Stage 0 Feasibility Study

Barton Avenue (LA 3060) Corridor

Bicycle and Pedestrian Accessibility Study

(US 90 to LA 18)

Luling, Louisiana

RPC Task No. A-1.26STC FY-26 UPWP

Introduction

The Regional Planning Commission in coordination with the St. Charles Parish is conducting a feasibility study for the qualitative assessment and potential modification of the corridor immediately adjacent to and including LA 3060 (Barton Ave.) from US 90 to LA 18 which could include travel lane modification, streetscaping, traffic calming measures, introduction and integration of walking and bicycling features, water management and resilience enhancements, and related improvements which would enhance safety, multi-modal use, and improve the quality of life for all users. This request builds upon previous planning studies undertaken on behalf of St. Charles Parish by RPC and is in accordance with the Infrastructure Investment and Jobs Act (IIJA) emphasis of improving safety and planning for all roadway users.

Project Background

St. Charles is working to implement bike and pedestrian projects throughout the Parish. RPC completed the St. Charles Parish Comprehensive Pedestrian and Bicycle Master plan for the parish in 2019. Through significant public outreach, a portion of Barton Ave. (LA 3060) between Rex Drive and US 90 was identified as a need and considered a high priority in the plan as the route provides access to the Mississippi River Trail for Luling's residential area south of US-90. Per the plan, north-south access between Rex Dr. and LA 18 would be accomplished via the use of Davis Drive, that runs parallel to Barton Ave.

Additionally, and since that time, RPC has worked with the Parish to implement a multi-use path project along LA 52 (Paul Maillard Rd.) between US 90 and LA 18, in the Boutte / Luling communities.

Study Purpose

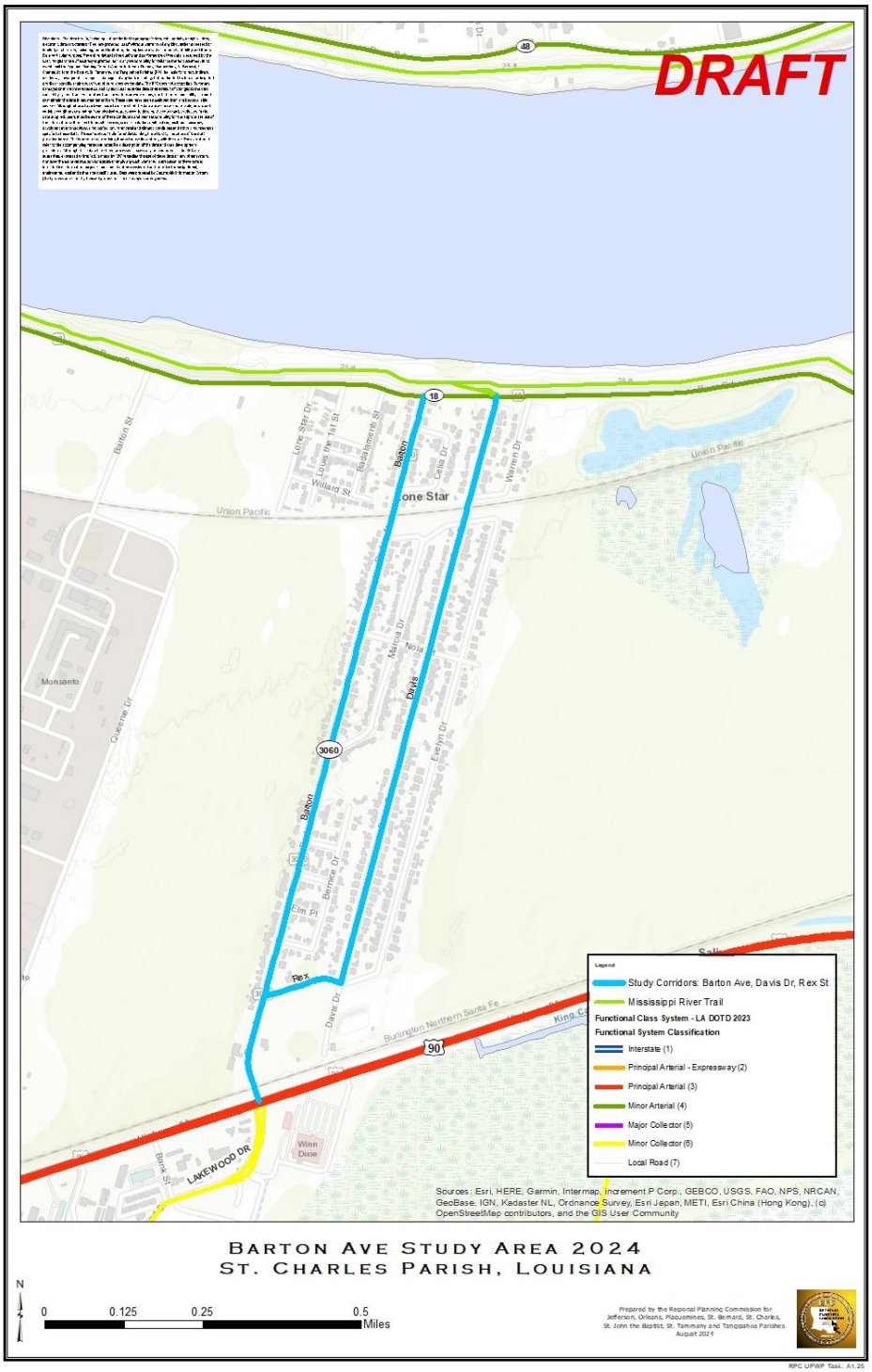
The purpose of the study is to identify conceptual and feasible pedestrian improvements that can be undertaken along and/ or adjacent to the heavily trafficked Barton Avenue (LA 3060) between US 90 and LA 18 in Luling. Evaluations of adjacent corridors should consider complete streets improvements along Davis Dr and Rex St, multi-modal enhancements at the US-90 intersection with Barton Ave/Lakewood Dr, and Mississippi River Trail access improvements between Barton Ave and Davis Dr along LA 18.

