

LA 22 TRAFFIC CIRCULATION AND CORRIDOR ANALYSIS

LA 22: CC Road to Dutch Rd.

Mandeville-Covington UZA

Task MC-1.19; FY-19 UPWP

SCOPE OF SERVICES

The purpose of this study is to conduct a traffic corridor analysis along LA 22 from CC Road just west of the Tangipahoa Parish Line to Dutch Road near the town of Madisonville in St. Tammany Parish. Traffic and land use data will be collected to provide a detailed description of existing traffic operational patterns, and produce specific recommendations for roadway and intersection improvements to enhance traffic circulation and safety, and reduce congestion. The need for the analysis derives from concerns by state and parish officials that growth in vehicular traffic along the corridor is quickly overwhelming the capacity of the roadway to accommodate it, thus negatively impacting traffic operations through excessive delay in certain locations, creating potential safety issues, and ultimately diminishing the quality of life for residents of the area.

Outcomes of the study will include a near term (5 year) growth scenario in the vicinity of the corridor and conceptual improvements for ameliorating anticipated problem areas based on same. The analysis will build upon and update previous analyses and recommendations DOTD District 62 at various locations along the LA 22 in this area. Using data from DOTD and new data collected as part of this study, the Consultant will coordinate with the St. Tammany Development office to synthesize traffic impact analyses, relevant reports, and known land development projects, and work with the Project Management Committee in developing a near term (within 5 years) trip generation/ growth scenario for the study area that would impact LA 22.

Study Area: The study area for the project will be an area bounded roughly by:

CC Road to the West,
LA 1077 to the East
Lake Pontchartrain to the South
I-12/ Brewster Rd. to the north

TASK 1: PROJECT TIMELINE AND KICK-OFF MEETING

The Consultant will prepare a draft project schedule including major milestones for the Tasks to follow. The timeline will be submitted at a project kick-off meeting that will include the Consultant, any sub-Consultant, St. Tammany Parish, Regional Planning Commission, and LADOTD District 62. Other attendees will be invited as necessary. The kick-off meeting will take place within two (2) weeks of the Notice to Proceed.

Task 1 Deliverable: Development of Project Schedule

TASK 2: 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 include representatives from St. Tammany Parish, RPC, DOTD District 62, and others as deemed appropriate. The Consultant will provide all necessary agendas, handouts, and exhibits in advance of the PMC meetings for RPC review and approval and prepare summary minutes of the meetings.

The PMC will meet approximately four times during the course of the study effort, including the kickoff meeting described in Task 1. In addition, the Consultant will, as necessary, conduct meetings with elected officials and other local leaders and organizations in the area to discuss the project's purpose and need and project-related opportunities and concerns. The Consultant will receive prior approval from RPC before initiating these contacts and prepare summary meeting minutes for review and discussion with the PMC.

Task 2 Deliverable: Establishment of Project Management Committee (PMC), Production of hand outs, meeting minutes for approximately four PMC meetings, potentially conduct meetings with non-PMC members w/ prior RPC concurrence and provision of meeting minutes for same.

TASK 3: SITE INVESTIGATION AND DATA COLLECTION

Site visits and field inspections will be conducted and data collected as necessary regarding the physical, engineering, land-use, and environmental features of the study area to allow an accurate assessment of both traffic and land use/ development conditions. LADOTD District 62 has undertaken a significant data collection and analysis effort in the corridor over the past three to five years. Given the rapid development occurring in the corridor, the consultant will undertake a data collection effort that will update previous DOTD data collection efforts in the corridor. Consultant will be provided data collected by DOTD and will compare previously collected data with a new data collection effort that entails the collection of new traffic volume counts and peak hour turning movement counts.

Traffic data will be collected at the following locations along LA 22:

Traffic Volume Counts – 24-hour traffic volume counts will be conducted at the following intersections and approaches:

- 1) CC Road and LA 22
- 2) Guste Island Road and LA 22
- 3) Perrilloux Rd./ Trapagnier Rd. and LA 22
- 4) Pine Creek/ Coquille Dr. and LA 22

These counts will contain hourly subtotals and include vehicle classification amounts. Counts must be completed during a 48 hour period that occurs while school is in session and does not include a holiday within the week. Consultant will compare these counts with earlier counts taken by DOTD and develop a growth rate by approach for these intersections using observed data.

Peak Hour Turning Movement Counts –

Using the growth rates developed, consultant will apply same to turning movement counts undertaken by DOTD. Consultant will develop new turning movement estimates based on factored growth rates. Consultant will prepare an HCM analysis for the intersections based on the modified turning movement estimates and prepare a table summarizing the results.

Crash Data

Consultant will work with DOTD and RPC to obtain the latest available crash data along the corridor. Consultant will prepare a map identifying crash locations and a summary table of crash type, severity, date, time, surface condition, number of persons injured, direction of travel and prior movement for roadway segments along the corridor for a period starting in 2015 through 2017 or latest available.

