Lower St. Bernard / Louisiana International Terminal Roadway Network and Resilience Study

Stage 0 Feasibility Study

RPC Task: LIT_STB

State Project No. H.015428

REQUEST FOR PROPOSALS

A. INTRODUCTION

The Regional Planning Commission (RPC), in coordination with the Port of New Orleans (Port NOLA) and St. Bernard Parish, is currently conducting a "Stage 0" Feasibility Study to evaluate impacts and assess potential improvements to the surface transportation network in St. Bernard Parish relating primarily to the implementation of the proposed Louisiana International Terminal (LIT) project, in Violet, Louisiana, as well as other downriver developments to be identified and reviewed. The RPC is requesting proposals from qualified firms to provide professional transportation planning services in support of this study.

B. PROJECT BACKGROUND

The Port of New Orleans (Port NOLA) is currently seeking to build a new intermodal container terminal facility in lower St. Bernard Parish. The planned Louisiana International Terminal (LIT) facility will be a $1.5 billion container terminal with an anticipated annual capacity of 2 million twenty-foot equivalent units (TEUs) annually.

The proposed terminal site in Violet, LA was selected following a site feasibility analysis conducted from 2018-2020 due to its naturally deep water, proximity to existing rail networks, and location inside the levee system. Port NOLA recently finalized the purchase of approximately 1,200 acres in Violet for the proposed LIT site (with an anticipated facility footprint of approximately 400 acres), and has initiated the permitting process with the U.S. Army Corps of Engineers (USACE).

Study Need:

The need for the study is a result of prior analysis by the Port of New Orleans that had identified the currently proposed site in Violet as the most viable site for a satellite port facility; in terms of commercial viability (including existing flood/levee protection), capacity for growth and expansion, and navigability on the Mississippi River. The proposed LIT facility as well as other downriver developments which are anticipated to lead to increased freight and employment traffic in lower St. Bernard Parish. It is further anticipated that said growth could become problematic to existing infrastructure, causing disruption to the transportation network, traffic patterns, and be potentially impactful to emergency response and evacuation capacity in this part of the region. This Stage 0 study will identify feasible traffic mitigation options.

Study Purpose:

The purposes of the Stage 0 Feasibility study are:

1) To develop a baseline of anticipated land use activities in lower St. Bernard, and corresponding trip generation characteristics of same.
2) To conduct a comprehensive assessment of existing and future traffic conditions/operations in lower St. Bernard Parish, including modeling of baseline traffic conditions and a comparison with forecasted traffic.
3) To develop conceptual alternatives for improving the transportation network in lower St. Bernard Parish to accommodate anticipated travel growth. Components to be assessed include, but shall not be limited to:
    a. Construction of a new transportation corridor providing a direct connection from the Interstate system, via the LA 47/ I-510 corridor, to or near the proposed Louisiana International Terminal (LIT) site in Violet, LA.
    b. Improvements to the existing road network and intersections within the study area.

c. Intelligent Traffic Systems (ITS) solutions for existing and forecast congestion, where appropriate and feasible

d. Determining impacts of changes in rail traffic to existing or proposed at-grade rail crossings in the study area.

e. Access management improvements in the vicinity of the proposed LIT site including a potential new transportation corridor with access for trucks to terminal property to avoid impacts to existing traffic and emergency response on local roadways.

4) To analyze the economic, environmental, community, and transportation-related impacts of different alternatives, including assessment of traffic safety and emergency evacuation impacts compared to the baseline scenario.

5) To identify potential vulnerabilities associated with each alternative to include weather events, natural disasters, and changing conditions, including sea level rise; and to develop conceptual elements that will enhance infrastructure and/or community resilience.

6) To analyze the financial feasibility of conceptual scenarios and provide recommendations for phased implementation and potential funding sources for conceptual improvements.

7) To proactively engage residents and stakeholders and solicit feedback through a robust community input process.

Study Objectives:

The intended objectives of the study include:

- Determining the direct impact of new port traffic on the existing roadway and rail networks in 2030 and in 2050.