Study Need

The need for the study entails the provision of safe and ADA accessible pedestrian and other complete street infrastructure for the LA 3060 corridor, a heavily travelled corridor with narrow travel lanes and minimal apparent right of way, particularly south of the Union Pacific Railroad Track.

Based on previous planning efforts in the St. Charles Bicycle Master Plan, the area adjacent to Barton Avenue was identified as a key route/ corridor that provides north-south mobility between LA 18/ Mississippi River Levee, and commercial areas of US 90.

Study Geography



The project corridor is LA 3060 located between the intersections of US 90 and LA 18. The corridor length is approximately 0.90 miles. Adjacent corridors to be evaluated in the study area include LA-18 between Davis Dr and LA 3060, Davis Dr between LA 18 and Rex St and Rex St between Davis Dr and LA 3060.

Task 1 - Project Management

1A: Project Timeline and Kickoff Meeting

The consultant will organize an internal kick-off meeting that will take place within two (2) weeks of the Notice to Proceed, to be held in-person or virtually at the discretion of RPC. The kickoff meeting will include the RPC Project Manager, RPC's public outreach coordinator (and other RPC staff as appropriate), the Consultant Project Manager, and a representative from each subconsultant. This meeting will address logistical details for the conduct of the project, including data sharing, invoicing requirements, RPC's Area of Interest Title VI Assessment and Standards, and other project expectations. The consultant will prepare a detailed project schedule including major milestones (PMT meetings, site visits, draft reviews, final report submission, etc.) to be submitted and reviewed at the project kick-off meeting.

