

THREE PARTY COST-SHARING AGREEMENT FOR METCALF/SHAWNEE MISSION PARKWAY TRANSIT PLANNING STUDY

This Agreement is entered into as of _____, 2010, by and among the City of Mission, Kansas (Mission), the City of Overland Park, Kansas (Overland Park), and Johnson County, Kansas, through Johnson County Transit (County).

Recitals

- A. County, in partnership with the Kansas City Area Transportation Authority (KCATA), has completed an initial feasibility review of a potential Bus Rapid Transit (BRT) system along Shawnee Mission Parkway and Metcalf Avenue in Johnson County. County and the cities of Mission and Overland Park, now desire to expand and update their study findings(theProject).
- B. The Project shall study and identify transportation issues and evaluate alternatives to address these issues in the Metcalf/Shawnee Mission Parkway corridors, commonly referred to as an "Alternatives Analysis" as set forth on the attached Exhibit A "Scope of Services", a copy of which is attached hereto and incorporated by reference herein.
- C. County has agreed to undertake and oversee the Project and Mission and Overland Park have agreed to reimburse the County for a portion of the costs of the Project as set forth in this Agreement.
- D. The Board of County Commissioners approved the extension of the contract for the Alternative Analysis study on February 25, 2010, including any and all funding agreements.

Agreement

- 1. The County agrees to undertake the Project and shall enter into, in its name, appropriate contracts for the completion of the study contemplated by the Project.
- 2. The Project shall, generally, encompass the work described on the attached Scope of Services and the County shall endeavor to have the Project completed by June 1, 2011.
- 3. The Project costs are anticipated to be approximately \$667,634 which the parties agree shall be shared as follows: Overland Park and the County shall each contribute \$53,411 and Mission shall contribute \$26,705, with federal funding to provide the balance. If the Project costs are less or more than \$667,634, then each party's share shall be decreased or increased, as the case may be, on a prorata basis.
- 4. The County may, at its option, seek reimbursement for Project costs from Mission and Overland Park as costs are incurred and paid or may seek a lump sum payment upon completion and acceptance of the Project by the County.
- 5. Mission and Overland Park shall be entitled to receive a detailed invoice for their share of costs from the County and the County shall supply an appropriate and detailed statement of such costs. The County shall not include as Project costs any costs other than those billed to the County by a third-party contractor and no costs incurred by the County for County staff time or overhead shall be included as a reimbursable expense.

6. Overland Park and Mission agree to promptly remit to the County their share of Project costs upon the receipt of a properly documented statement from the County.
7. For purposes of Project guidance, oversight, and intergovernmental cooperation, the parties shall each designate a representative which persons shall be kept generally informed by the County of the progress of the Project.
8. This Agreement shall terminate upon the completion of the Project as evidenced by the County's acceptance of the same. Mission and Overland Park's obligations under this Agreement shall automatically terminate upon the payment of their respective share of Project costs as set forth above. If the County fails to undertake the Project as evidenced by entering into a contract for the work with a third-party contractor no later than October 30, 2010 either Mission or Overland Park, or both, may terminate this Agreement upon written notice to all other parties and upon such termination shall have no further obligations under this Agreement.
9. This Agreement is entered into under the home rule powers of each entity and is not subject to approval by the attorney general under K.S.A. 12-2901 because it is within the exception for agreements for studies undertaken by governmental entities.

This Agreement is entered into as of the _____, 2010, even though the execution may have occurred before or after such date.

Board of County Commissioners
of Johnson County, Kansas

City of Overland Park, Kansas

Annabeth Surbaugh, Chairman

Carl Gerlach, Mayor

Attest:

Attest:

Casey Joe Carl
Clerk of the Board

Marian Cook, City Clerk

City of Mission, Kansas

Approved as to form:

Laura McConwell, Mayor

Tammy M. Owens
Senior Assistant City Attorney

Attest:

Martha Sumrall, City Clerk

Approved as to form:

David K. Martin
City Attorney

Approved as to form:

Robert A. Ford
Assistant County Counselor

Exhibit A

SCOPE OF SERVICES

FTA Alternatives Analysis

Metcalfe Avenue / Shawnee Mission Parkway Corridor

Introduction

Building upon the Metcalfe Avenue and Shawnee Mission Parkway Transit Planning Study (referred to as Phase I report), Phase II of this study will be designed to satisfy the Federal Transit Administration's (FTA) Alternatives Analysis (AA) requirements. This study examined transit options along Metcalfe Avenue in Overland Park, Kansas and along Shawnee Mission Parkway/Johnson Drive in Mission, Kansas extending toward the State Line and into the Plaza area in Kansas City, Missouri.

