

STAGE 0 FEASIBILITY STUDY
SCOPE OF SERVICES

LA 3127: LA 3141 to LA 3213
Conceptual Feasibility Study: Freight Corridor Planning
(RPC Task A-3.21STJ; FY-21 UPWP NOUZA)

STUDY AREA

The corridor for analysis will be LA 3127 between LA 3213 in St. John the Baptist Parish and LA 3141 in St. Charles Parish. The study area will be defined as the area south of the Mississippi River (on the westbank) to the north, the wetlands immediately south of the roadway to the south, and the roadways described above, LA 3141 to the east and LA 3213 to the west.

LA 3127 in this area transitions from a four lane rural arterial roadway at LA 3141 into a two lane rural roadway thence to LA 3213. LA 3213 provides access to the Grammercy/ Wallace Bridge crossing of the Mississippi River and will be the terminus for the analysis.

PURPOSE AND NEED

The purpose of this study is to update the planning parameters for widening the roadway within these logical termini, as well as construction costs associated with the effort in St. Charles and St. John Parishes. The last significant update for LA 3127 was undertaken by DOTD in 2011 and was conducted as part of a larger conceptual effort branded as the “West Bank Turnpike,” that stretched from Port Allen in West Baton Rouge Parish to Boutte, in St. Charles Parish.

The need for the study effort is as follows:

- 1) Update the planning parameters for the widening of LA 3127, including updates to Stage 0 Environmental Checklist and Preliminary Scope and Budget information.
- 2) Update cost estimates for widening the roadway consistent with the latest DOTD design standards and subsequent impacts to costs related to rights of way, utility relocations, etc., and to include those costs as part of a future update to the Metropolitan Transportation Plan for the New Orleans Urbanized area.
- 3) Assess opportunities for green infrastructure, water management and resilience consistent with planning efforts by efforts by St. John the Baptist Parish and the LA Office of Community Development LASAFE initiative, in order to preserve the roadway and the environment around it.
- 4) Assess how the roadway, currently a designated hurricane evacuation route, can be improved and made more resilient to enhance the emergency evacuation of the New Orleans area, particularly the westbank.
- 5) Assess LA 3127 as a freight corridor that would support adjacent industrial development along the Mississippi River

This Stage “0” Study will provide a high-level overview that will update cost estimates to complete an upgrade of LA 3127 to a four-lane section from its current two-lane configuration between LA 3141 and LA 3213. This section of roadway was planned and partially implemented as a four-lane rural highway. Right of way and roadbed for the four-lane highway is in place.

The Conceptual Feasibility Study will be carried out in coordination with RPC, DOTD Districts 02 and 62, St. Charles and St. John the Baptist Parishes, and other community and stakeholder organizations as may be needed. The scope of work for this Stage “0” Feasibility Study consists of the following:

SCOPE OF WORK:

TASK 1: PROJECT MANAGEMENT COMMITTEE

The consultant will assist RPC in establishing and supporting a Project Management Committee (PMC) to guide the technical work effort and to review the consultant's work products. The PMC will consist of the RPC, St. John the Baptist Parish, St. Charles Parish, the District Traffic Operations Engineer or their designee for LADOTD Districts 02 and 62, and other stakeholders, as appropriate. The consultant will provide all necessary agendas, handouts and exhibits in advance of PMC meetings for RPC review and approval and prepare summary minutes of the meetings.

The PMC will meet not more than four times during the study effort. These meetings may be in a virtual setting. Consultant will be responsible for organizing the virtual meetings and will identify the venue (i.e. Zoom, MS Teams, gotomeeting, etc.) to be used.

In addition, the consultant will assist RPC in the conduct of meetings (maximum of three) with other stakeholders in the area to discuss the project's purpose and need and project-related development opportunities and concerns, as appropriate. The RPC will initiate these contacts in consultation with the parishes, and the consultant will prepare summary meeting minutes for review and discussion with the PMC.

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

TASK 2: PROJECT TIMELINE & KICK-OFF MEETING

The consultant will prepare a draft project schedule including major milestones (PMC meetings, site visits, draft reviews, final report submission, etc.). The timeline will be submitted at the project kick-off meeting that will include the consultant, all sub-consultants, RPC, St. John and St. Charles Parishes, and LADOTD representatives. The kick-off meeting will be organized by the consultant and take place within two (2) weeks of the Notice to Proceed.