1A Deliverable*: Task Product will include a meeting agenda and detailed project schedule with timeline and major milestones.*

1B: Bi-Weekly Project Management Meetings

The consultant will organize bi-weekly project management meetings that will take place two (2) weeks following the internal kick-off meeting, to be held virtually. Bi-Weekly meetings will include the RPC Project Manager, RPC's public outreach coordinator (and other RPC staff as appropriate), the Consultant Project Manager, and a representative from each subconsultant (as appropriate). These meetings will provide RPC with project updates and allow the project team to coordinate on tasks and deliverables. The consultant will provide all necessary agendas, handouts and exhibits at least one day in advance of bi-weekly meetings for RPC review and prepare summary minutes of the meetings.

1B Deliverables*: Task products will include meeting agendas, handouts, and summary minutes.*

1C: Project Management Team (PMT)

The consultant will assist RPC in establishing and supporting a Project Management Team to guide the technical work effort and to review the consultant's work products. The PMT will consist of the RPC, St. Charles Parish, the LADOTD District 02 Traffic Operations Engineer or their designee for LADOTD District 02, and other stakeholders, as appropriate. The consultant will provide all necessary agendas, handouts and exhibits one week in advance of PMT meetings for RPC review and approval and prepare summary minutes of the meetings.

The PMT will meet not more than four times during the study effort. These meetings may be in a virtual setting. The consultant will be responsible for organizing the meetings and will identify the venue (i.e. in-person or virtual via the following platforms: Zoom, MS Teams, GoToMeeting, etc.).

Agenda Topics for each PMT Meeting are as follows:

1. Project Introduction and Existing Conditions Analysis
2. Design Concepts, Route Alternatives, and Evaluation Criteria
3. Decision Matrix and Feasible Alternatives
4. Draft Study Review

***1C Deliverables**: Task products will include meeting agendas, handouts, summary minutes and support graphics. A report of meeting activities and outcome, with a copy of the sign-in list, will be made available to attendees within 10 days of each meeting.*

1D. Stakeholder and Community Engagement

In accordance with RPC's Title VI Policies and in concert with RPC and the Parish, the consultant will describe community involvement goals and objectives, outreach efforts, and schedule in a stakeholder and community engagement checklist.

In consultation with RPC, the consultant will arrange meetings with other stakeholders in the area to discuss the project's purpose and need and project-related development opportunities and concerns, as they arise and as appropriate. These meetings may include personnel from St. Charles Parish Gov't, DOTD, Pontchartrain Levee District, rail representatives, adjacent property owners, and other relevant agencies, etc.

The consultant shall be responsible for arranging and conducting up to two (2) community meetings at different phases of the project to solicit public input on the feasibility study. These meetings may be conducted in an in-person or virtual setting at the discretion of RPC. Meetings shall be publicized and conducted in accordance with the RPC's Public Involvement Plan and Title VI Program.

The consultant shall work with jurisdictions and organizations representing communities within the project area of interest (AOI) to distribute information about these community meetings along with other opportunities for community input.

A public participation checklist will be accomplished and submitted for RPC and PMT review that identifies:

- Date of meeting
- Time of meeting
- Venue Location/Options
- Meeting Format
- Meeting Notice/ Advertising Options
- Meeting Notice venues for dissemination (coordination with parish or municipal websites, social media, etc)
- Other relevant information to enhance participation

For each public meeting/ outreach event.

***1D Deliverables:** Task products will include a stakeholder and community engagement checklist, meeting agendas, handouts, presentations, summary minutes and support graphics. Post-meeting, summary*

minutes will be made available to the RPC within ten (10) business days of all stakeholder and community meetings, with an original copy of the sign – in sheet (and/or a full list of virtual attendees) for inclusion with the final report.

Task 2 - Existing Conditions Analysis

2A. Data Inventory and Plan Review

Prior to initiating other deliverables, the consultant will review existing data and studies addressing the project area. The PMT will assist the consultant in compiling available data addressing land use and zoning, transportation, utilities, area demographics and environmental conditions within the study area. RPC will make available boundary based aerial imagery, existing and proposed regional bike/ped facility data, transportation road networks, land use and land-based datasets as needed.