The Phase I report describes existing transit conditions and provides a review of possible transit alternatives. Two alternatives were identified – enhanced transit service to operate with bus rapid transit features in mixed traffic and enhanced transit service to operate as bus rapid transit within a fixed guideway for a portion of the route.

At the conclusion of Phase I, it was determined that the study of transit alternatives would enter into the FTA Small Starts planning process. The capital requirements associated with a fixed guideway will require a more extensive planning process than that provided in Phase I in order to be considered for federal funding for a project of this potential magnitude. This Phase II Study will concurrently provide the documentation necessary to support an FTA Small Starts application for the construction of a Bus Rapid Transit (BRT) fixed guideway, if that is selected as part of the locally preferred alternative. The information developed in Phase I will be utilized as the more detailed Phase II Small Starts Alternative Analysis is completed.

The Phase II study will include a more rigorous definition of the transit alternatives. It will include more defined operations plans and will include conceptual engineering plans for sections of the corridor in which a fixed guideway alternative will be developed.

The following scope of services provides the transportation, engineering and environmental tasks anticipated to develop and complete an AA and the supporting documentation for an FTA Small Starts application. It has been prepared as a basis for fee negotiations and study development.

Below is the outline:

TASK 1 Project Management

TASK 2 Coordination

TASK 3 Public Outreach

TASK 4 Purpose and Need

TASK 5 Environmental Data Collection and Evaluation

TASK 6 Transportation Alternatives Development and Evaluation

TASK 7 Conceptual Engineering and Alternative Refinement

TASK 8 FTA Coordination and Revision

TASK 1 PROJECT MANAGEMENT

1.0 Consultant Project Management

The Consultant shall assign a Project Manager who will communicate regularly with Johnson County Transit's (JCT) Project Manager on technical and policy matters and issues affecting completion of this study.

The Consultant's Project Manager will also supervise individual discipline leaders to assure appropriate and/or required coordination with the Study Advisory Committee, federal, state, regional or local agencies, community or other special interest groups has been accomplished.

A study kick-off meeting will be held and attended by key study team members, including the Project Manager, and key members of the Consultant's project team.

1.1 Study Record

Relevant technical data, drawings and reports will be maintained by the Consultant and delivered to JCT at completion of this study. Management and financial records will be maintained for possible review for a period of three years following completion of this contract.

1.2 Monthly Progress Reports

The Consultant will develop and submit monthly reports documenting the progress of each task during the reporting period. Reporting shall identify activities accomplished during the reporting period, as well as activities anticipated during the next reporting period. Monthly Progress Reports shall also identify whether funding is sufficient to complete each task, issues to be resolved, and schedule modifications. Progress reports will accompany the monthly invoices. A schedule has been assumed to complete all of the tasks of this Scope of Services.

1.3 Monthly Progress Meetings

The Consultant anticipates meeting with JCT staff on or about a monthly basis to discuss the status of this assignment, as well as policy and technical matters.

TASK 2 COORDINATION

This task will include coordination with the Study Advisory Committee, City of Mission, City of Overland Park, KDOT, MARC, and corridor Stakeholders.

2.1 Study Advisory Committee (five meetings)

The Study Advisory Committee established in Phase I will be continued for Phase II of this study. The primary responsibility of the Study Advisory Committee will be to participate in the overall study process, provide and disseminate information, review and comment on draft documents and address specific issues associated with the development of study recommendations. Study Advisory Committee meetings are anticipated to occur at the following project points: (1) Project Kick-off, Description of the AA Project, and Purpose and Need, (2) Alternatives Refinement, (3) Alternative Evaluation of the Guideway and TSM, and (4) Operations Plan and Capital Costing; (5) Draft AA Report.

