

Sistrunk Boulevard Streetcar Feasibility Study**SPECIFIC SCOPE OF SERVICES AND DELIVERABLES**

As requested, we have prepared a scope of work and budget for the Sistrunk Boulevard Streetcar Feasibility Study. T.Y. Lin, International (TYLI) will act as prime consultant and will be joined by subconsultant, Clary Consulting LLC for the analysis of funding sources.

Our scope addresses the seven items listed in the “Proposed Scope of Work” as described below and anticipates being able to develop findings using similar methodologies and tools to those used, in part, by the SFRTA and FDOT teams completing the Phase I and Phase II design for The WAVE, respectively. In order to provide the common technical background – particularly for the ridership forecasts, operating plan and capital and operating/maintenance costs – we have included meetings with those teams to facilitate information sharing. It is assumed that the Broward MPO and/or City of Ft. Lauderdale staff will be able to schedule them. We have also included two public meetings to be determined by the CRA Director.

For the purposes of this proposal, the project study area is generally bounded by Sunrise Boulevard and Broward Boulevard, between NE Third Avenue and I-95.

Task 1 **Coordination** – CONSULTANT will manage and complete the tasks and deliverables identified in this scope of services and coordinate with the Client Project Manager to ensure completion within the project timeline. A primary component of all of the tasks will be the completion of quality control of analyses and documentation, and quality assurance checks of performance. CONSULTANT will provide Quality Control (QC) of all draft and final deliverables prior to submittal to the Client.

1.1 Coordination Meetings**1.1.1 Project Management Progress Meetings**

CONSULTANT Project Manager will prepare for, attend and complete follow-up activities associated with three (3) monthly progress meetings (i.e., “Progress Meeting No. 1”, “Progress Meeting No. 2”, and “Progress Meeting No. 3”) with the Client Project Manager to review project status to date, activities accomplished, next steps, budget and schedule adherence, review of unforeseen events, etc. All of these meetings will be held in person, and will include preparation and corresponding materials (agenda, progress reports, etc), and follow-up activities resulting from these monthly meetings.

1.1.2 Public Meetings

The CONSULTANT will present interim and preliminary findings of the Sistrunk Streetcar Feasibility Study at two public meetings to be scheduled and coordinated by the City/ CRA. The intent of these meetings is to provide information about: (first meeting) what is being studied and the timeframe; and to present (second meeting) study findings. Public input will be captured as part of future project development should the City/CRA decide to move forward. The CONSULTANT will prepare presentations for each of these meetings. Responsibility for scheduling the meeting and all meeting logistics will be the responsibility of the City/CRA.

1.1.3 Invoicing and Progress Report

CONSULTANT will prepare a work breakdown structure and schedule for all tasks and deliverables necessary to complete the project on time and within

budget. CONSULTANT will also prepare and submit monthly invoices in a format approved by the Client.

1.1.4 Other Administrative Activities

CONSULTANT will prepare, submit and file all documentation required under our contract with the MPO, including detailed statements per the MPO's requirements, expense reports/receipts, and preparation of a subconsultant agreement.

Task 2 Data Collection - CONSULTANT shall assemble all available data to support the development of Operating Plans, alignments, ridership forecasts, and other information needed for successive steps: i.e., Task 3-Operating Plans, Task 5-Ridership Forecasts, Task 6-Capital and Operating Cost Estimates, and Task 7-Funding Sources. CONSULTANT shall seek to utilize the methodologies, assumptions, tools, etc., used by the SFRTA team for The WAVE to the extent practicable, for the development of the Operating Plans estimation of ridership forecasts for the three Sistrunk streetcar alignments. For the purposes of this proposal, it is assumed that we will be able to review available data with the SFRTA team for The WAVE.

2.1 Research – CONSULTANT will review relevant transportation and land use studies, identify and list the infrastructure projects completed to date that have the potential to support or constrain a streetcar service in the study area. Included in this research will be the physical and operational features of The WAVE (Phase I and II) and BCT bus routes (Routes 1, 9, 11, 14, 22, 31, 36, 40, 50 60), ridership estimates and forecast model documentation, right-of-way, land use, socio-economic and demographic data that will be used to support development of the Operating Plans (Task 3). CONSULTANT will check the consistency of recently completed developments vis-à-vis City-adopted documents; specifically, the recent rezoning of portions of the study area to understand the development and re-development conditions.