- Completing a comprehensive study of traffic conditions that incorporates analysis and supporting data to inform decision-making by the RPC, DOTD, St. Bernard Parish, Port NOLA and other parties.
- Identifying a mix of feasible concepts for transportation enhancements which support a balanced outcome reflecting community needs together with regional container growth and associated port development at the proposed LIT site and other identified nearby areas of anticipated land development and traffic growth
- Determining high-level costs for conceptual projects and identifying funding options and implementation strategies (including phasing) for delivering said projects.
- Developing Stage 0 documentation and conceptual plans for all feasible alternatives.
- Analyzing potential impacts and planning factors such as congestion mitigation, climate resilience, and disaster mitigation; and developing supporting documentation including technical memos, reports, and plans that will facilitate future applications for competitive funding for delivery of projects identified in the study.
- Providing opportunities for communities within the study area of interest to engage in the planning process
- To accomplish tasks in a thorough and expeditious manner with aggressive timelines that account for potential review of various regulatory/ permitting agencies

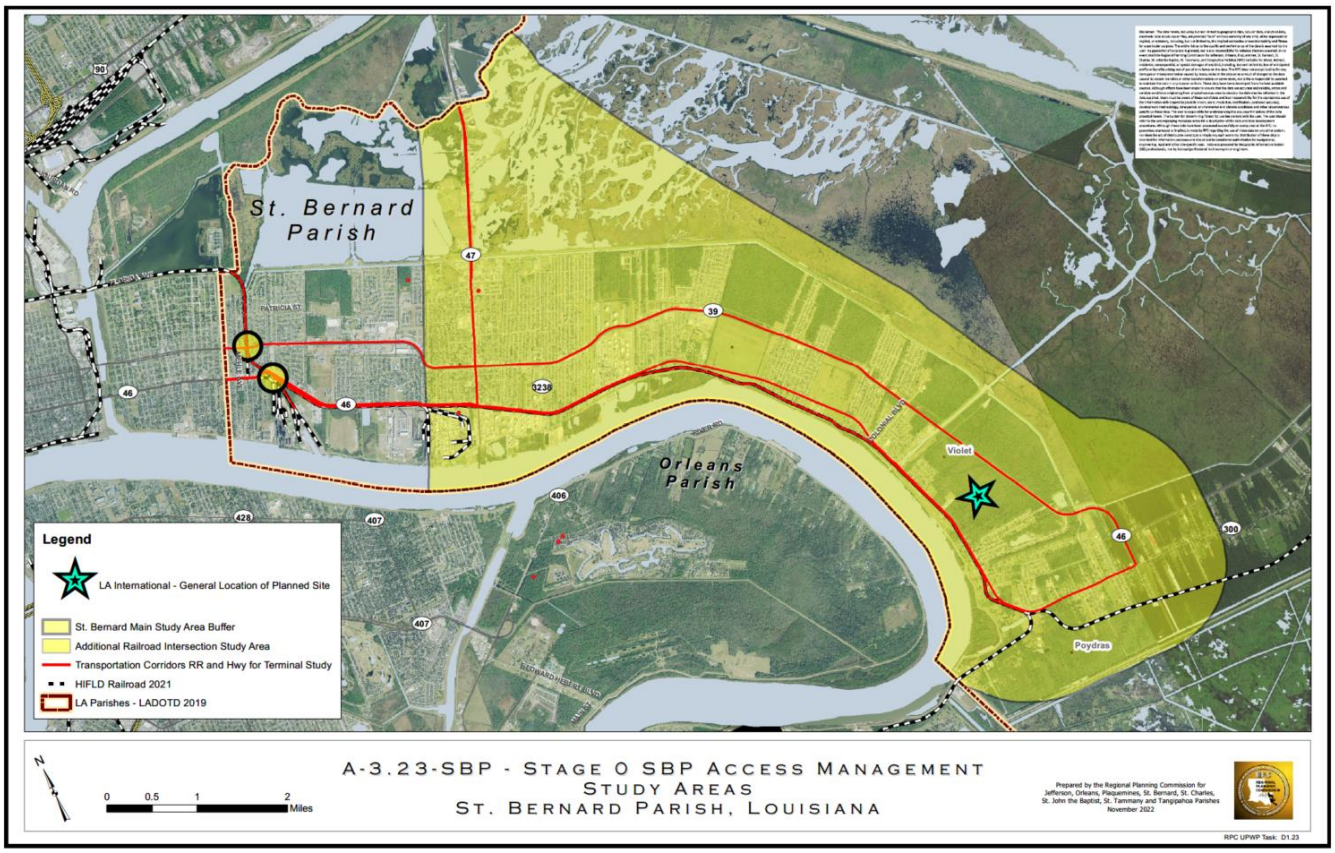
The Conceptual Feasibility Study will be carried out in coordination with RPC, Port NOLA, DOTD, St. Bernard Parish, and other community and stakeholder organizations within the study area.