In addition to appropriate JCT, City of Overland Park and City of Mission staff, the following will again be invited to participate in the Study Advisory Committee:

- A representative from KDOT;
- A representative from MARC;
- A representative from the Federal Transit Administration (FTA);
- A representative from the KCATA;
- Members from other interested parties - to be determined.

It is anticipated that the Study Advisory Committee will meet up to five times (5) times during Phase II of this study. These meetings are anticipated to last up to two hours each.

The Consultant will:

- Maintain a database of Study Advisory Committee members;
- Be responsible for scheduling the date and time, identifying the meeting location, and
- developing draft meeting notices for JCT approval;
- Distribute/publish (email) Study Advisory Committee meeting notices and agenda to Study Advisory Committee Members, and posting meeting notices and agenda;

- Distribute/publish (email) Study Advisory Committee meeting minutes.

2.2 Stakeholders Meetings (up to 10 meetings)

It is anticipated that additional meetings/presentations to various stakeholders in the study area will be required. The purpose of these meetings is to provide them with an overview of the study's activities and to solicit their views on the current conditions and vision for the future of the Metcalf Avenue and Shawnee Mission Parkway corridors. These meetings may include but are not limited to the following stakeholders:

- Local Chambers of Commerce;
- Community / Neighborhood groups;
- Business groups

Up to ten (10) of stakeholder meetings will be held during Phase II of this study. The consultant will work with the Study Advisory Committee to identify the Stakeholders to meet with. It is anticipated that two members of the Consultant team will attend these meetings and they will last an average of one hour each. A summary of each meeting will be prepared by the Consultant.

TASK 3 PUBLIC OUTREACH

Because of the numerous communities and stakeholders associated with this study, this Public Outreach task is intended to supplement Task 2 Coordination activities.

3.1 Develop Public Involvement Plan

A public involvement plan will be prepared by the Consultant based upon input from the Study Advisory Committee and Stakeholders. The PIP will be reviewed by the Study Advisory Committee and revised based upon discussion in order to provide opportunity to comment on the PIP and to develop a plan that will provide opportunities for the public to be part of this collaborative planning process. It is envisioned that the PIP will include many of the following elements as described in the following subtasks. These subtasks will be refined as the PIP is developed.

3.2 Public Meetings

Public n Meetings (two meetings)

The purpose of these meetings is to obtain input from the general public regarding the development and scope of this study, confirmation of the alternatives presented in Phase I, and general consensus regarding the recommendations that were made in Phase I. The Public Information meetings will be general "open house" style with brief presentations. It is anticipated that there will be one (1) set of Public Information

meetings held in up to two (2) locations agreed to by the Study Advisory Committee and JCT, one (1) in Overland Park and one (1) in Mission.

For each of the information meetings, the Consultant will be responsible for:

- Scheduling the date, time and meeting location, developing handout material, preparing and giving presentations;
- Preparing display graphics needed. JCT shall review all display graphics prior to publication;
- Developing draft meeting minutes and summary of the comments received at each meeting;
- Preparing meeting minutes; and
- Maintaining a log of each meeting.

Alternatives Review Meetings (two meetings)

The Consultant shall be responsible for the preparation and logistics for one (1) set of public meeting on the preferred alternative. At a minimum, this includes securing appropriate locations, advertising and various media announcements. Provisions for a court reporter if required will be arranged and conducted by JCT. Two (2) meetings will be held, one (1) in Overland Park and one (1) in Mission. A summary of the meetings will be provided by the Consultant.

3.3 Web Site

The Consultant, for use in this study, will provide study information to Johnson County, City of Mission, City of Overland Park, MARC and KDOT if desired by these agencies for their web sites. The web sites may be used to advertise to the public of upcoming meetings or study events, provide project information (e.g. background and contact information, published reports) and show the methods available to communicate with the study team. As the study process progresses, the Consultant will provide updated meeting announcements and additional relevant information to technical staff from Johnson County, City of Mission, City of Overland Park, MARC and KDOT for the purpose of updating web sites.