The consultant will summarize relevant prior studies and plans, including but not limited to the St. Charles Parish Bicycle and Pedestrian Master Plan undertaken by RPC in 2018 and briefly describe what role the project may play in the context of regional connectivity. The consultant shall identify any recent (since 2010) projects implemented within or otherwise affecting the study area, and to the extent possible shall identify recent maintenance history of roadways within the project area.

The consultant will conduct field observations to inventory conditions as a basis for planning. Field observations should include a site review of the transportation context, utilities, topography/terrain, surrounding land use, wetlands, rivers/streams, creeks, and other surface waters, etc.

2A Deliverables: *Products will include a task report summarizing existing plans and studies for the corridor, incorporating an inventory of data available for the project area, describing coordination efforts with any ongoing planning efforts or projects within the study area, and identifying implemented projects affecting the study area. The consultant shall describe within the Task Report how plans and data are to be used in the development of the plan and completion of subsequent tasks.*

2B. Crash Data Review

The RPC will provide the consultant with a five-year history of fatal and serious injury crashes and crashes of all severities for non-motorized users, by location within and near the project area. This includes all non-motorized crashes along LA 3060 study corridor. The consultant will review the *Louisiana Pedestrian Crash* Study, LADOTD's HSIP list, and LADOTD's Roadway Departure Implementation Plan, and identify if any segments within the study area are identified as segments that have a high potential for safety improvement.

2B Deliverables*: The consultant shall prepare a memo summarizing findings from the review of the crash data and describing how these data will inform subsequent tasks. The consultant shall prepare maps and tables summarizing crash data for inclusion in PMT presentations and the final report. The consultant will coordinate with RPC's GIS Coordinator to ensure compliance with RPC standards and industry best practices related to GIS products and printed mapping.*

2C. AOI/ Demographic Profile

To review community impacts and access in the study area and as stated in Task I(d), an Area of Interest (AOI) will be established by the RPC. The RPC will provide the consultant with geographic demographic and employment data, including measures identifying socio-economically distressed neighborhoods. The consultant shall describe within the Task Report how these data are to be used in the development of the plan.

2C Deliverables: *Task report summarizing and mapping findings from Subtask 2C. The consultant will coordinate with RPC's GIS Coordinator to ensure compliance with RPC standards and industry best practices related to GIS products and printed mapping.*

2D. Land Use and Design Regulations

The consultant shall identify and review applicable local and state permitting, land use, and roadway design standards and regulations applicable to the study area in consultation with the PMT, including but not limited: to the DOTD Road Design Manual, applicable parish or municipal design standards on local roadways, and land use and design regulations in the Comprehensive Zoning Ordinance (CZO). The consultant shall identify and describe these regulations and standards in the Task Report, to be used as a basis for subsequent tasks.

The following relevant land use considerations shall be mapped for the study area where data are available:

- Existing and future land uses
- Major employers and primary commuter routes
- Desired destinations and other points of interest
- Places of cultural or historical significance

2D Deliverables: *Task report summarizing and mapping findings from Subtask 2D. The consultant will coordinate with RPC's GIS Coordinator to ensure compliance with RPC standards and industry best practices related to GIS products and printed mapping.*

2E. Transportation Vulnerability Data Review and Assessment

The RPC will provide the consultant with the most recently available data indicating the transportation system's vulnerability to various natural hazards within the study area. The consultant will consult with the St. Charles Parish and DOTD to determine if the vulnerability accurately reflects conditions in the study area, and to identify additional vulnerable locations if appropriate.

The consultant will provide a high-level vulnerability assessment of the general corridor to natural hazards. The assessment shall consider quantitative and qualitative data such as past occurrences of identified hazards, presence of protective features, projected hazardous conditions, ROW elevation/ flood zone mapping, and stakeholder input.