Study Geography:

The proposed Louisiana International Terminal (LIT) site is located in Violet, LA. The project study area is bounded by the Mississippi River and Hurricane Protection Levee. The project boundaries are defined to

include the road and rail connections to the study area across the intracoastal waterway and hurricane protection levee.

The general boundaries include St. Bernard Parish east of LA 47, as well as a small section of uninhabited eastern New Orleans south of the Gulf Intercoastal Waterway and north of Bayou Bienvenu, the parish line. The study area includes the following principal and major arterial roadways: Paris Road (LA 47), St. Bernard Highway (LA 46), East Judge Perez Drive (LA 39), in St. Bernard Parish. Currently, LA 46, LA 39, and LA 47 are emergency evacuation routes and are also NHS routes throughout much of the study area.



C. CONSULTANT SCOPE OF SERVICES

TASK 1 - PROJECT MANAGEMENT

1a. Project Timeline and Kick-Off

The Consultant will organize the project kick-off meeting within two (2) weeks of Notice to Proceed. This meeting will help determine the data layers required and available from RPC or others, help identify background information and reports needed and where they are located, discuss and guide data collection efforts, allow for shared contact information, guide the full stakeholder outreach list, guide project phasing, and refine agency tasks and involvement.

In preparation for the kick-off meeting the Consultant will prepare a draft project schedule including major milestones (data collection, PMC meetings, stakeholder meetings, site visits, draft reviews, final report submission, etc.). The schedule must be submitted and approved by the RPC Project Manager prior to the kick-off meeting and invitees will be discussed and determined with the RPC Project Manager. The Consultant and all sub-consultants must attend the project kick-off meeting. Others include RPC, Port NOLA, St. Bernard Parish Community Planning and Engineering Departments or other representatives of the parish as appropriate, LADOTD District 02 representatives and any others identified in consultation with the RPC Project Manager. A list of all stakeholders, their titles, email and phone numbers will be created, kept up-to-date and shared with the RPC Project Manager and PMC.

Deliverables: Task product will include a detailed project schedule with timeline and major milestones, and a list of stakeholders with appropriate contact information. In response to approval timelines by various permitting agencies, RPC is encouraging an expedited timeline for completion of this study. The consultant shall update the schedule and stakeholder list over the course of the project, as needed.

1b. Project Management Committee

The Consultant will assist RPC in establishing and supporting a Project Management Committee (PMC) to guide the technical work effort and review the Consultant's work products. The PMC will consist of representatives from the RPC, St. Bernard Parish, City of New Orleans, Port NOLA, DOTD, and other stakeholders as deemed appropriate.

The Consultant shall be responsible for arranging PMC meetings at appropriate intervals throughout the study effort. These meetings may be conducted in an in-person or virtual setting at the sole discretion of RPC. The consultant will be responsible for organizing and facilitating all PMC meetings, including identifying appropriate in-person or virtual venues as directed by RPC, and preparing and delivering content (including briefings, presentations and visuals) for all meetings. The consultant will create and keep up-to-date an excel list of PMC invitees with their email and phone numbers, provide all necessary agendas, handouts and exhibits at least 5 business days in advance of PMC meetings for RPC review and approval, and shall prepare summary minutes of the meetings for the RPC Project Manager's approval before distribution to the PMC.

Deliverables: Task products will include meeting agendas, handouts, presentations, summary minutes and support graphics. A report of the meeting activities and outcome, with an original copy of the sign-in list, will be made available to the RPC within 10 days of all PMC meetings.