3.4 Public Advertisements/Press Releases

Public advertisements (paid advertisements in newspapers or other media) will be used to advertise the AA public information meetings and the AA public meetings.

The Consultant shall prepare and publish public notice display advertisements, flyers, notices and web site postings. The Consultant will be responsible for designing the display ad and paying for its publication. JCT shall review all materials prior to publication.

3.5 Newsletter

Two (2) newsletters are proposed as part of Phase II of this study. Each will be a two sided, 8.5"x11", color newsletter. The Consultant will be responsible for designing the newsletter and paying for its distribution. It is assumed there will be 250 newsletters that will be emailed or mailed to persons on the mailing list. An additional 250 newsletters will be provided to JCT. The consultant will confer with the City of Mission and City of Overland Park staff to obtain contacts to be included on mailing list. JCT shall review all materials prior to distribution.

TASK 4 PURPOSE AND NEED

4.1 Description of Study Area, Transportation Problems, and Needs.

A basic understanding of the local study area and the specific problems and needs to be addressed in the study will be defined based upon information developed in Phase I of the project.

A well-specified statement of the problem for which alternative solutions are being analyzed will be prepared. Phase I activities will be reviewed and updated including the development of project goals, objectives, and evaluation measures; and provide a framework for determining which alternatives should be considered as reasonable options in the corridors.

4.2 Study Goals, Objectives, and Preliminary Evaluation Measures.

The establishment of study goals and objectives was completed in Phase I. These will be incorporated into the Phase II study.

Common categories of goals, objectives, and measures identified by FTA include:

1. *Effectiveness* - the extent to which alternatives solve the stated transportation problems in the corridor;
2. *Impacts* - the extent to which the alternatives impact --- positively or negatively - nearby natural resources and neighborhoods, air quality, the adjacent transportation network and facilities, land use, the local economy, etc.;
3. *Cost effectiveness* - the extent to which the costs of the alternatives are commensurate with their benefits;

4. *Financial feasibility* – the extent that funds required to build and operate the alternatives are likely to be available; and
5. *Equity* – that is, the costs and benefits of the alternatives are distributed fairly across different population groups.

4.3 Information Package/Making the Case Document

A short five to ten page document will be prepared that identifies the key elements of the upcoming alternatives analysis. The Making the Case Document will:

- Identify the nature, extent, and timing of the problem(s) being addressed, including:
 - Roadway congestion, including the specific travel markets contributing to and affected by congestion;
 - The effects of roadway congestion on transit service, performance, and competitiveness;
 - Limitations on transit capacity and their effects;
 - Economic development;
 - Environmental concerns;
 - The impacts of congestion and other accessibility problems on specific economic-development plans; and
 - The extent to which these problems already exist or are projections of emerging difficulties.
- Present the specific ways that the proposed project is effective in addressing the problem, including:
 - Improvements in the quality of transit service in terms of reduced travel and wait times, and improved reliability, comfort and convenience;
 - Projected ridership response to these improvements;
 - Cost effectiveness; and
 - Expected economic-development impacts.
- Outline the merits of the proposed project as a candidate for Small Starts funding, including:
 - The benefits and costs of the project compared to the baseline alternative; and
 - The benefits and costs of the project compared to lower-cost “build” alternatives.

TASK 5 ENVIRONMENTAL DATA COLLECTION AND EVALUATION

An environmental literature search and database scan will be completed to provide baseline information on the locations, and types, of environmental and community resources and constraints. The environmental evaluation will include mapping and written descriptions of environmental and community resources documented within the corridor. The study corridor will be defined as 500 feet in width, specifically, 250 feet measured on each side of the corridor roadway centerline.

5.1 Data Collection

The early data collection efforts conducted during the preparation of the AA will be used for identifying biological, physical, and community resources within the study corridor. For the purpose of expediting a review of the resources within the study corridor, we have assumed that the specific locations of the proposed improvements and other facilities will not be identified prior to commencing this task. Therefore, it will be assumed that all of these project facilities will be located within the study corridor and no data collection will be completed for areas outside the corridor. Relevant data will be documented in an environmental evaluation memorandum through mapping and text for each resource topic below. Graphics will show the locations of the environmental resources on digital ortho maps. For purposes of negotiation, we assume that the environmental evaluation memorandum each report will include a maximum of 50 11x17 inch graphics.