The following environmental and transportation vulnerability considerations shall be mapped for the study area where data are available:

- Threatened and endangered species

- Coastal and jurisdictional wetlands, rivers/streams/creeks, and other surface waters; include applicable local, state, and federal buffer ordinances/regulatory requirements
- Hydrology and hydraulics (FEMA floodplain, etc.)
- Managed natural areas (tree canopy/conservation areas, nature preserves, waterfowl impoundments, etc.)
- Topography/terrain
- Brownfields/known contamination sites

***2E Deliverables**: Task report summarizing and mapping findings from Subtask 2E that describes the prioritized hazards, identified vulnerabilities, and methodologies used to complete the assessment. The consultant will coordinate with RPC's GIS Coordinator to ensure compliance with RPC standards and industry best practices related to GIS products and printed mapping.*

2F. Infrastructure and Utilities Data

The consultant shall conduct field work and use any relevant data to identify existing infrastructure conditions and utilities within the project study area. The consultant shall document information on roads within the study area, including lane widths, shoulder widths, available right-of-way, pavement and sidewalk conditions and intersections. The consultant shall inventory existing utilities and facilities including gas, water, electric, sewer, drainage, elevation, lighting, striping, signage, and signals. Information shall be documented in an appropriate geospatial/machine-readable spreadsheet format with accompanying maps/graphics showing infrastructure and utilities within the study area.

The following infrastructure considerations shall be mapped for the study area where data are available:

- Transportation context/existing and planned infrastructure inventory, which may include roadways (typical geometry, traffic volumes, speed limits, signalized and unsignalized intersections, driveways, etc.); bridges (vehicular and pedestrian); bicycling facilities and pedestrian networks (bicycle lanes, sidewalks, trails, shared use paths, crosswalks, etc.); transit (routes and stops); and rail (freight and commuter)
- Utilities (publicly and privately-owned)
- Adjoining/surrounding area projects (relevant programmed/funded STIP, HMIP, and CIP projects and projects in design or under construction that may influence the study)
- Real estate/land acquisition which may include existing right-of-way (roadway, rail, etc.); utility easements (private/public); government-owned/public lands; and conservancy-owned lands

***2F Deliverable:** Task report summarizing and mapping findings from Subtask 2F. The consultant will coordinate with RPC's GIS Coordinator to ensure compliance with RPC standards and industry best practices related to GIS products and printed mapping.*

Task 3 – Count Data Collection

3A. Motorized Traffic Counts

All traffic data shall be collected and formatted (Excel spreadsheet) for use with RPC's Regional Traffic Counting Program and consistent with DOTD standards. Appendix A of this Scope of Work describes

LADOTD data collection methodology and shall be the governing resource in regard to traffic data collection.

7-day, 24-hour bidirectional traffic volume counts will be conducted on specified segments of the project corridor at three locations. These counts will contain hourly subtotals and include vehicle classification amounts. Counts must be completed during a 7-day period that does not include a holiday or special event not typically seen at the site. Per DOTD traffic data collection policy, consultant will review the 24 hour counts and recommend a peak AM, Mid-day, and PM peak period to RPC PM. The RPC project manager will review and recommend approval or otherwise comment on changes required.

Traffic counts will be required on the segments as follows:

- LA 3060 (Barton Ave.) north of the Union Pacific RR Tracks and LA 18
- LA 3060 (Barton Ave) near Nola Street
- LA 3060 (Barton Ave.) between US 90 and Rex Drive
- US 90 approx. 300 feet west of LA 3060
- US 90 approx. 300 feet east of LA 3060
- Davis Drive north of the Union Pacific RR Tracks and LA 18
- Davis Drive between Nola Drive and Rex Drive
- Rex St between Davis Dr and LA 3060 (Barton Ave)

3B. Non-Motorized Data Collection

Automated 24-hour, 7-day bicycle and pedestrian counts shall be collected at the above referenced locations using a DOTD-evaluated methodology described in LTRC 16-4SA ("Pedestrian and Bicyclists Count - Developing a Statewide Multimodal Count Program," specifically Appendix D "Pedestrian and Bicycle Count Data: A Guide for Louisiana" - https://www.ltrc.lsu.edu/pdf/2019/Appendix%20D.pdf). Counts should be collected during the same period as motorized traffic counts. As a part of the data collection, temperature and weather conditions will be recorded.