1c. Stakeholder and Community Meetings

In consultation with RPC, the Consultant will prepare a Stakeholder and Public Outreach Plan for the RPC and PMC review and approval. Consultant will be responsible for arranging meetings with stakeholders in the area to discuss the project's purpose and need and project-related development opportunities and concerns, as appropriate. Stakeholders to be consulted include (but are not limited to) the following: Norfolk Southern, SE LA flood protection authority, Port NOLA sponsored community groups, Trucking, Entergy (overhead power

lines), wetlands-DNR, Army Corps, Coast Guard, St. Bernard Parish Government, and others as deemed necessary.

The Stakeholder and Public Outreach Plan will discuss, and the Consultant shall be responsible for, arranging and conducting a minimum of 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. 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 or other opportunities for community input.

Deliverables: Task products will include meeting agendas, handouts, presentations, summary minutes and support graphics. 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 DATA AND PLANS

Prior to initiating other deliverables, the Consultant will review and inventory existing data and studies addressing the corridor.

2a. Demographic Profile

To review community equity, access and general impacts in the study area, 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.

2b. Existing Data and Plans

The Consultant will review all plans, studies, and technical documentation prepared by Port NOLA in support of the Louisiana International Terminal (LIT) project, including the preliminary traffic analysis for the Violet site and all materials submitted to date in support of the permit application process. The Consultant shall, in addition, seek information about any planned industrial expansion within the study area, and review all other relevant plans and studies for the corridor, including but not limited to: the regional Metropolitan Transportation Plan (MTP), regional Freight Plan, Orleans Parish and St. Bernard Parish Comprehensive Plans, 2017 St. Bernard Parish Bicycle and Pedestrian Plan Update, and any relevant sub-area land use or transportation studies addressing conditions within the study area**.** Consultant will review the above plans and identify gaps in data. Said gaps will be addressed in Task 3

The Consultant will initiate compiling available data addressing existing and future land use, industrial expansion plans, zoning, transportation, utilities, area demographics, traffic safety, crash data, and environmental conditions within the study area. The PMC will assist in identifying sources and providing contact information as needed. The Consultant will compile and review any existing traffic data collected within the study area collected from 2012-2022.

The Consultant will prepare a comprehensive summary of data and plans reviewed during Task 2 to be included within the Task Report and used as a basis for subsequent tasks.

Deliverable: *Task Report summarizing existing 2.a and 2.b data and plans relevant to the study area, incorporating an inventory of existing data.*

TASK 3 - DATA COLLECTION

The Consultant shall be responsible for preparing a Data Collection Plan which shall describe in detail the proposed approach to land use, utilities, and traffic data collection, including count methodologies, locations,

and deliverables. The RPC Project Manager will review and recommend approval or otherwise comment on changes required.

3a. Land Use and Existing Conditions

Working with St. Bernard Parish Office of Community Development and other representatives of the parish as appropriate, the Consultant shall prepare land use and facilities inventory for the urban sub-area in an appropriate geospatial/machine-readable spreadsheet format, with accompanying maps/graphics showing existing and planned development in the study area adjacent to the corridor. The land use information will be used to project growth of traffic and as an input into a traffic analysis in subsequent tasks.

The consultant shall be responsible for collecting appropriate land uses, housing, employment, and socioeconomic data to modify TAZ-level inputs to the RPC travel demand model, including but not limited to the following attributes:

A) Population
B) Housing units
C) Average income
D) Primary/secondary school enrollment
E) University enrollment (total)
F) University enrollment (resident)
G) Retail employment
H) Non-retail employment

The Consultants will compile datasets in an appropriate geospatial format in consultation with RPC staff. It is anticipated that preliminary datasets will be compiled using existing information from Task 2 and updated with input from the PMC as well as the results of fieldwork conducted during Task 3. The Consultant will work to obtain data related to "gaps" in data identified in Task 2.