5.2 Biological Diversity

This task will assemble available information on biological diversity, including flora, fauna to be present within the project study area.

5.3 Rare, Threatened and Endangered Species

GIS Database background data on known rare, threatened, and endangered species habitat will be collected and reviewed relative to potential species within the project corridor.

5.4 Wetlands

This task will identify the location of existing wetlands in the study area through review of National Wetland Inventory mapping, available digital ortho maps, and recorded GIS data layers.

5.5 Floodplains

The Federal Emergency Management Agency (FEMA) mapping of 100-year floodplains within the project corridor will be assembled. This information will be documented on project area maps to approximate the influence of floodplains on the project area.

5.6 Historical Resources

The State Historic Society and the State Historic Preservation Office will be contacted to identify historic properties that are listed on or eligible to be listed on the National and/or State Registers of Historic Places within the study corridor.

5.7 Land Use

Land use information will be collected from local municipalities, counties and regional metropolitan planning organizations to assemble a comprehensive land use map for the study corridor. General land use mapping will be provided for areas up to ¼ mile outside of the study corridor.

5.8 Hazardous/Contamination

The relative environmental risk associated with the alternatives considered in the AA study will be reviewed to estimate the likelihood for each improvement to encounter a recognized environmental condition associated with a current or historic discharge, spill, or potential seepage of hazardous wastes, contaminated materials or other regulated substances. An environmental database search of the corridor study area will be collected from Environmental Data Resources. The data base results for sites/incidents within this study area will be screened and those sites/incidents with potential for being encountered during construction of the alternatives will be investigated further through coordination with local and state agencies and readily available record fields. Information researched will include: UST, LUST, RCRA, CERCLIS, SPILLS, and ERNS and local fire department records. Sites identified as a potential concern to proposed improvements will be mapped.

5.9 Water Resources

Background information will be collected for the project corridor to establish existing surface water resources. Streams, rivers, and watershed basins will be identified and mapped across the corridor study area.

5.10 Socio-economic Data

Socio-economic data produced in the Phase I report will be included to provide information in this AA on population characteristics, household characteristics, employment characteristics and environmental justice issues. Existing and future land uses will be described.

TASK 6 TRANSPORTATION ALTERNATIVES DEVELOPMENT AND EVALUATION

The development of alternatives to be considered in the alternatives analysis study closely follows the explanation of the corridor problem and definition of study goals and objectives. Alternatives were initially identified in Phase I of this project. The alternatives from Phase I will be reviewed as well as the examination of additional alternatives as appropriate.

6.1 Identification of Strategies

The development and definition of alternatives is an iterative process. The first step will be to review the conceptual definition of a broad range of strategies from the Phase I study and determine if any additional strategies should be considered.

6.2 Alternatives Development

This subtask will focus on refining the alternatives developed in Phase I through preparation of operating plans. Phase I developed generalized descriptions for bus rapid transit including fixed guideway components along Metcalf Avenue and Shawnee Mission Parkway/Martway Street.

Subsequent evaluation and screening of these conceptual alternatives will be completed to narrow the range of viable alternatives to a manageable number to carry forward into a detailed analysis. This analysis includes the development of more detailed definition of alternatives, including an adequate transportation system management alternative likely to serve as the project's Baseline Alternative for Small Starts reporting purposes.

The following alternatives were developed in the Phase I study:

- No Build
- TSM
- Build Fixed Guideway on Metcalf Avenue and Martway

Consider alternatives (consistent with joint FTA/FHWA guidance, and new SAFETEA-LU requirements), proposed in Phase I of this study, review and revise the assumptions upon which those alternatives were considered, evaluate project elements, including

but not limited to alignment options and station locations, and confirm that these alternatives meet the project Purpose and Need.

6.3 Define No-build

Existing services will be defined. The No Build Alternative is defined as existing plus committed (in the most current MARC TIP).

