

Regional Planning Commission  
Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. John, St. Tammany and Tangipahoa Parishes

### **Scope of Services**

**Comprehensive Operations Analysis  
Orleans, Jefferson, & St. Bernard Parishes  
FTA Grant No. LA-2018-013-00  
RPC Task COA18**

This scope of services outlines the project requirements and expected outcomes for the development of a Comprehensive Operations Analysis with network design recommendations for services provided by the Regional Transit Authority of New Orleans (RTA), Jefferson Parish Transit (JET) and St. Bernard Urban Rapid Transit (SBURT). Potential contractors should describe in detail their proposed methodology for accomplishing each of the tasks, personnel involved with the conduct of each task, and proposed budget per task.

Respondents are encouraged to expand on these requirements where there is a potential to supplement the overall objectives of the work, or to propose innovative means of achieving the described outcomes.

Proposals will be assessed on a score of 0-110. Scoring criteria consists of the following:

- 1) Experience of consultant team and consultant team's staff in performing comparable works (24 points)
- 2) Past performance on comparable work for RPC or other clients (20 points)
- 3) Current work load and its potential impact on the consultants capacity to perform this work in a timely and professional manner (12 points)
- 4) Consultant team size and staffing availability relative to the magnitude of this work (12)
- 5) Responsiveness to work scope, including an assessment of the consultant's proposal and its ability to achieve the objectives of the scope within a realistic work schedule (32 points)
- 6) Appropriateness of the proposed budget given the proposed work response (10 points)

#### **General:**

The purpose of the Comprehensive Operations Analysis (COA) will be to provide a detailed assessment of existing transit and mobility services in Orleans, Jefferson, and St. Bernard Parishes. Based on this analysis, the plan will present a plan for network design and optimization for RTA, as well as improved integration with SBURT and JET, with clearly defined stages of implementation.

The foundation of the analysis will be an extensive data collection effort and outreach to the public and other critical stakeholders. Data collection will be sufficient to determine prevalent travel patterns in the region as well as unmet mobility needs, and should be suitable to develop detailed profiles of each route operated by the Regional Transit Authority (RTA) and Jefferson Transit (JET). Outreach efforts will focus on establishing a shared community vision as to the future of the region's transit system, and informing the objectives and recommendations that implement this vision.

Recommendations for service and network improvements will advance and build on the strategies identified in the Regional Transit Authority's Strategic Mobility Plan (SMP) and Jefferson Parish Transit's ongoing strategic planning efforts. These include but may not be limited to:

- Make services and schedules easier to understand;
- Add transit priority treatments on roadways and reduce conflicts with automobiles;
- Identify sources of delay and provide strategies to decrease travel times;
- Improve connectivity between the three transit operators;

- Create fast, frequent service on major corridors in the region;
- Network optimization or design alternatives when warranted
- Establish select service routes;
- Improve local routes and crosstown service;
- Improve transit efficiency in downtown New Orleans;
- Provide quick connections to identified employment centers throughout the region;
- Expand or otherwise improve water transportation options;
- Coordinate schedules for transfers;
- Explore opportunities for alternative mobility options; and
- Explore opportunities to better integrate with other travel modes (i.e., bikeshare, park n' ride, TNCs, etc.)

Immediate recommendations in the COA will be financially-constrained and end in 2022, consistent with the first implementation phase of RTA's SMP. Short-term recommendations for the subsequent five years will include financially-constrained recommendations as well as recommendations that assume reasonable increases in revenue. Network and service recommendations will include estimated operating costs associated with proposed changes, as well as a budget for future infrastructure needs, including vehicle acquisition, transit facilities, etc. that will be required to support these recommendations.

## **Primary Stakeholders**

### *Regional Transit Authority*

The New Orleans Regional Transit Authority, providing service in City of New Orleans and the City of Kenner in Jefferson Parish, is the largest transit provider in the region in both ridership and fleet size. The RTA operates 32 bus routes, 5 streetcar lines, 2 ferry routes, and paratransit in its service area, which includes the City of New Orleans and City of Kenner.