3b. Traffic Data Collection

The Consultant shall be responsible for collecting all data necessary to complete a comprehensive, multimodal analysis of traffic conditions within the study area, including Highway Capacity Manual (HCM) Level of Service (LOS) analysis at all major intersections and appropriate Highway Safety Manual (HSM) quantitative safety analysis of major corridors and intersections. Data collection locations within the study area will be finalized with the RPC Project Manager and data to be collected shall include, at a minimum:

1. 7-day automated counts with vehicle classifications, hourly subtotals, and speeds at all major road entrances and exits to the study area (and at appropriate intervals and locations on arterials and major collectors within the study area,
2. 3-hour extended peak AM and PM Turning Movement Counts (TMCs) with 15-minute subtotals of vehicle classifications, pedestrians, and bicycles at all major intersections and key activity centers within the study area.
3. Automated 7-day counts for non-motorized (pedestrian and bicycle) travel usage will be collected at all locations if automated camera methods are used to count vehicles under #1. If manual or other count methods are employed for #1, the RPC Project Manager will determine the locations for all non-motorized counts. These will be based on appropriate locations within the study area at observed or anticipated locations of high-volume pedestrian and bicycle activity.

Traffic Data shall be collected consistent with LADOTD Traffic Engineering and Process Reporting (TEPR) Tier 1 methodology. RPC anticipates data to be collected at the following locations pending RFP negotiation:

7-Day Classification Counts

Paris Road. (LA 47):

- Between Ferry Landing and East St. Bernard Hwy. (LA 46)

- Between East St. Bernard Hwy. (LA 46)and East Judge Perez Dr. (LA 39)
- Between East Judge Perez Dr. (LA 39) and Forty Arpent Canal Road Signal
- Between Forty Arpent Canal Rd Signal and Bayou Bienvenue

I-510:

- Between Bayou Bienvenue and Almonaster Blvd.
- Between Almonaster and Chef Menteur Highway (US 90)
- Between Chef Menteur Highway (US 90)and Lake Forest Blvd.
- Between Lake Forest Blvd. and I-10
- On Directional Ramps: EB I-10, WB I-10, NB to Little Woods
- On Interchange Ramps at Chef Menteur Highway (US 90)and I-510
- On Interchange Ramps at Lake Forest Blvd and I-510

East Judge Perez Dr. (LA 39):

- Between Bayou Rd. and East St. Bernard Hwy. (LA 46)
- Between East St. Bernard Hwy. (LA 46)and Colonial Blvd.
- Between Colonial Blvd. and Hannan Blvd.
- Between Hannan Blvd and Campagna Dr.
- Between Campagna Dr. and Palmisano Blvd.
- Between Palmisano Blvd. and Paris Rd. (LA 47)
- At Norfolk Southern RR Crossing

East St. Bernard Hwy. (LA 46):

- Between East Judge Perez Dr. (LA 39) and Monte Longo Ln
- Between Monte Longo and Colonial Blvd.
- Between Colonial Blvd. and Docville Farm
- Between Docville Farm and Hannan Blvd.
- Between Hannan Blvd. and Palmisano Blvd.
- Between Palmisano Blvd. and Paris Rd. (LA 47)
- At Norfolk Southern RR Crossing

Turning Movement Counts (AM, Mid Day, PM Peak):

- Paris Rd. (LA 47) at Forty Arpent Canal Rd.
- LA 47 at Solidelle St.
- LA 47 at Genie St.
- LA 47 at Virtue St.
- LA 47 at 40 Arpent Canal Rd
- East Judge Perez Dr. (LA 39) at Paris Rd. (LA 47)
- LA 39 at Palmisano Blvd.

- LA 39 at Campagna Dr.
- LA 39 at Archbishop Hannan Blvd.
- LA 39 at Guerra Dr.
- LA 39 at Colonial Blvd.
- LA 39 at Bayou Rd.
- East St. Bernard Hwy. (LA 46) at North Access (W. Smith Elementary School)
- LA 46 at South Access (W. Smith Elementary School)
- LA 46 at Colonial Blvd.
- LA 46 at St. Bernard Park Way (LA 39) / East Christie St.
- LA 46 at Palmisano Blvd.
- LA 46 at Paris Rd (LA 47)

3c. Freight Rail Data Collection

Working with PMC rail participants, a high level assessment of expected daily rail traffic and typical train lengths shall be determined for existing conditions and for each of the 2030 and 2050 build out scenarios of LIT based on a reasonable forecast of growth in rail commodities (containerized and non-containerized) and existing and planned rail storage capacity. The Consultant will identify the frequency and length of time of expected highway/rail crossing blockages at the Norfolk Southern crossing of St. Bernard Highway (LA 46), LA 39 in Arabi, and at LA 47 near the Chalmette/Lower Algiers Ferry crossing.