***Deliverable:** Task product will include detailed project schedule with timeline and major milestones.*

TASK 3 – EXISTING CONDITIONS AND PROPOSED LAND USE

The westbank of the Mississippi River in the study area is largely agricultural. As such, it is subject to economic development exigencies, primarily riverfront industrial development- similar to other Mississippi riverfront locations between New Orleans and Baton Rouge. LA 3127 provides access to numerous industrial facilities east of LA 3141, for example, and is an important roadway for freight movements that service those facilities.

Working with the St. Charles and St. John Parish Planning Departments, a land use and facilities inventory will be prepared in an Excel Spreadsheet and in map/ graphic form showing existing and planned / forecast development in the study area adjacent to the corridor. The land use information will be reviewed by the PMC for accuracy. The land use information will be used for trip generation purposes and as input into a traffic analysis. The consultant will use the latest edition of the ITE Trip Generation manual to discern specific volumes from land uses. The traffic analysis will be performed based in part on this land use information to estimate projected traffic volumes for the alternative(s) and conceptual design of intersections and access management opportunities along LA 3127 in the study area. It will also be used to inform conceptual design of alternatives in subsequent tasks.

***Deliverable:** Task Report that includes a list of land use data collected, documentation of Trip Generation characteristics of same, and map/ graphic products.*

TASK 4: Traffic Data Collection

The consultant will work with the PMC to establish baseline traffic volumes (existing conditions) for the study area. The traffic network will be established by the RPC in consultation with the PMC and based on the region's federal-aid system and pertinent parish roadways.

1. Traffic data will be collected to determine traffic conditions both existing and projected within the study corridor. Collected data will include directional Average Daily Traffic (ADT) counts and vehicle classifications on
 - LA 3127 immediately east and west of LA 3141 (2)
 - LA 3141 immediately north of LA 3127
 - LA 3127 at W. St. John High School Driveways (2)
 - LA 3127 immediately east and west of LA 640
 - LA 640 north of LA 3127
 - LA 3127 immediately east and west of LA 3213

Traffic data collection efforts for this subtask will be conducted over a consecutive three-day period (T-Th) during non-holiday weeks. Counts will be summarized in hourly increments over the three-day period, then averaged into a single 24 hour period. Counts will be undertaken during non-holiday weeks only. Peak traffic hours will be discerned and used to provide input for peak hour turning movement counts.

2. Peak hour Turning movement counts:

Peak hour turning movement counts will be undertaken at the following locations

- LA 3127 at LA 3141
 - LA 3127 at W. St. John High School Driveways (2)
 - LA 3127 at LA 640
 - LA 3127 at LA 3213
3. All traffic data will be collected and formatted (Excel spreadsheet) for use with RPC's Regional Traffic Counting Program. The collected traffic data along with land use trip generation data will be used in preparing a planning-scale Highway Capacity Manual (HCM) analysis for the above intersections. The results of the analysis will be presented to the PMC for review.
 4. Speed data from the NPDSMRS for the LA 3127 corridor will provided to the consultant for use in analysis in Tasks 3 and 4.

***Deliverable:** Consultant will prepare documentation of the above information to be used in subsequent tasks and prepare a standalone report that will be used as input for those same. RPC project manager will review this and results from Task 3. Upon approval, consultant will be authorized to begin subsequent tasks.*

Task product will include the transportation study network populated with existing and newly collected traffic data thereby establishing an existing conditions benchmark for use in the analysis. 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 5: DESIGN YEAR TRAFFIC AND ANALYSIS

Consultant will perform a Level of Service and delay estimate for the study intersections using AM and PM peak hour demand based on projected traffic volumes discerned in Task 3. RPC will provide a growth rate for the corridor using the 2048 Existing + Committed roadway network from the

SELATRAM model. Consultant will use said growth rate, and trip generation characteristics of land uses developed in Task 3 as input into a forecast year traffic analysis for a single build scenario.

The consultant will discuss with the PMC how the various intersection locations work under existing and forecast conditions. Consultant will propose conceptual improvement alternative(s), that will include access management improvements and policies for review.

***Deliverable:** Consultant will accomplish a standalone traffic operations report for forecast conditions in the LA 3127 corridor. Said report will be included in the appendix of the overall report and include the transportation study network populated with existing and newly collected traffic data thereby establishing an existing conditions benchmark for use in the analysis.*

TASK 6: ENVIRONMENTAL/WATER MANAGEMENT

The LA 3127 corridor traverses large swaths of marsh that are part of a larger estuary associated with Lac Des Allemands to the south. Using available data, maps and field investigation, consultant will identify water body boundaries, flow and hydrological relationships within the study area and connections beyond the study area. The consultant will identify opportunities to improve water management associated with the highway corridor as it is currently constructed, and improvements that can be made to the drainage and hydrology of the roadway to more readily enhance the natural movement of water and the overall resilience of the highway and planned land use and growth.