Created in 1983 by the Louisiana Legislature, The Regional Transit Authority is a political subdivision of the state that has statutory authority to operate in Orleans, Jefferson, St. Bernard, and St. Tammany Parish. Transdev currently operates the RTA under a delegated management contract.

### *Jefferson Transit*

Jefferson Transit is the second largest transit provider in the region. JeT operates 13 bus routes and paratransit on the east and westbanks of Jefferson Parish, with bus routes providing multiple connections in the City of New Orleans. Jefferson Parish Department of Transit Administration oversees the management of Jefferson Transit, which is currently operated by the same private entity as RTA, Transdev. Jefferson Parish (synonymous with county) itself is the second most populous parish in the region, after East Baton Rouge and before Orleans, with an estimated 426,275 residents.

### *City of New Orleans*

The City of New Orleans is a major port city in southeast Louisiana. According 2012-2016 American Community Survey the estimated population of New Orleans is 382,922, making it the largest city in the state. The City has a mayor-council government, with the latter consisting of seven members (five council districts and two at-large). The city is the center of the New Orleans-Metairie Metropolitan Statistical Area, an eight parish region with a 2016 estimated population of 1,250,247.

### *St. Bernard Urban Rapid Transit*

St. Bernard Urban Rapid Transit provides transit service to St. Bernard Parish with connecting service to RTA. It functions as a department of St. Bernard Parish government. The service is one line that connects the communities of Arabi, near the Orleans/St. Bernard Parish line, Chalmette, Meraux, Violet, and Poydras. Deviations to the

route can be requested in seven areas of this corridor. St. Bernard Parish itself is southeast/downriver of Orleans Parish, and has an estimated 2017 population of 46,202.

### *Regional Planning Commission*

The Regional Planning Commission (RPC) serves as the Metropolitan Planning Organization for the New Orleans urbanized area. RPC's planning area includes the service areas of both RTA and JeT, as well as smaller transit providers in St. Bernard, St. Tammany, St. Charles, and St. John the Baptist Parishes. The RPC is governed by a board comprised of local elected officials, citizen members from the parishes of Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. John the Baptist and St. Tammany, as well as the Louisiana Secretary of Transportation. The RPC's Transportation Policy Committee consists of the RPC board as well as representatives from various transportation stakeholders throughout the region, including RTA and JET.

In addition to managing the project, RPC staff will provide coordinating and technical assistance.

### **General Expectations:**

- While there is no requirement for the consultant firm to be local or to relocate for the project, there is an expectation that the consultant will be present for much of the conduct of the project, and be made available for live presentations and meetings unless otherwise indicated by the RPC.
- The consultant team will be able to demonstrate expertise and experience in the development of comprehensive operations analyses, scenario planning, network designs, and fixed route service planning for transit operations in large metropolitan areas.
- The consultant team will demonstrate expertise in conducting an outreach program to a diverse metropolitan area, including to the general public and to elected officials or other governmental stakeholders.
- The consultant team should be able to demonstrate general knowledge of the region's geography, demographics, and existing transit services.
- While there is no requirement for the consultant firm to be local or to relocate for the project, there is an expectation that the consultant will be represented as needed for engagement, data collection, and presentations.
- The consultant team should demonstrate expertise in conducting surveys, including on-board to riders and to other stakeholders as appropriate.
- The consultant team should demonstrate expertise in the use of database and geodatabase software, and of the ESRI ArcGIS or comparable software suite.
- Any products, including presentation materials, datasets, or mapping products, will be provided to RPC in the format requested. All data used in any part or step of the project will be provided to the RPC upon request or otherwise at the completion of the project.
- The consultant prime will provide invoices according to the RPC's formatting requirements. Invoices will be accompanied by a detailed progress narrative for the invoiced time period that includes, if applicable, an updated project schedule, dates of any meetings convened, description of submitted deliverables, and any descriptions of difficulties or setbacks confronted in project management.

### **Task 1: Project Management and Advisory Committee**

The consultant will develop a work plan that includes a description of the project workflow and a detailed project schedule, with clear designations of responsibility among the project team, sub-consultants, and the anticipated dates of completion of key project deliverables. This work plan will be presented to the RPC within fourteen days of the notice to proceed.