Deliverable*: Task Report describing the collection methods and findings from data collection. Consultant will prepare documentation of the above information to be used in subsequent tasks and prepare a stand -alone report that will be used as input for those same. RPC Project Manager will review this and results from this task. Upon approval, the Consultant will be authorized to begin subsequent tasks.*

3d. Infrastructure and Utilities Data Collection

The Consultant shall conduct field work to identify existing infrastructure conditions and utilities within the study area, including gas, water, electric, sewer, drainage, elevation, lighting, striping, signage, and signals, and roadway and intersection characteristics. Information shall be documented in an appropriate

geospatial/machine-readable spreadsheet format with accompanying maps/graphics showing infrastructure and utilities within the study area.

Deliverable: *Maps and geospatial data documenting pavement conditions infrastructure and utilities information. 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.*

3e. Crash Data

The Regional Planning Commission shall supply the Consultant with the most recent 3 years of crash data within the study area in excel format for further analysis and mapping.

TASK 4 - TRAFFIC DATA ANALYSIS AND REPORTING

4a. Traffic Analysis Report of Existing Conditions

Level of Service Analysis

The Consultant shall conduct an operational analysis for all listed intersections within the study area, including a Highway Capacity Manual (HCM) Capacity Analysis for the A.M. and P.M. peak periods at intersections selected for turning movement counts in Task 3 with delay, volume-to-capacity (v/c), and 95^{th} percentile queue lengths as the measures of effectiveness (MOE) Analysis shall be conducted for the existing conditions.

Deliverable: A draft traffic report summarizing the results of the Capacity Analysis, including figures, measurements of effectiveness (LOS, delay, etc.) shall be provided to the RPC and PMC for review.

Traffic Safety Analysis

The Consultant shall conduct a comprehensive safety analysis of corridors and intersections within the study area applying appropriate Highway Safety Manual (HSM) tools and processes using three (3) years of crash data per LADOTD's latest guidelines. Data will be made available by the RPC per 3.d. Vulnerable user counts and vulnerable user crash data will be analyzed to identify locations within the study area which may require additional attention in facility design (striping, signalization, or other bicycle and pedestrian countermeasures) to safely accommodate vulnerable users in existing conditions.

TASK 5 - CONCEPTUAL PLAN DEVELOPMENT

Based on the findings from Tasks 2-4, consultant will review, summarize, and make recommendations in a report form, following RPC report protocols that improve/enhance operational efficiency and safety for all modes where opportunities exist to do so both in the field and in policy. The evaluation will include but not be limited to examining the feasibility of implementing a potential new roadway within the study area, enhancing or improving existing roadway facilities, and enhancing freight rail access to the port site per the 2030 and 2050 build scenarios.

5a. Special Considerations

Potential for Interstate Extension

To understand all options and limitations for a potential new corridor alternative, the Consultant will investigate the reasonableness of requesting an interstate extension and interchange access location per FHWA guidance promulgated under 23 CRF 103 (National Highway System), 23 CFR 139 (Interstate System Access) and 23 CFR 625 (Design Standards for Highways) between the terminus of I-510 and an interchange site in the vicinity of the proposed LIT. Environmental considerations, land use and transportation planning data collection would inform the route and operational integrity needed to meet federal and state criteria as a

potential new designated segment of the Interstate System. This information will be shared with the PMC and will inform the conceptual alternatives presented to the PMC.

Vulnerabilities Documentation

The Consultant will conduct a risk-based assessment of proposed alternatives' potential vulnerabilities to current and future weather events and natural disasters, such as severe storms, flooding, drought, levee and dam failures, wildfire, rockslides, mudslides, sea level rise, extreme weather, including extreme temperature, and earthquakes. Research shall include reviews of state and local hazard mitigation plans, FEMA flood maps, sea level rise projections, and other relevant analyses of potential hazards in the study area.