***Deliverable:** Consultant will prepare working visualizations of the proposed planning scale improvements and conceptual design alternatives to help the PMC understand environmental/water management design intent by using before and after graphic perspectives for important nodes and before and after graphics in plan view for the corridor.*

TASK 7: EMERGENCY EVACUATION

Currently LA 3127 is an emergency evacuation route. Consultant will review the current use of LA 3127 for evacuation purposes with Parish Emergency Managers and identify opportunities to improve traffic flow related to emergency evacuations and provide an assessment of improvements (outside of adding lane capacity) that can be undertaken to improve traffic flow while mitigating risks to the roadway (I.e. flooding, wind damage risk from hurricanes, etc.).

***Deliverable:** The Consultant will prepare a Technical Report of identified needs or potential improvement for traffic flow during an emergency evacuation after with appropriate Emergency Managers. This could include ITS features to be integrated into the Regional ITS architecture at future date; signage, striping, messaging capabilities; contra-flow or other methods.*

TASK 8: NEAR TERM AND LONG TERM IMPROVEMENTS

The consultant will review information collected in previous tasks to identify current/ forecast problem areas, deficiencies, and opportunities for improvement. The consultant will undertake the following tasks:

- A. Using the results of information developed in previous tasks the consultant will prepare near term and long- term conceptual alternatives-for the corridor incorporating operational effectiveness, land use changes, and environmental feasibility for PMC consideration. Consultant will prepare conceptual layouts of the proposed improvements on recent aerial photography provided by RPC at a scale of 1" = 200'. Plans will be developed at a planning level scale, and will be used to as input for further advancement of feasible concepts derived from this analysis.
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- B. Phased Implementation: Consultant will develop above concepts with an eye toward possible phased implementation. Consultant will provide recommendations on how proposed improvements can be implemented in phases, as funding allows.

Consultant will adhere to the latest LADOTD policies related to access management and complete streets, as applicable for the corridor. Consultants will review best practices for resilience and water management and identify opportunities for inclusion in the conceptual plans.

***Deliverable:** Task product will be high level conceptual plans for proposed improvements in both the near term and long term in the LA 3127 corridor, and potential phased implementation of same.*

TASK 9: OPINION OF PROBABLE COST

The consultant will provide the PMC with a prioritized list of both short and long-term transportation and related capital improvements for each alternative development scenario, describing the forecast transportation deficiency, type of proposed improvement(s), details of construction line items, quantities, and opinion of probable cost. Consultant will also prepare an order of magnitude cost estimate for the resilience assessment recommendations that will include operations and maintenance costs of same for concepts identified in earlier tasks. Costs will be provided for each phase of concepts promulgated in Task 8.

***Deliverable:** A prioritized list of short and long-term transportation improvements with an opinion of probable costs for each development concept for further study and consideration.*

TASK 10: DRAFT REVIEW

An electronic draft of the report and up to five hard copies will be submitted to RPC for distribution to the PMC for review by, at the latest, 80% of project completion. Pending approval of the draft, RPC may, at its discretion, require the consultant to distribute hard copies to PMC members for their review.

The draft report will include, but not limited to a draft purpose and need for the projects, existing traffic conditions, forecasted traffic conditions, proposed highway improvements, including near term recommendations as well as longer term traffic management solutions, conceptual right of way needs and utility relocations, and environmental concerns.

***Deliverable:** Development and circulation of draft report for PMC review and comment.*

TASK 11: FINAL DELIVERABLES

Following review and approval of the draft submission, the consultant will provide RPC with ten (10) bound copies of the final **LA 3127: LA 3213 to LA 3141 Conceptual Feasibility Study**, documenting the information and analysis described above. Ten printed copies of the report and 10 portable electronic storage devices (“jump drives”) in electronic format (in both *.docx and *.pdf format) including all maps and visualizations (in CAD or similar format) and HCM input/output files will be submitted by the consultant to the RPC for distribution.

***Deliverable:** Final report deliverable including ten bound and electronic copies of the study and all supporting data, maps, and other documentation.*

***Timeline:** Eight months*

***Budget:** 70,000*