A technical advisory committee will be formed at the outset of the project to solicit information and provide guidance to the primary stakeholders throughout the COA development process. The committee will meet

within fourteen days of the notice to proceed to finalize the work plan, and at key milestones during the COA process as identified in the project schedule. All sub-consultants are expected to attend this meeting.

The committee will include, at a minimum, staff from the Regional Transit Authority, Jefferson Transit, Regional Planning Commission, the City of New Orleans, St. Bernard Parish, and other stakeholders to be identified.

Minimum Deliverables: Project Work Plan

## **Task 2: Public Outreach**

The consultant will develop a Public Outreach program for RTA/Orleans Parish that will clearly identify key community engagement methods and points within the conduct of the project. Outreach will be designed to garner public input from a representative cross section of the study area, both geographically and demographically, including a broad spectrum of household incomes, races and ethnicities, primary languages spoken (including Spanish and Vietnamese), and transit riding and non-riding residents. Emphasis will be placed in particular on informing and gathering input from residents that are typically under-represented. This program is due to the RPC for review no later than twenty-one days from the notice to proceed.

While RPC will assist in determining the best locations for these meetings, the consultant will be responsible for scheduling and reserving facilities and for ensuring that the public is thoroughly notified of the meetings. The proposal will describe in how the consultant intends to conduct these meetings, or additional meetings, in order to best provide the public with opportunities to inform the plan with community priorities and feedback on recommendations. The final public outreach plan will describe this process in more detail.

The consultant will give at least one presentation to each of the Regional Planning Commission, the New Orleans City Council, the Mayor of New Orleans, the RTA Board of Commissioners, and the Jefferson Parish Council. The consultant will likely be asked to give individual presentations to elected officials or other stakeholders, per RPC directives, and will need to budget accordingly.

The consultant is encouraged to propose innovative or alternative means of garnering public input to the project, including though not limited to: surveys (in addition to or in combination with the onboard surveys described in task 3), participation at neighborhood association meetings, co-locating opportunities to solicit input at transit stops or centers, social media, smartphone applications, establishing a presence at local events (festivals, fairs) etc.

All materials to be used for public outreach must be pre-approved by the RPC, and will be delivered for review no later than three days prior to the meeting. All public outreach events will be attended to with RPC staff unless explicitly stated otherwise by RPC.

The consultant is expected to work closely with RPC's public outreach officer in the implementation of the program in order to ensure that all Title VI, ADA, and language requirements are satisfied.

Minimum Deliverables: Public Outreach Plan  
Public Outreach materials

## **Task 3: Data Collection and Analysis**

The consultant will prepare a Data Collection and Management Plan for approval by the technical advisory committee. It will describe the means by which the consultant will collect sufficient data on existing transit service and community characteristics in order to complete Task 4, including:

- Provide detailed profiles on each route in the service area;
- Identify latent demand for public transit services;

- Identify inefficiencies both within and between systems; and
- Identify opportunities to optimize service, whether within the existing network or under proposed network design scenarios

These data will be derived at a minimum from a review of existing data, plans, and/or reports, as well as the conduct of an on-board survey. The proposal should generally describe how the consultant intends to meet these data requirements within and potentially beyond the framework described below. The Data Collection and Management Plan will be due within twenty-one days of the notice to proceed.

### *Existing Data*

The study will include a review the RTA Strategic Mobility Plan, which should provide the foundation for the COA work. The study may also include a review of AVL/APC data and other available data, reports, and plans that pertain to the existing transit system and current and planned transportation and land use conditions in the study area that could affect transit use. The consultant will be responsible for determining what data are useful to satisfy the requirements of the project. Requests for data should be made through the RPC, and approval or denial of requests will be made by the RPC in consultation with the Technical Advisory Committee. Data sharing agreements may be required depending on the dataset provided. Appropriate citations and disclaimers must be adhered to per data sharing agreement instructions.