Traffic Impacts from Developments

Consultant will work with the St. Tammany Development office to determine the latest permitted developments in the vicinity of the LA 22 corridor in the study area. Consultant will gather and assess relevant information including and especially Traffic Impact Assessments (TIA's) from St. Tammany Parish for

developments in the vicinity, and prepare a geospatial data set and graphic presentation indicating the location of the development, trips generated from the site, and forecasted distribution as documented in the TIA's. This task will provide a high-level summary of approved, planned developments including: number and density of housing units; square footage of non-residential development; and use and intensity of non-residential development. The consultant will also collect, summarize and map the area's zoning to illustrate the potential impacts of future development that has not yet been permitted or planned. Consultant will document source of all information gathered.

Task 3 Deliverables:

- a) Graphic/ tabular comparison of previously collected data and data collected as part of this effort for four intersections mentioned above. This includes 24 hour counts at all approaches and turning movement count comparisons.
- b) Map/Graphic of crash locations, and summary table of crashes per attributes described above for calendar years 2015 through as recent as available.
- c) Map/Graphic and corresponding geodatabase summarizing planned and permitted land development changes in the study area that are anticipated to impact the LA 22 corridor in this area, as well as zoning; trips generated by same, as well as anticipated peak hour impacts and trip distribution as documented in TIAs or other analysis/permitting documentation. Consultant will coordinate with RPC's GIS Manager for appropriate standards.

TASK 4: TRAFFIC ANALYSIS AND TRIP GENERATION ESTIMATES

Working with the PMC, the Consultant will develop and evaluate a near term (five year) forecast scenario that incorporates:

- a) Updated data collected in Task 3,
- b) Synthesized TIA reports and known developments from St. Tammany Parish and their forecasted impacts to the LA 22 corridor, and
- c) A background growth rate on the LA 22 corridor from RPC Travel model.
- d) Growth rate from Task 3 deliverable which compared existing DOTD counts to updated project counts.

Consultant will coordinate a meeting with the PMC to review and obtain consensus on a realistic development scenario that documents forecast changes based on observed data and trip generation forecasts of traffic that would access the LA 22 corridor within a near term five year horizon. Pending successful conclusion of this task, consultant will be authorized to proceed with Task 5 by RPC personnel.

Task 4 Deliverable: Table/ graphic summarizing synthesis of updated traffic data, agglomerated traffic impacts of known land use developments and background growth rates for the LA 22 corridor.

TASK 5: CONCEPTUAL DEVELOPMENT AND EVALUATION

Pending concurrence of the forecast scenario as developed in Task 4, roadway improvements to mitigate or manage projected impacts will be developed in consultation with the PMC and presented to the PMC in draft form for review and comment. These will include measures to improve the functionality and safety of the intersections and identified safety problem areas and proposed countermeasures within the study area through geometric modifications, roadway re-alignments, three-laning, other access management techniques, as well as improved signage and/or striping.

Highway Capacity Manual Analysis

A Highway Capacity Manual (HCM) analysis will be undertaken for each intersection and levels of service outputs by turning movement compared to previous analysis by DOTD. The analysis will include older DOTD counts. It will also include counts grown using the updated traffic counts information and land use data. Traffic volumes from existing data will need to be grown to 2019 “existing” year and 5-years into the future.

These will be done prior to development of detailed recommendations for improvements at specific locations along the corridor. A Highway Capacity Manual (HCM) level of service analysis will also be performed on possible intersection and roadway modifications to assess the impact of these proposed improvements during AM and PM peak hours.

Task 5 Deliverable:

1. Comparison Table that summarizes HCM analysis outputs for levels of service by turning movement by intersection for previous DOTD efforts and updated counts. This will be done for “existing 2019” and “5-year future” 2024.
2. Development of conceptual improvements for problem areas identified from previous tasks. Provision of HCM analysis to quantifiably demonstrate operational improvements and/or known safety countermeasures.

TASK 6: DRAFT REVIEW

A draft report with all documentation described above will be submitted to RPC, St. Tammany Parish and others on the PMC. The report will include the conceptual layout of the preferred alternative and descriptions of the proposed improvements.

The report will identify potential utilities, environmental constraints, or other issues that could influence the concept’s feasibility and impact on the physical, natural and human environment; and will correspondingly prepare the **DOTD Stage 0 Environmental Checklist** for submittal to LADOTD as a deliverable. Form can be found at http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Pages/Stage_0.aspx

The Consultant will develop quantities and unit cost estimates for each element of the conceptual design plan of the preferred alternative as well as future project design costs, recommended project phasing, and potential funding sources for project implementation. The consultant will prepare the **DOTD / MPO Stage 0 Preliminary Scope and Budget Checklist** which will define the purpose and need for the project, alternative evaluation and screening process, and estimated budget/cost estimated for each project phase.

TASK 7: FINAL DELIVERABLES

Following review and approval of the draft submission, the Consultant will provide RPC with ten (10) bound copies of the Final Study Report and supporting plan packages. An editable MSWord file and pdf version of the final report and plan packages will be provided that will include all accessory documentation created during the course of the study. Data collected as part of this effort will be provided in a spreadsheet or database format specified by RPC staff. CADD, HCM, Synchro or other electronic files will be included in the deliverables via approved electronic storage media (USB drive, etc).

TIMELINE: 9 Months

BUDGET: \$55,000