detailed in the Tier 2 Screening report.