To be provided:

- Daily/monthly/annual route summary reports, including ridership characteristics, passengers per mile, passengers per hour, on-time performance and other measures deemed necessary to determine route productivity;
- Existing transit provider service standards and operations plans;
- Timetables and system maps;
- Annual operating budgets;
- Farebox data, including revenue and fare media utilization data;
- Origin-destination survey data for other providers in the region, including River Parish Transit Authority, St. Bernard Urban Rapid Transit, and St. Tammany Transit, if available.
- Maintenance equipment and facilities;
- Existing regional Transportation Improvement Program (TIP) and Metropolitan Transportation Plan (MTP);
- RTA's Strategic Mobility Plan (SMP); and
- JET's ongoing strategic planning effort;

Available on request:

- Student travel datasets from major colleges and universities, if available.
- Outputs from RPC's travel demand model
- RPC's passively collected origin-destination dataset
- Current and projected demographic and employment data, with relevant mapping products;
- Roadway network information and LOS estimates and projections;
- Datasets from the City of New Orleans' Bikeshare program;
- Existing and planned land use and zoning documents, including the City of New Orleans Plan for the 21<sup>st</sup> Century (Master Plan);

Additional requests may be made to the Regional Planning Commission. Data sharing agreements may be required depending on the dataset provided. Appropriate citations and disclaimers must be adhered to per data sharing agreement instructions.

## *On-Board Survey*

The completion of an on-board survey is a priority work task. To capture an accurate measure of customer travel purposes and to better evaluate means of matching services with customer needs, the COA will include the completion of an on-board survey of ridership on both the RTA and JeT systems.

Specific survey design, sampling requirements, and implementation methodology will be developed through consultation with the primary stakeholders. The primary stakeholders will also determine priority routes for initial surveying efforts. The product of the survey will be a complete, organized data set and summary report for the COA and, in combination with other acquired datasets, detailed route profiles for each route in the all systems, describing productivity, performance, and ridership characteristics such as, race and ethnicity, visitor vs. resident, income, etc.

The following is RPC's recommended methodology. Any deviation from this methodology should be described in detail by the consultant in their proposal, and include reasoning of the deviation (cost effectiveness, innovative best practices, etc.) as well as an explanation as to how these deviations can achieve equal or greater outcomes.

The hand delivered survey will collect data on trip origin, trip destination, trip purpose, route/operator transfers, mode transfers, fare media utilization, and residence of the rider (to determine visitor vs. local resident). Surveys will also collect demographic information such as sex, age, race/ethnicity, income, household size, primary household language, smart phone ownership and household vehicle ownership. The primary stakeholders will develop the content of the survey with the consultant and provide it to the consultant for pre-testing. A pilot test survey will be conducted to ensure the adequacy and performance of the survey logistics and the questionnaire. The consultant will review the results of the pilot effort and provide a brief summary of recommended revisions and logistical refinements. The consultant will also be responsible for having the approved survey translated into Spanish and Vietnamese and providing a plan for implementing the survey in these languages.

The consultant is responsible for hiring and training staff needed to collect and validate on-board survey data, as well as creating surveying schedules for specific routes and trips. Surveyors will appropriately record completed surveys and refusals by route, date, and starting and ending time.

The sampling plan will be consistent with Federal Transit Administration (FTA) standards for sample size and statistical validity, ensuring that data collected is representative of every route and that data is of sufficient quality for use in the regional travel demand model.

Surveys will be conducted on weekdays in the fall and early winter of 2018. Additional survey work may be required to adequately capture the weekend market.

The consultant will employ a stratified random probability sample for selecting trips for survey work with sampled trips on morning-peak, afternoon-peak, and off-peak hours in both travel directions. Additional load information, as well as schedule adherence data and running times, will be collected for all trip segments where APC or AVL data is not available.

Following the collection of survey forms, the consultant will be responsible for determining the completeness and validity of responses and for coding open-ended answers. The suitability of origin and destinations for geocoding will be confirmed. All information will be entered into a database and delivered to primary stakeholders as it is completed. The consultant will be responsible for geocoding the data with oversight by primary stakeholders.