Deliverable*: Task product will be summarized vulnerability information provided in graphic form and included as part of the deliverable from Task 5. The Consultant will document outreach efforts and will include electronic files, maps, or other data from consulted agencies and databases in the corridor in an appendix to the report. The Consultant will document outreach efforts and will include electronic files, maps, or other data from consulted agencies and databases in the corridor. The Technical Report shall be placed in an appendix to the Final Report. This information will be shared with the PMC and will inform the conceptual alternatives presented to the PMC.*

5b1. Land Use Development Scenarios

Working with the PMC, the consultant shall develop four land use development scenarios for the study area pursuant to 2022-2023 Baseline Conditions established in Tasks 3 and 4. They are:

1. 2030 development scenario without LIT
2. 2030 Partial LIT development with background growth
3. 2050 development scenario without LIT
4. 2050 Full LIT development with background growth

5b2. Forecast Scenario Traffic Analysis

The Consultant will develop trip generation and growth rates for each scenario listed above as reviewed and approved by the PMC. Using those inputs, the Consultant will perform a capacity analysis on each of these scenarios using Highway Capacity Software (HCS) for the study intersections using AM and PM peak hour demand. Vulnerable user conditions will be included in evaluations to understand how vehicle or rail growth will impact on-street accommodation and safety of vulnerable users traveling along or crossing roadways in the study area. The Consultant will discuss with the PMC how the various intersection locations work under existing and forecast conditions. The Consultant will propose conceptual roadway alternative(s) that will include access management improvements and policies for review.

5b3. Traffic Demand Modeling

The Consultant will recommend adjustments to the TAZ data sets for input into the SELATRAM model. The RPC will review the input TAZ datasets before modeling begins. After RPC approval of the TAZ dataset the applicable transportation infrastructure (i.e. modification to the highway network or introduction of transit) into the SELATRAM model will be run for each scenario using the 2022-2023 no-build network as a base. The Consultant shall utilize RPC travel demand outputs to assist in developing traffic assignments and forecasting future traffic volume demands within the study area. Model outputs of each scenario will be reviewed by the Consultant, RPC, and PMC for accuracy. Task products shall include transportation study networks populated with existing and newly collected traffic data, thereby establishing benchmarks for concept development at the regional level.

5c1. Design Years 2030 and 2050 Improvements to Land Use Development Scenarios

The Consultant will prepare (6) six draft concepts. Three (3) will reflect network alternatives for the 2030 development scenario and (3) three will reflect network alternatives for the 2050 development scenario using the results of information developed in previous tasks, They will incorporate identified factors that include operational effectiveness, land-use changes, vulnerability to hazards, and environmental feasibility, for PMC consideration. The Consultant will develop best-fit and appropriate scale alternative concepts for the roadway network consistent with the forecast data. Consultant will prepare layouts of the conceptual alternatives on recent aerial photography provided by RPC at a scale of 1" = 200'. Plans will be developed at a planning level scale and used as input for further advancement of feasible concepts derived from this analysis.

Consultant will provide recommendations on how conceptual network alternatives can be implemented in phases, as funding allows. For each conceptual network alternative and phase, the Consultant will (to the extent possible at this stage of project development) establish preliminary cost estimates for each conceptual network improvement, incorporating design, engineering, environmental actions, right-of-way acquisition, utility relocation, and contingencies.

The Consultant will adhere to the latest LADOTD policies related to access management and complete streets policies,as applicable for the conceptual network alternative.. The Consultants will review best practices for resilience, water management, and evacuation and identify opportunities for inclusion of same in the conceptual plans. The Consultant will use best practices in rail evaluation methods to assess highway traffic impacts in conceptual network alternatives.

Deliverable: Task product will be (6) six high-level conceptual plans for the proposed network alternatives associated with the 2030 and 2050 network scenarios and potential phased implementation, where applicable.

5c2. Resilience Assessment

All improvements promulgated will identify and incorporate resilience features. Resilience is defined as making surface transportation assets more resilient to current and future weather events and natural disasters, such as severe storms, flooding, drought, levee and dam failures, wildfire, rockslides, mudslides, sea level rise, extreme weather, including extreme temperature, and earthquakes. RPC intends to assist communities undertake resilience improvements and implement strategies that allow for the continued operation or rapid recovery of surface transportation systems that serve critical local, regional, and national needs, including evacuation routes, and that provide access or service to hospitals and other medical or emergency service facilities, major employers, critical manufacturing centers, ports and intermodal facilities, utilities, and Federal facilities. Consistent with recent IIJA guidance, coastal infrastructure, such as a tide gate to protect highways, that is at long-term risk to sea level rise, natural infrastructure that protects and enhances surface transportation assets while improving ecosystem conditions, including culverts that ensure adequate flows in rivers and estuarine systems will also be assessed as part of this study effort.

