



ST. TAMMANY PARISH

MICHAEL B. COOPER
PARISH PRESIDENT

NOTICE OF REQUEST FOR QUALIFICATIONS

St. Tammany Parish is seeking responses for the following project:

RFQ# 21-1-4 – US 190 W Roundabouts

Responses will be received by the Department of Procurement, **until 2:00pm CST Wednesday, May 26, 2021**. RFQ responses will be opened publicly at the physical location as identified in Section 1.4 of the RFQ documents and only respondents who have submitted an RFQ response shall be identified aloud. Prices shall not be read. Each response will be evaluated by designated Parish personnel after the submission deadline and public opening has passed.

Each Proposal must be sealed. The outside of the envelope, box or package should be marked with the Proposer's Name and Address, the Proposal Name, the RFQ #, and the Proposal Opening Date.

The successful Respondent must supply St. Tammany Parish Government with all required documentation as specified in the RFQ documents. Said Respondent must also be in Good Standing and licensed to do business in the State of Louisiana.

Specifications may be obtained from the St. Tammany Parish Government Procurement Office, 21454 Koop Dr., Suite 2F, Mandeville LA., 70471

Responses will be received at St. Tammany Parish Government Department of Procurement Office, 21454 Koop Dr., Suite 2F, Mandeville LA., 70471 from each Respondent or his agent, or by certified mail with return receipt requested.

Procurement Department

REQUEST FOR QUALIFICATIONS

ST. TAMMANY PARISH GOVERNMENT

US 190 W Roundabouts



RFQ Number: 21-1-4

Proposal Opening Date: Wednesday, May 26, 2021

Proposal Opening Time: 2:00PM

4/15/2021

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Attachment “F” – Affidavits

Attachment “G” – Sample Scoring Matrix

REQUEST FOR QUALIFICATIONS
FOR
US 190 W Roundabouts

PART I: OVERVIEW

1.1 Background

The provider will utilize the LADOTD approved Stage 0 Feasibility Study by Neel Shaffer dated June 30, 2014 along with the 2019 addendum issued by LADOTD to develop construction documents for three roundabouts along the US190 corridor at Carroll Road, Maris Stella Street, and Westminster Drive in Slidell, LA.

The project is part of a Cooperative Endeavor Agreement (CEA) between St. Tammany Parish and LADOTD whereas the Parish will be responsible for funding the preparation of project design drawings and LADOTD will share costs for the construction of the project. Due to funding through LADOTD, all designs, plans, and specifications shall be in accordance to current LADOTD standards and procedures

1.1.1 Purpose/Goals

The purpose of this Request for Qualifications (RFQ) is to obtain informational proposals from qualified Respondents who are interested in providing engineering services for the design of three (3) roundabouts along US 190 W. Westminster Drive and Carroll Road are both currently signalized intersections. Removal of those facilities are included in the Provider's scope of work. The professional services contract to be awarded will require the services of licensed engineers, surveyors and support staff. Submittal of a proposal does not create any right or expectation to a contract with the Parish.

1.2 Definitions

- A. Shall – The term “shall” denotes mandatory requirements.
- B. Must - The term “must” denotes mandatory requirements.
- C. May - The term “may” denotes an advisory or permissible action.
- D. Should – The term “should” denotes a desirable action.
- E. Contractor – A Respondent who contracts with the Parish.
- F. Parish - St. Tammany Parish Government.

G. Discussions- For the purposes of this RFQ, a formal, structured means of conducting written or oral communications/presentations with responsible Respondents who submit proposals in response to this RFQ.

H. RFQ – Request for Qualifications.

I. Respondent – Person or entity responding to this RFQ.

J. Agreement – A contract between the Contractor and the Parish.

K. Evaluation Committee – Committee established for the purposes of evaluating proposals submitted in response to this RFQ.