2.2 Transit Usage – CONSULTANT will review the coordinate with Broward County Transit (BCT) to obtain the latest available travel times, headways, and ridership at a bus-stop level for the ten routes serving the study area, as well as those bus routes that are within one-half mile of the study area. As stated above, the CONSULTANT will review ridership findings developed for The WAVE project.

2.3 Existing Infrastructure Inventory – CONSULTANT will prepare an inventory of traffic control devices, roadway features and geometrics, sidewalks, crosswalks, on-street parking, and back-out parking on collector streets, bicycle lanes, bus stops and bus stops facilities, street lighting, tree cover and informal signage for study area. This inventory will be based on the Florida Department of Transportation (FDOT) Roadway Characteristics Inventory; and Broward County, Fort Lauderdale, and BCT's GIS databases. CONSULTANT will verify and update the available secondary data based on visual analysis of aerial imagery (Google Earth and Broward County Property Appraiser aerial data) and site visits.

2.4 Development – City of Fort Lauderdale will provide information of completed and ongoing development projects within and adjacent to the study area. CONSULTANT will evaluate connectivity issues and update the programmed transportation improvements based on the development projects provided by the City of Fort Lauderdale.

Task 3 Operating Plans – The operating plans for the three alternatives (all three will be reviewed under the WAVE Phase I and Phase II scenarios) will be based on a variety of factors including station locations, routings, route mileage, available vehicle equipment, schedule for The WAVE Phase I and Phase II services, traffic controls (including traffic signal timing,

vehicle and pedestrian traffic volume) and desired headways. The operating plans will include a schedule for streetcar service by station stop.

Streetcar running speeds and dwell time will seek to mirror those produced for The WAVE Phase I and II. However, if an alternative alignment is placed on an arterial street (e.g., Broward or Sunrise Boulevard) running speeds may be adjusted. This analysis will be completed in a spreadsheet –based model.

Task 4 Integration with BCT, SunTrolley, NW Community Link, and The WAVE (Phase I and Phase II) Services – As discussed above, the operating plan for the Sistrunk Boulevard streetcar alternatives will provide for direct transfers to The WAVE phases I and II. CONSULTANT shall recommend modifications to routings and/or headways/schedules for consideration to all or some of the ten (10) BCT bus routes that use study area streets in order to avoid providing redundant transit services as well as to utilize the opportunity for BCT routes to best connect with the Sistrunk Boulevard alternatives and for BCT to possibly better deploy the bus services in the study area to other parts of the transit district. Similar analyses will be completed for the Sun Trolley and NW Community Link services. This analysis will be completed in a spreadsheet –based model.

Task 5 Ridership Forecasts - CONSULTANT shall seek to utilize the methodologies, assumptions, tools, etc., used by the SFRTA team for The WAVE to the extent practicable, for the estimation of ridership forecasts for the three Sistrunk Boulevard streetcar alignments. For the purposes of this proposal, it is assumed that CONSULTANT will be able to review the model documentation utilized by the SFRTA and FDOT teams for The WAVE.

CONSULTANT will develop a spreadsheet-based model to forecast daily ridership levels for future year (consistent with SFRTA and FDOT team) for each of the six options. The spreadsheet-based model would be built with the following information obtained from the adopted Southeast Florida Regional Planning Model (SERPM) with appropriate modifications¹:

- regional model origin-destination trip tables
- regional model modal splits
- socioeconomic and land use data for the study area
- ridership for the study area bus routes

CONSULTANT will utilize the model documentation provided by the SFRTA and FDOT teams for The WAVE and fill in any data gaps with locally available information. This spreadsheet-based model follows the general methodology of the FTA’s Simplified Trips-on-Project Software (STOPS), and has clear advantages in its application, such as: the inputs and how they influence ridership estimation are clearly visible; and the inputs an easily be changed and new ones tested.