Data collection may reveal that additional survey work is required among smaller providers in the region to better understand regional travel patterns. If such deficiencies are revealed, the consultant will develop appropriate survey methodology through consultation with the primary stakeholders and the relevant operators.

### *Latent Demand*

The consultant will use best practices in collecting new data and/or processing existing data for the latent demand analysis. The consultant may use passively collected data (e.g. cell phone and vehicle probe data), analysis of demographic data, or other proposed methodologies, to assess the potential for expanded transit service within the region, particularly where new service may be created or existing service may require adjustment to capture potential demand.

Latent demand survey work will be supplemented through examination of demographic data with emphasis on areas or populations not presently served by transit or marginally served by transit whether due to lack of service or underperforming service. Land-use studies and planning data should be analyzed to incorporate potential future demand.

### *Data Processing*

Basic data processing will be done simultaneously with field data collection to the extent possible. The resulting database will be reviewed, edited, and corrected using both manual and automated edit checks. The definition of data items required to constitute a “usable” sample will be proposed by the consultant and approved by the primary stakeholders.

As mentioned prior, data collected will be consolidated into a geospatial database. The data will be aggregated at the route level using boarding and alighting count data. The consultant will develop and apply expansion factors to the data. In order to correct for disproportionate sampling, weighting of the response records will be applied by the consultant. The weights are a product of the following four factors:

- Response Factor - The response factor accounts for the fact that less than 100% of the boarding passengers will be interviewed. In order to calculate the response factor, the contractor will use the recorded number of boarding passengers and the number of completed interviews. The system will be stratified by route, direction, service period, and vehicle or stop. It is understood that stops may be aggregated in a reasonable and logical fashion where appropriate.
- Vehicle Factor - The vehicle factor accounts for the fact that not all of the trips in a stratum were sampled. In order to calculate the vehicle factor, the contractor will use headway data to determine the number of scheduled trips by route, direction and time.
- Boarding Factor - The boarding factor expands the sampled boardings to an estimate of the total boardings on an average day. It is the product of the response factor and the vehicle factor. However, there is no guarantee that this “build-up” approach will match observed ridership (based upon APC data) by route, direction, and time-of-day. The contractor will calculate a “third” factor that results in a reasonable match with actual observed ridership.
- Linked Trip Factor - The linked trip factor accounts for the fact that a person who transfers from one vehicle to another has multiple chances of being intercepted. It is equal to the reciprocal of the number of vehicles used.

### *Data Mapping*

The consultant will create a geographic feature class for all transit routes and transit stops in the region. The route features will be routable for use in network analyses. Attributes will include unique route and stop identifiers, operator identifiers, and other route characteristics as determined by the technical advisory committee or as recommended in the proposal.

The consultant will create a geographic feature class that includes origins and destinations and prevalent travel patterns as ascertained through data collection and processing. This feature class will have a base map derived from U.S. Census geography.

Development of all geodatabases and mapping products will be done in coordination with RPC's GIS staff to ensure compatibility with existing GIS services and resources.

#### *Other*

The consultant is encouraged to expand on these minimum requirements through the proposal of other best practices or innovative means of deriving, processing, and/or presenting data on existing and potential ridership and transit services.

Minimum Deliverables: Data Collection and Management Plan  
Draft and Final On-Board Survey  
Databases of all new datasets  
Geographic feature classes of the existing transit system  
Geographic feature classes of O-D and travel pattern data

#### **Task 4: Evaluation**

Utilizing collected OD data, AVL and APC data, public and stakeholder input, and other data derived in Task 3, the study will include a system analysis that will evaluate route productivity and overall effectiveness of RTA's network, including the interface between RTA and JET/SBURT. In concert with all data collected in previous tasks, the system analysis will include a profile for each route that will include and evaluate, at a minimum, the following:

- Hours and miles operated for weekdays and weekends;
- Average daily ridership by route segment, trip, and time of day for weekdays and weekends;
- Peak vehicles;
- Operating costs;
- Revenues;
- On-time performance;
- Maximum load points, load factors, and average trip lengths by time of day;
- Significant origin-destination combinations;
- Transfer patterns;
- Operating cost per platform hour;
- Revenue per vehicle service mile;
- Operating cost per passenger;
- Passenger miles;
- Demographic characteristics of riders;
- Whether the rider is local or a visitor;
- Fare media utilization of riders; and
- Regional travel characteristics, particularly inter-parish travel segments.