1.3 Schedule of Events

	<u>Date</u>	<u>Time (CT)</u>
1. RFQ Available	April 28, 2021	8:00AM
2. Deadline to receive written inquiries	May 17, 2021	2:00PM
3. Deadline to answer written inquiries	May 19, 2021	2:00PM
4. Proposal Opening Date (deadline for submitting proposals)	May 26, 2021	2:00PM
5. Oral discussions with Respondents, if applicable	<i>To be scheduled</i>	
6. Notice of Intent to Award to be mailed	<i>To be scheduled</i>	
7. Contract Initiation	<i>To be scheduled</i>	

NOTE: The Parish reserves the right to revise this schedule. Any such revision will be formalized by the issuance of an addendum to the RFQ.

1.4 Proposal Submittal

This RFQ is available in PDF format at www.stpgov.org or in printed and PDF form from St. Tammany Parish Government Procurement Department, 21454 Koop Drive, Suite 2F, Mandeville, Louisiana 70471.

It is the Respondent's responsibility to check the Parish website frequently for any possible addenda that may be issued. The Parish is not responsible for a Respondent's failure to download any addenda documents required to complete an RFQ.

All proposals shall be received by the Procurement Department **no later than the date and time shown in the Schedule of Events.**

Important - - Clearly mark outside of the sealed envelope, box or package with the following information and format:

- X **Name and Address of Proposer**
- X **Proposal Name: US 190 W Roundabouts: Westminster Drive, Carroll Road, Maris Stella Street**
- X **RFQ #: 21-1-4**
- X **Proposal Opening Date: Wednesday, May 26, 2021**

Proposals may only be sent via certified mail, hand-delivery or courier service to our physical location at:

St. Tammany Parish Government Procurement Department
21454 Koop Drive, Suite 2F
Mandeville, Louisiana 70471

Respondent is solely responsible for ensuring that its courier service provider makes inside deliveries to our physical location. The Parish is not responsible for any delays caused by the Respondent's chosen means of proposal delivery.

Respondent is solely responsible for the timely delivery of its proposal. Failure to meet the proposal opening date and time shall result in rejection of the proposal.

PROPOSALS SHALL BE OPENED PUBLICLY AT THE PHYSICAL LOCATION IDENTIFIED ABOVE AND ONLY RESPONDENTS SUBMITTING PROPOSALS SHALL BE IDENTIFIED ALOUD.

1.5 Proposal Response Format

Proposals submitted for consideration should follow the format and order of presentation described below:

- A. **Cover Letter:** The cover letter should exhibit the Respondent's understanding and approach to the contemplated projects. It should contain a summary of Respondent's ability to perform the services described in the RFQ and confirm that Respondent is willing to perform those services and enter into a contract with the Parish.

ATTENTION: Please indicate in the Cover Letter which of the following applies to the signer of this proposal. Evidence of signature authority shall be provided upon the Parish's request.

1. The signer of the proposal is either a corporate officer who is listed on the most current annual report on file with the secretary of state or a member of a partnership or partnership in commendam as reflected in the most current partnership records on file with the secretary of state. **A copy of the annual report or partnership record must be submitted to the Parish before contract award.**
2. The signer of the proposal is a representative of the Respondent authorized to submit this proposal as evidenced by documents such as, corporate resolution, certification as to corporate principal, etc. **If this applies, a copy of the resolution, certification, or other supportive documents must be submitted to the Parish before contract award.**

The cover letter should also:

1. Identify the submitting Respondent and provide its federal tax identification number;
2. Identify the name, title, address, telephone number, fax number, and email address of each person authorized by the Respondent to contractually obligate the Respondent; and
3. Identify the name, address, telephone number, fax number, and email address of the contact person for technical and contractual clarifications throughout the evaluation period.