Forecasts will be prepared for each of the three alternative alignments under two scenarios: i.e., The WAVE Phase I and THE WAVE Phase II. In other words, forecast will be produced for six options. As described in Task 3 above, this is necessary because of the different

¹ Modifications may be made to account for trips not fully captured by SERPM - bicycle and walk trips, non-home based trips (trips to and from work places, government services, cultural, religious, and educational institutions, shopping centers, restaurants, hotels, etc.). Each of these items is critical for understanding how and why people use downtown or community circulator service such as streetcar circulator.

operating plans that will be used in Phase I and II, and the need for the alternative alignments to have complementary operating plans to avoid bunching and track and signaling conflicts in the system.

Task 6 Capital and Operating/Maintenance Cost Estimates - CONSULTANT shall prepare capital cost and operating/maintenance cost estimates for use in the analyses developed for Task 7- Funding Sources. For the purposes of this proposal, it is assumed that the CONSULTANT will be able to review the cost inputs developed by the SFRTA and FDOT teams for The WAVE.

6.1 Capital Cost Estimates – CONSULTANT will develop will develop conceptual capital costs (in current dollars) for engineering, construction and mobilization of the alternative streetcar alignments, including track, signal/ communication equipment and software, power facilities, vehicles, etc. The concept cost estimates will be completed on a quantities and unit price basis (per mile costs), and will include costs for sidewalks, curbs, and drainage. The estimates will not include the costs associated with right-of-way acquisition or relocations.

6.2 Operating and Maintenance Cost Estimates – CONSULTANT will prepare estimates of annual operating and maintenance costs associated with the alternatives. The operating cost estimates will be based on per service and/or revenue hour as reported in the National Transit Database by providers of streetcar services elsewhere in the U.S., as well as the findings prepared by the SFRTA and FDOT teams for The WAVE.

Task 7 Potential Funding Sources - CONSULTANT shall assemble and prepare a list of potential funding sources for the capital and annual operating/maintenance costs generated by the Sistrunk Boulevard Streetcar alternatives. The list will contain only those funding instruments that the alternatives may be eligible for, and also be evaluated on the basis of the project's competitiveness for receipt of those funds. In addition, this effort will describe the actions required to receive those funds, and will recommend the next steps needed to more fully develop the funding analysis. The analysis will be limited to a review of existing funding sources, but will also provide a "higher-level" of the range of funding that could be generated by a special assessment district.

SUBCONSULTANT Clary Consulting, who is providing financial advice to the SFRTA team in the development of The WAVE project, will be performing this analysis and effort and for the purposes of consistency, will utilize the approach they have taken with The WAVE for this Sistrunk analysis.

Task 8 Issues to Overcome/Recommended Next Steps – As part of the feasibility study, the CONSULTANT will identify physical, operational, financial, and other impediments CONSULTANT believes would need to be either avoided or mitigated to advance any of the alternatives. Strategies to avoid or mitigate these impediments will be described.

Based on the findings of the above tasks, the CONSULTANT will recommend the next steps to advance or modify (or, even no longer consider) any proposal to initiate a streetcar service in the study area. If the findings indicate that a streetcar service is both feasible and productive, next steps recommendations would be focused on formally adopting an approach – with public and private sector stakeholders – to include the streetcar service in long-range transportation and land use plans, and to consider whether federal or state funds would be sought to continue development of the service.

In addition, more precise information about costs, equipment and materials needs, and

construction schedules (in particular, with respect to utilities) is critical to decision making and can only be accomplished with survey data and more detailed engineering and design.

Moreover, the interests of neighborhood residents and businesses, and other stakeholders need to be discussed to ensure that a streetcar service is an appropriate investment for the community in the study area as well as the community at-large.

If the decision is made to seek Federal and state funds, their grant programs have prescriptive requirements that can often delay desired schedules; and so, addressing those requirements should be part of the initial efforts.

These next steps will be identified and described in the Final Report.