The evaluation should also include an identification and evaluation of key regional corridors. The consultant shall investigate and analyze current and projected land use, population densities, activity centers, and development trends, and relate them to transit improvements or alterations.

The evaluation should take into consideration the effectiveness of the system at matching transit riders to employment centers or other services, as determined by the origin-destination survey or other data as appropriate. The analysis should also determine where service levels are inadequate, in excess, or redundant given ridership demand and evolving regional land uses. The efficiency and ease of transfers between lines, as well as between systems and modes shall be assessed.

Minimum Deliverables: System Analysis Report

## **Task 5: Service Recommendations and Network Design**

Development of the final recommendations will be preceded by evaluation of a minimum of two alternative service scenarios for RTA service and regional service integration. These scenarios will be developed based on priorities and values derived from public input and consultation with the technical advisory committee, on a reasonable expectation of fiscal constraint, and in consideration of service deficiencies and opportunities identified in Task 4. Scenarios may recommend service changes and/or network redesigns in New Orleans along with improved regional connectivity and integration with services in Jefferson and St. Bernard Parishes, or services proposed for Jefferson Parish in their own strategic planning effort.

These scenarios will be evaluated using performance measures determined through consultation with the technical advisory committee. Performance measures will include measures that are consistent with RTA's SMP, such as measures related to improving access to jobs and healthcare facilities.

The study will conclude with a phased series of recommendations for RTA and RTA's interaction with JET and SBURT. The immediate recommendations will be consistent with the first implementation phase of the RTA's SMP. Longer-term recommendations will include financially-constrained recommendations as well as recommendations that assume a moderate increase in revenues. Costs and changes in revenue based on service changes, as well as potential sources for increases in revenue, should be identified.

Recommended improvements for RTA will optimize service and leverage projected resources in ways that best meet current and anticipated demographic, land use, and employment trends in the region. In addition to improving existing services, the recommendations should focus on:

- Improving regional coordination, including identifying potential regional corridors for enhanced service;
- Laying the foundation for High-Capacity Transit and Select Service routes identified in RTA's SMP and JET's strategic plan;
- Associated capital needs for vehicles, facilities, etc.

Route recommendations will include alignments, schedules, headways, hours of service, areas served, traffic considerations, and stop locations and spacing. All recommendations for fixed route service changes and/or new service should consider the additional costs of providing requisite ADA paratransit service.

Minimum Deliverables: Draft report, final report, including operations analysis and network/service design recommendations

## **Task 6: Title VI**

An environmental justice analysis will be performed to determine the impacts of recommended changes on the region's minority populations to identify the transit needs, and to develop strategies to avoid or mitigate any potential negative impacts as per the requirements of Title VI of the 1964 Civil Rights Act.

As part of the analysis, the RPC will assist the consultant in developing maps and data sets that graphically represent proposed service changes in relation to various concentrations of target demographics. The produced maps and demographic profiles, along with travel time analyses, should ensure that any proposed changes are equitably distributed in such a way that will avoid burden and provide benefits to disadvantaged populations.

All conduct of a Title VI and Environmental Justice analysis will be performed in coordination with RPC's Title VI officer, and all products will be reviewed by the officer prior to distribution to other stakeholders.

Minimum Deliverables: Title VI Analysis

**Timeline:** The contractor is expected to complete the project within 12 months of the notice to proceed date.

The origin and destination on-board survey is time sensitive, and should be considered a priority component of this work effort and should thus begin immediately following the award of contract and the initial scoping meeting.

Prior to commencement of work, the consultant will be required to have a pre-contract scoping meeting with the RPC and RTA to discuss and finalize the project timeline, milestones, deliverables, and reporting requirements.