3C. Speed Data Collection

Single point speed data will be collected at the above locations on LA 3060. At a minimum, sample sizes should include at least 100 free-flow vehicles or two hours of collection, whichever threshold is met first. The technique the consultant intends to use to collect speed (traffic counter, RADAR/LIDAR, third party data) must be described in the project proposal and ultimately approved by the PMT. At each location, the following will be documented:

- The posted speed limit
- The percent of vehicles exceeding the posted speed limit
- Standard deviation of speeds, to determine the amount variation between high and low end
- 50^{th} percentile speed
- 85^{th} percentile speed
- 95^{th} percentile speed

3D. Turning Movement Counts (TMCs)

The consultant will undertake weekday and weekend turning movement counts using the peak periods identified in Task 3C. Consultant shall document passenger vehicle, truck, bicycle, and pedestrian usage at each identified intersection for a three (3) hour period adjacent to the discerned AM and PM peak hour (1 hour before, 1 hour after). It is anticipated that turn movement counts will be required at the following sites listed below. Final locations will be approved by the RPC project manager before counts commence.

- *LA 3060 at US 90*
- *LA 3060 at LA 18*
- *LA 18 at Davis Drive*
- *US 90 at LA 3060/Lakewood Dr.*

3A-3D Deliverable: *Task report describing task 3 road characteristics and all collection methods, data collected, and analysis of data collected. The consultant will note daily weather conditions and the low and high temperatures for each day data is collected.*

Task 4 – Existing Conditions Evaluation Report

With the documentation prepared in Tasks 2 and 3, the consultant will prepare a report that:

- Summarizes existing planning efforts or implemented projects that would have a potential impact or are otherwise related to non-motorized travel on the corridor.
- Analyze, map, and describe the safety conditions of the corridor based on the provided 5-year crash data.
- Describe the motorized traffic conditions of the roadway using data collected in the previous tasks.
- Describes in detail existing and potential conflicts with motorized traffic for bicyclists and pedestrians on the LA 3060 corridor.
- Describes locations within the study area where transportation infrastructure may be vulnerable to natural hazards.

Deliverable: *An existing conditions report for the corridor.*

Task 5 - Conceptual Plan Development

<u>5A. Design Criteria & Desired Typical Sections</u>

Based on the findings from Tasks 2-4, the consultant will review, summarize, and make recommendations that improve/enhance operational efficiency and safety for all modes where opportunities exist to do so both in the field and in policy. The Consultant will review and develop design criteria for conceptual alternatives, which will include:

- Review and incorporate recommendations with FHWA proven safety countermeasures where feasible.
- Review and make recommendations consistent with the Parish and LADOTD design and Complete Streets policies, informed by the newest available AASHTO Guidance on Bicycle and

Pedestrian Facility Design, NACTO Urban Bikeway Design Guide, NACTO Urban Street Design Guide, and other national guidelines relevant to pedestrian and bicycle planning and safe design.
- Strategy recommendations to enhance the transportation system's ability to withstand natural hazards, particularly as they relate to water management.

The Consultant will also provide selected desired typical section information to be used when developing route alternatives. Typical sections should include proposed design concepts and illustrate relationships with the existing transportation network and adjacent land use.

These concepts may incorporate Complete Streets elements such as new or upgraded sidewalks/ paths, protected bikeways, separated bicycling and walking paths, signage, striping, lighting, augmented pedestrian crossings, wayfinding, ADA improvements, roadway diets, speed modification, and other measures to enhance the safety and connectivity of the corridor, consistent with LADOTD design standards (EDSM II.2.1.14).

Resilience: Conceptual alignments and roadway configurations to be developed will assume implementation of resilience features for the road and right of ways. The resilience features should directly address vulnerabilities identified in the vulnerability assessment, and may include structural features (e.g., gray infrastructure), nature-based solutions (e.g., green infrastructure), policies, or a combination of features.

Additionally, the concepts may include elements to enhance infrastructure resilience and livability such as green infrastructure (e.g., rain gardens, permeable pavements, street trees, etc.), grey infrastructure (e.g., improvements to street drainage), and streetscaping.