Task 9 Presentation to Board/Commission - CONSULTANT shall prepare and present a short PowerPoint presentation to either Broward MPO Board or the Fort Lauderdale City Commission about the findings of the study. The presentation will be reviewed with staff at Progress Meeting No. 4 prior to the briefing.

Task 10 Final Report – CONSULTANT will prepare draft and final reports for the Sistrunk Boulevard Streetcar Feasibility Study for review with the Client Project Manager. The final report will document the data collection, analysis, findings, coordination, etc., utilized to develop the study findings. The report will be between 30 and 60 pages in length, include an Executive Summary and corresponding appendices. The draft report will be reviewed with the Client Project Manager, and comments and suggestions to this draft from the Client will be compiled by the Client Project Manager and forwarded to the CONSULTANT for incorporation in the final report.

Deliverables

Deliverables for this project shall consist of the following:

Task 1

- Agendas/meeting notes/summaries for monthly Progress Meetings with the Client (2 hr maximum).
- Critical path schedule for project tasks and deliverables based on the work scope.
- Subcontract agreement for work to be completed by Clary Consulting.
- Monthly progress reports that describe activities completed, project progress and future activities.
- Monthly invoices by the 20th of each month.
- Administrative tasks associated with the obligations of our contract with the Client.
- Presentation materials (PPT) for two public meetings.

Task 9

- Draft and final PowerPoint presentation to Board or Commission

Task 10

- Sistrunk Boulevard Streetcar Feasibility Study (Draft and Final Report)

Project Assumptions

The analysis and recommendations resulting from this project is limited to the boundaries of the proposed study area.

CONSULTANT will be able to meet with the SFRTA and FDOT teams preparing development for The WAVE for the purposes of sharing information, data, reports, etc., The WAVE operating plans, modeling methodology, capital and operating cost variables, and funding sources.

CONSULTANT will be able to meet with BCT staff to review any anticipated changes to the bus services provided in the study area.

Client Responsibilities

- Client shall request meetings with SFRTA and FDOT teams preparing development for The WAVE.
- Client shall be responsible for scheduling two public meetings, as well as all corresponding meeting logistics.
- Client shall schedule date for presentation to the Board or Commission.
- Client shall provide the documents summarizing the development and land use changes in the study area.

Project Schedule

The CONSULTANT shall perform the services identified in Tasks 1 through 10 inclusive within three (3) months of written Notice to Proceed, as shown below.

Task	Description	Month 1	Month 2	Month 3
1	Project Management/Administration			
	Progress Meeting No. 1			
	Progress Meeting No. 2			
	Progress Meeting No. 3			
	Public Meetings (2)			
2	Meet with SFRTA and FDOT Teams on The WAVE Phase I/II			
	Meet with BCT Staff			
3	Identify Station Locations			
	Develop Operating Plans			
4	Integration with The WAVE Phase I/II, and BCT bus routes			
5	Ridership Forecasts			
6	Physical/Operational Feasibility			
	Capital Cost Estimates			
	Annual Operating & Maintenance Cost Estimates			
7	Funding Sources			
8	Issues to Overcome/Next Steps			
9	Progress Meeting No. 4			
	Presentation to Board or Commission			
10	Draft and Final Report			

Project Budget

The cost for the services performed by the CONSULTANT and SUBCONSULTANT in Tasks 1 through 10 totals \$180,000, as shown in the table below.

Task No.	Task Title	Consultant	Subconsultant	Total
1	Coordination	\$5,540		\$5,540
2	Data Collection	\$3,590		\$3,590
3	Operating Plans	\$22,160		\$22,160
4	Integration with Transit Services	\$10,200		\$10,200
5	Ridership Forecasting	\$44,400		\$44,400
6	Conceptual Eng/Capital and Operating Cost	\$38,260		\$38,260
7	Funding Sources	\$7,450	\$9,400	\$16,850
8	Issues to Overcome/Next Steps	\$12,240		\$12,240
9	Presentation to Board or Commission	\$5,700		\$5,700
10	Draft/Final Report	\$21,060		\$21,060
		\$170,600	\$9,400	\$180,000