The Consultant will review the existing roadway network and any proposed capacity enhancements / new infrastructure alternatives to connect lower St. Bernard Parish to the Interstate System for evacuation and emergency response purposes related to emergency evacuation improvements (I.e., flooding,wind damage risk from hurricanes, etc.).

Deliverable: The Consultant will prepare a Technical Report to describe resilience elements that have been incorporated into proposed conceptual alternatives that may be expected to protect future infrastructure and enhance the resilience of the transportation system and community. These might include identified needs or potential improvement for traffic flow, including an estimate of travel time savings during an emergency evacuation, signage, striping, messaging capabilities, contra-flow, or other methods. The Consultant will

document outreach efforts and will include electronic files, maps, or other data from consulted agencies and databases in the corridor. The Technical Report shall be placed in an appendix to the Final Report.

5d. Utility Information

The Consultant will research and report on utilities within or crossing the existing right of way. Potential conflicts will be identified and costs/methods for resolving conflicts will be developed. Cost estimates for same will be provided.

Deliverable: *Utility information provided in graphic form and included as part of the deliverable from Task 5. The Consultant will document outreach efforts to utility providers and will include electronic files, maps, or other data from utility providers in the corridor in an appendix to the report.*

5e. Environmental Documentation

The Consultant will research and report on all known environmental constraints or issues that could potentially impact project feasibility or implementation of the project. The Consultant will develop a matrix that identifies and ranks, at a high level, alternatives promulgated, , and potential environmental impacts associated with each.

Websites and on-line data resources such as

- NEPA Assist
- St. Bernard Parish GIS Data Portal
- IPaC
- NWI Mapper
- FEMA MapService Center
- Websoil Survey
- NWI Environmental Justice Screen Tool

- Louisiana State Historic Preservation Office

As well as those promulgated by LADOTD in the accomplishment of Stage 0 Environmental Checklists will be reviewed to accomplish this task. Citations shall be provided for all environmental data used.

***Deliverable**: Task product will be summarized environmental information provided in graphic form and included as part of the deliverable from Task 5. The Consultant will document outreach efforts and will include electronic files, maps, or other data from consulted agencies and databases in the corridor in an appendix to the report.*

5f. Opinion of Probable Cost

The Consultant will provide the PMC with a prioritized list of transportation-related capital improvements for each alternative network scenario, describing the forecast transportation deficiency, type of proposed improvement(s), details of construction line items, quantities, and opinion of probable cost. The Consultant will provide costs estimates for each phase of each alternative concept promulgated in Task5a..

Deliverable: A prioritized list of 2030 and 2050 transportation improvements with an opinion of probable costs for each development concept for further study and consideration.

5g. Financial Analysis

The Consultant will conduct a financial analysis of funding options for implementation of conceptual improvements identified in Task 5. This analysis shall include, but not be limited to, a review of competitive federal grants along with local funding sources. The assessment shall include a financial analysis of a potential tollway based on forecast trips, forecast revenues, and anticipated costs of a new infrastructure corridor as identified in task 5d.

***Deliverable:** The Consultant will prepare an analysis of the suitability of a new roadway to function as a toll facility and consider project cost and return on investment.*

TASK 6 - STAGE 0 FEASIBILITY REPORT

6a. Draft Report

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 feasibility report will include but is 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, anticipated permits required, utility relocations, and environmental concerns.

6b. Final Report

Following the review and approval of the draft submission, the Consultant will provide RPC with ten (10) bound copies of the final Lower St. Bernard/ Louisiana International Terminal Roadway Network and Resilience Study documenting the information and analysis described above. Ten (10) printed copies of the report and ten (10) portable electronicstorage devices ("jump drives") in electronic format (in both *Docx and *.pdf format), including all maps and visualizations (in CAD, GIS, or similar format) and HCM analysis 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, technical reports, maps, and other documentation. The final report should be provided with a minimum of 2 weeks for review and comment prior to the contract completion date.*