5B. Conceptual Route Alternatives

Draft alternatives should include those deemed feasible by the PMT and be developed to a level of detail sufficient to communicate to professionals and to the general public and provide context that incorporates the existing built environment.

The overall project corridor may be divided into segments or key areas as necessary. Describe opportunities and constraints associated with each area (including photos/maps) and develop route alternatives within each segment/area.

- Provide an overall map showing the route alternatives
- Provide a summary table of segment alternatives including segment ID/ name, short description, length, cost considerations and summary of challenges/ opportunities associated with each.
- Identify, discuss, and map potential connections and access areas.

Deliverable*: Conceptual plan and maps with visualizations of the proposed improvements and conceptual design alternatives. The visualizations will focus on three segments of the corridor as defined by the PMT.*

Task 6 – Prioritization and Feasible Alternatives

Based on the analysis conducted in the previous tasks and input from the public meetings, the consultant will provide the PMT with a prioritized list of both short- and long-term feasible

improvements, describing the transportation deficiency, type of proposed improvements, and an estimated cost for the preferred alternative(s).

The consultant will first develop methodology for evaluation of alternatives, including development of evaluation criteria (qualitative and quantitative). Evaluation criteria should consider user safety, connectivity, demand/density, cost, right-of-way/property impacts; flood study impacts; utility impacts; structures required (bridges/boardwalks/retaining walls); user experience; construction complexity; public input; maintenance requirements; and project implementation schedule.

The consultant will provide a decision matrix table scoring each alternative using the evaluation criteria. The consultant will also provide recommendation and justification for preferred alternative(s) including alignment, typical section(s), road crossing treatments, access points, and connections. If applicable, discuss interim vs. long-term recommendations.

The consultant will provide project cut sheet(s) for feasible alternative(s). Cutsheets may include an alignment map; brief description; typical sections; renderings; accessibility/connectivity (points of interest and connection points); demand/density (number of households and employees within project study area); potential permitting needs; potential right-of-way/easement acquisition needs (estimated area needed, number of impacted parcels, number of impacted property owners); and estimated cost information (current year construction cost, escalated construction cost for anticipated build year, right-of-way cost based on tax appraisal values, design services cost, construction engineering and inspection services cost, and total budget recommendation).

Deliverable: *A methodology matrix for prioritizing projects (without cost); a program of feasible projects with associated costs; visual maps of potential projects by cost a, type and priority.*

Task 7 – Draft and Final Report

The Consultant shall finalize alternatives and prepare/submit the Stage 0 Feasibility Study, documenting the information and analysis described above. All studied alternative(s) deemed feasible by the PMT will be described in the Stage 0 Report.

The MPO will engage with the local public agency (LPA) following the completion of the Stage 0 report to determine a recommended alternative, should the LPA decide to advance the project. The consultant will prepare MPO Stage 0 checklists (ref. LA DOTD Program Development and Project Delivery System Manual, Chapter 4: Stage 0 Standard Operating Procedure, Checklist for MPO Stage 0-Preliminary Scope and Budget Worksheet, and Stage 0 Environmental Checklist) for the recommended alternative. The consultant will also provide an overview of implementation strategies and tools and identify the next steps for project development, which include:

- Discussion of the organizational framework for implementation in an action plan, including tasks, lead agencies, key partners for collaboration, task dependencies, resources needed, and potential timeframe for implementation.
- Identification of potential funding sources and describe any relevant requirements associated with each (local match requirement, eligibility criteria, etc.)

All deliverables should be aggregated into a draft final document for review by the PMT before the project has been billed at 85%. The PMT and RPC staff may recommend changes to be addressed before

a final plan is approved. The consultant will provide ten (10) hard copies of the final plan (including appendices), as well a digital copy on a USB drive with all accompanying data. Six (6) hard copies of the final report will be delivered to the Regional Planning Commission, and four (4) hard copies shall be delivered to St. Charles Parish.