6.4 Define TSM

The TSM alternative is best described as transit improvements lower in cost than the proposed new start, which result in a better ratio of measures of transit mobility when compared to cost than the No Build Alternative; the "best you can do" without a major capital cost or potential FTA New Start investment. The purpose of the TSM comparison is to isolate the costs and benefits of the proposed major transit investment. The TSM may not be analogous to the FTA Baseline Alternative (to be developed by the Consultant in consultation with FTA and JCT). At a minimum, the TSM alternative must include in the project corridor all reasonable cost-effective transit improvements short of investment in a New Start project.

Under the TSM alternative, increased bus service (over current service levels) will be projected to reflect the anticipated increase in corridor population and employment by a defined opening year.

The TSM alternative will include examining potential route alignments for the corridor's preferred alternative and a recommended alignment or alignments defined. This analysis will include determining:

- Routing of current Route H
- Southern terminus definition
- Feeder / route connections with Sprint Campus and on College Boulevard
- East-west connections as identified in 5-Year Plan
- Routing near downtown Overland Park
- Routing in downtown Mission
- Routing into Plaza and connections with other BRT routes

The existing bus services will be examined for possible route modifications to establish feeder bus and connecting routes. Service to existing or planned connecting routes such as on 95th Street and 75th Street will also be examined and assessed.

6.5 Define Fixed Guideway

Further refine the description of the Build Alternative considered in Phase I. This description shall include alignment, passing sidings, innovative technology, operations, and potential station locations. The fixed guideway elements described in Phase I will be further defined. The cost estimates at this level will be similar to that provided in Phase I. Additional concept development, refinement, cost estimation, right-of-way requirements and conceptual engineering will be completed as described in Task 8.

6.6 Prepare Alternatives Definition Report

This report will be prepared and submitted to the FTA. It is anticipated that a memorandum or similar document of no more than 10 to 15 pages would satisfy its information needs.

6.7 Ridership Estimates

An elasticity or pivot point model analysis will be used to estimate the transportation benefits of the project alternatives. Consultation will take place with the FTA on the use of this approach. The cost-effectiveness of the alternatives will be conducted for the opening year of the project. Ridership estimates will be completed for the No-build, TSM and Build Alternatives.

6.8 Operations Plan

The consultant will develop an operations plan for the TSM and the Build Alternatives. The Consultant will develop detailed operations plans for the alternatives reflecting route alignment, span of service, service frequency and vehicle size. These operations plans will be used to develop operational costs factors such as platform hours, platform miles and labor rates.

6.9 Evaluation of Alternatives

The Consultant will evaluate the study area transportation system to determine the level of transportation benefit realized from each alternative. Cost-effectiveness of each alternative will be determined based upon FTA guidelines.

6.9.1 Financial Plan and Evaluation

This task will develop the financial analysis of each alternative and the potential sources of funding. In rating potential New and Small Starts projects, FTA proposes to give additional attention to the adequacy of the local financial commitment for ongoing recapitalization of the existing transit system.

SAFETEA-LU amended Section 5309(d)(2)(C) to require that a proposed Small Starts project be “supported by an acceptable degree of local financial commitment to maintain the entire public transportation system without requiring a reduction in existing public transportation services or level of service.” In addition, SAFETEA-LU added Section 5309(d)(4)(A)(iii), requiring that “local resources are available to recapitalize the overall public transportation system.” In essence, SAFETEA-LU requires that FTA give added attention to ensuring that the financial plan for a Small Starts project demonstrates that adequate resources are in place to preserve the quantity and quality of existing transit service and to support the orderly recapitalization of the system. Put another way, SAFETEA-LU is looking for assurances that the existing transit system is in a state of good repair and is likely to remain so whether or not the new investment is made.

To meet this statutory requirement, FTA is proposing to give added attention to this issue in its reviews and ratings of financial plans. At present, FTA uses three subfactors to rate the Capital Plan:

1. Current capital financial condition of the sponsoring agency and funding partners;
2. Degree of commitment and availability of Non-Section 5309 Small Starts funds;
3. Financial capacity to cover capital cost increases or funding shortfalls and reasonability of capital planning assumptions and cost estimates.