Deliverable:

Budget Range: $125,000 - $145,000

Timeline: Eight months

Appendix A: Traffic count methodology

Appendix A: Traffic Count Methodology:

RPC template scope language for projects requiring traffic counts:

It is anticipated that traffic counts will be required at the locations referenced in Task 3:

Data collection will consist of 48 hour sessions conducted between Monday and Friday. Traffic data collection will adhere to the following provisions:

1) Traffic counts shall not be conducted during holidays, annual festivals, Mardi Gras, or other abnormal traffic/inclement weather conditions. School zone traffic factors into the count data; therefore, the counts shall take place when school is in session, unless otherwise approved by RPC.
2) Consultant must adhere to the provisions of 2016 LA DOTD Traffic Monitoring Manual, Chapter 4.0: Site Selection for Road Tube Placement and the FHWA 2016 Traffic Monitoring Guide (at least Chapter 3).
3) The consultant must utilize a raw traffic data file format that is compatible with the Traffic Server operated by the DOTD and certified as a current version of traffic data management software. A list of compatible file formats may be obtained from the RPC or DOTD.
4) 48 hour traffic counts will be collected at 15 minute intervals. Data delivery will include 15 minute interval counts, peak hour counts, and average daily traffic counts. The nominal traffic volume shall be based on the number of axles recorded assuming 2 axles per vehicle. Average daily traffic count data will be adjusted using the most recent, DOTD approved Traffic Count Adjustment Factor guidance. Both the adjusted and non-adjusted counts will be provided to the RPC.
    a. 15 minute counts with demand volumes included (Peak Hour Counts):
        i. May be requested during morning, midday, and evening peak hours at intersections, median opens, and driveways.
        ii. The terminology “with demand volumes included” requires the consultant to use procedures described in The Manual of Transportation Engineering Studies, 2nd Edition to determine arrival volumes. Arrival volumes shall be recorded when the demand exceeds the capacity and queues develop. Queues will develop when the intersection/driveway/median opening becomes saturated. Arrival volumes can be approximated by relating the departure count to the number of vehicles in the queue.
5) 48 hour vehicle classification counts will be collected at 15 minute intervals. Delivery will include 15 minute interval counts, total class counts, and percentage of each vehicle type as defined by FHWA Traffic Monitoring Guide (TMG).
6) Volume and vehicle classification counts shall be performed on the same week or at the same time if possible.
7) For both volume and vehicle classification counts: Data provided shall include the latitude and longitude coordinates of the site obtained by global positioning system (GPS) technology and recorded during the monitoring session at each site designated and identified by a station number. Data must be collected for each direction of travel and the nominal traffic volume data

will be reported by direction (North/South or East/West). Sites located on divided highways and other locations agreed to in advance will require two installations, one for each direction of traffic. For each of these sites, the monitoring sessions will be simultaneous.

8) A detailed description of the type of sensors including the name and manufacturer of the traffic monitoring equipment to be used is to be provided to RPC.
9) The consultant will adhere to a Quality Assurance /Quality Control program to reasonably assure the collecting and reporting of accurate and quality traffic data. The consultant must also reasonably assure good quality data and minimally adhere to the TMG standards and guidelines required for collecting and reporting traffic monitoring data.

The consultant will be responsible for the organization, processing, and delivery of the traffic data. Data will be provided to the RPC in the following formats:

1. A Microsoft Excel compatible (.xls or .csv) spreadsheet summarizing average daily traffic, based on a template to be provided by RPC. The spreadsheet must include latitude and longitude of the location of each count with projection information, including datum unit of measure and an assigned unique ID; AND
2. An ESRI compatible geographic file (shapefile or feature class) summarizing average daily traffic, based on a template to be provided by the RPC which will include count location unique ID (LOCAL_ID or IntID) and location description.

Raw traffic data files in a format that is compatible with the most current traffic data management software operated by the LA DOTD (currently MS2 Traffic Count Database System (TCDS)). A list of compatible file formats for LA DOTD upload may be obtained here:

https://docs.ms2soft.com/docs/ms2-help-data-import