This will include a description of the future funding conditions under differing scenarios in order to demonstrate the following:

- Analysis of local funding options and demonstration of local funding commitment.
- Identification of potential funding sources for both capital and operating costs.
- Demonstration that the agency is in reasonably good financial condition and can afford to implement and sustain the LPA and other existing services.

The Client will provide information on local funding commitment from the City of Overland Park and Mission. The Client and the Consultant will work together to discuss local funding commitments with other local communities that will be part of the BRT route. Up to 5 (five) additional meetings will be conducted by the consultant as part of the financial analysis discussion.

6.10 Reports and Deliverables

The Alternatives Analysis will be prepared by the Consultant. Interim reports will be submitted including the:

- Purpose and Need
- Making the Case Document
- Alternatives Definition
- Ridership forecasting methods and results
- Capital Cost and Operating Cost estimates
- Draft and Final Alternatives Analysis Report

The Consultant will prepare standard 8.5x11 inch and/or 11x17 inch report graphics for inclusion in the AA document to illustrate relevant project elements and affected resources in the project area. Graphics will be prepared utilizing existing project base mapping in an ArcView readable format. The inventory of GIS data prepared for the project will be used for the preparation of graphics, in addition to other available map sources if appropriate.

Fifteen (15) copies of draft and final versions of each document will be provided along with electronic files.

TASK 7 CONCEPTUAL ENGINEERING AND ALTERNATIVE REFINEMENT

The conceptual definition includes the preliminary identification of candidate alignments and operating strategies. Defined operating strategies – as distinct from detailed operating plans developed as planning and project development proceeds – give general ideas of overall bus service levels, service standards, and guideway service options. These definitions are sufficient to address such general concerns as ranges of costs, ridership potential and financial feasibility. More basically, they provide the information necessary for decision makers and other stakeholders to confirm that no reasonable alternative (in terms of meeting corridor needs) is being excluded from the analysis, as well as understand the magnitude of the costs and benefits associated with the various options for improving conditions in the corridor. The aerial photography

will be provided by Johnson County AIMS. Fifteen (15) copies of the draft and final conceptual corridor mapping will be provided.

7.1 Mapping

Aerial mapping will be provided in digital format by JCT/Johnson County for a corridor 500 feet in width, specifically, 250 feet measured on each side of the right-of-way centerline. This data will be used as needed for developing engineering concepts and as appropriate to illustrate existing conditions and potential impacts from the alternatives

7.2 Fixed Guideway Concepts – Metcalf Avenue (135th Street to 105th Street)

The parameters for the development of fixed guideway concepts are listed below:

- Layout the guideway and/or queue jumps on 1" = 100' aerial
- Define the stations/stops
- Define and provide conceptual layouts for Rosanna Square Park & Ride lot
- Describe utilities running parallel to corridor
- Illustrate potential redevelopment on concept plan as envisioned in Vision Metcalf
- Identification of potential property impacts of the concept

7.3 Fixed Guideway Concepts – Metcalf Avenue (105th Street to 87th Street)

The parameters for the development of fixed guideway concepts are listed below:

- Layout the guideway and/or queue jumps on 1" = 100' aerial
- Define the stations/stops
- Define and provide conceptual layouts for Metcalf South Mall Park & Ride lot
- Describe utilities running parallel to corridor
- Illustrate potential redevelopment on concept plan as envisioned in Vision Metcalf
- Identification of potential property impacts of the concept

7.4 Fixed Guideway Concepts – Metcalf Avenue (87th Street to Johnson Drive)

The parameters for the development of fixed guideway concepts are listed below:

- Layout the guideway and/or queue jumps on 1" = 100' aerial
- Define the stations/stops
- Describe utilities running parallel to corridor

- Illustrate potential redevelopment on concept plan as envisioned in Vision Metcalf
- Identification of potential property impacts of the concept

7.5 Fixed Guideway Concepts – Johnson Drive/Martway from Metcalf Avenue to Roe Avenue

A guideway location study will be completed to assess the benefits and costs associated with guideway operation on Shawnee Mission Parkway, Johnson Drive and Martway through this section. This will involve development of different concepts for each of these potential alignments. A comparison of costs, access, environmental impacts, land use and other factors will be completed. From this analysis, one alignment will move forward for concept design and cost estimation based upon this design.

7.6 Fixed Guideway Concepts – Roe Avenue to State Line Road

The parameters for the development of fixed guideway concepts are listed below:

- Layout the guideway and/or queue jumps on 1" = 100' aerial
- Define the stations/stops
- Describe utilities running parallel to corridor
- Identification of potential property impacts of the concept

7.7 Station Prototype Concept

The consultant will work with the County to develop a concept for the construction of a typical station for the side of the street and for the center station platforms associated with the fixed guideway. A number of draft concepts will be prepared. Based upon review, one concept will be further refined.

7.8 Park & Ride Lot Concepts

The consultant will prepare up to three park and ride concepts for the Rosanna Square and Metcalf South Mall locations. These will be presented to the client and based upon comments refined.

7.9 Cost Estimates

The consultant will prepare cost estimates for the fixed guideway sections based upon the conceptual engineering plans prepared. The consultant will use current bid tabs to obtain unit prices. Cost estimates will be prepared for each guideway section. Other capital costs such as rolling stock, traffic signal priority and station cost will be prepared.

TASK 8 FTA COORDINATION AND REVISION

8.1 Ridership and Reliability

The consultant will coordinate with the FTA to update and refine the ridership forecasting procedures. This scope of services does not include estimation of ridership utilizing a systems planning model. If determined to be required from the FTA, a separate scope of services will be developed.

The consultant will develop information for the following FTA factors: 1) transit-orientation of existing and future land use plans and policies 2) project sponsor experience with implementing previous projects 3) industry experience with the proposed project type in similar settings 4) the reliability of the forecasting methods 5) the degree to which future ridership projections depend on substantial population and employment growth beyond the opening year 6) the use of innovative contractual agreements for operations 7) and mitigation actions taken by the project sponsor.

8.2 Effectiveness

The consultant will follow the FTA procedures for determining cost- effectiveness. It will be comprised of two factors: 1) general mobility, and 2) economic development/land use. FTA proposes three measures for general mobility: 1) the average number of weekday riders on the project, 2) the user benefits per passenger mile on the project, and 3) the severity of the current congestion in the project corridor. The number of people that will benefit from the project will be identified. "User benefits" is defined to include changes in mobility that are measured by ridership-forecasting methods to include both existing and new transit riders compared to the baseline alternative. The user-benefits measure will include reductions in transit travel times (including time spent walking, waiting, transferring, and riding in transit vehicles), any other service characteristics (such as the number of transfers) included in local forecasting methods, and the availability of multiple competitive travel options, again as represented by local forecasting methods. The user-benefits measure also captures credit for other project characteristics that improve the quality of transit service including changes in reliability, span of service, safety and security, passenger stations, passenger information, permanence of the facilities, and other characteristics

not represented by travel times and costs, which are represented by the mode specific constants included in the travel model. The measures used to determine current congestion will include: the percent deviation in peak period average speeds vs. free flow speeds for private vehicles and buses, person hours of delay in the corridor, the level of service for highways and major arterials that serve the project corridor, and the ratio of daily vehicle miles to lane miles.

8.3 Land Use Worksheets

FTA proposes that the economic development/land use rating be based on five measures: 1) the extent to which the station area can be further developed, 2) the extent to which plans and policies encourage transit-oriented development, 3) local economic conditions, 4) increased accessibility of the project, and 5) the permanence of the project. Specific measures will include:

- (1) Current land-use conditions characterized by population and employment density as well as the degree to which the existing development patterns facilitates access to transit and pedestrian movements;
- (2) The degree to which development plans and land-use policies support transit oriented densities and pedestrian-friendly land uses in the future;
- (3) The economic development climate in the corridor characterized by corridor population and employment growth over the past 5 years and the assessed value of property within a 1/2 mile radius of each proposed station for each of the past 5 years;
- (4) The project-related change in transit accessibility for developable areas in the corridor as measured by total user benefits vs. the baseline alternative; and
- (5) The economic lifespan of new transit facilities proximate to those developable areas as measured by the value of fixed assets in the corridor (including stations and guideway elements but excluding yards and shops) divided by the total cost of the proposed project in constant base year dollars.