- B. **Table of Contents:** Organized in the order cited in the format contained herein.
- C. **Respondent Qualifications and Experience:** History and background of Respondent, financial strength and stability, related services provided to government entities, existing customer satisfaction, volume of merchants, etc. Respondent should specifically provide a description of all relevant consulting assignments similar to the services requested herein which have been completed by the Respondent within the last three (3) years (“Recent Projects”).

The description of any such Recent Projects should include the following:

1. Name of the client;
2. Year of the assignment and length of time to complete the project;
3. Nature of the services rendered; and
4. Professionals assigned to the project who are also proposed to serve on this assignment.

- D. **Proposed Solution/Technical Response:** Illustrating and describing proposed technical solution and compliance with the RFQ requirements.
- E. **Innovative Concepts:** Presentation of innovative concepts, if any, for consideration.

- F. **Project Schedule:** Detailed schedule of implementation plan. This schedule is to include implementation actions, timelines, responsible parties, estimate of total time to acquire property up to initial offer, etc.
- G. **References:** Respondent should provide names, addresses, telephone numbers, and contact persons for five (5) other public jurisdictions for which comparable services have recently been rendered, including a description of the services provided.
- H. **Customer Service:** Each Respondent should submit a provision for customer service, including personnel assigned, toll-free number, and account inquiry, etc.
- I. **Resumes:** Each Respondent should submit resumes for account manager, designated customer service representative(s), and any other key personnel to be assigned to this Project, including those of subcontractors, if any.
- J. **Financial Stability Statement:** Each Respondent should submit information demonstrating the Respondent's financial stability (financial statements, annual reports, or similar data for the last three years).
- K. **Additional Information:** Each Respondent should submit any other information deemed pertinent by the Respondent including terms and conditions which the Respondent wishes the Parish to consider.
- L. **Acknowledgment and Waiver:** Respondent shall execute and have notarized an Acknowledgment and Waiver (Attachment "C" hereto).
- M. **Multiple Copies of Response:** Each Respondent shall submit one (1) signed original response. Four (4) additional copies of the proposal should be provided, as well as one (1) redacted copy, if applicable (See Section 5.2).

PART II: SCOPE OF WORK/SERVICES

2.1 Scope of Work/Services

The US 190 W corridor in Slidell between Northshore Boulevard and US 11 carries a large volume of traffic. There are several intersections that see increased congestion, accidents, and limited maneuverability due to the traffic traversing US 190. This project will install roundabouts at key intersections to alleviate some of the congestion and improve the flow of traffic.

The provider will utilize the LADOTD approved Stage 0 Feasibility Study by Neel Shaffer dated June 30, 2014 along with the 2019 addendum issued by LADOTD to develop construction documents for three roundabouts along the US 190 corridor at Carroll Road, Maris Stella Street, and Westminster Drive located in Slidell, LA.

Provider shall meet with the Parish as needed, review the preliminary and final plans to verify concept, constructability, and accuracy of designs along with associated reports, conclusions,

calculations, and recommendations prior to submitting to the Parish and LADOTD for review and approval. Provider shall submit a schedule or timeline for each task and provide status reports as requested by the Parish. Provider shall attend all meetings with the Parish and LADOTD regarding the status of the project.

Provider shall submit Project Status Report with each invoice submitted to the Parish. Provider shall attend any and all meetings with the Parish and LADOTD regarding the status of the Project including, but not limited to, pre-design, kickoff, and progress meetings. Provider shall submit a design schedule including target dates for milestone design activities.

The selected Provider will be required to perform the tasks listed below for the design of three (3) roundabouts. Provider will submit plans for all review stages required by LADOTD and as needed to verify concept, constructability, and accuracy of design along with associated reports, cost estimates, conclusions, calculations, and recommendations.

Services include but are not limited to the following:

TASK 1 - PRELIMINARY PLANS

1. **Survey:** Provider shall procure and coordinate all necessary topographic surveys. Survey shall include the location and owners of all existing utilities located within the existing and required right of way. Property corners shall be clearly marked for the existing and required right of way.
2. **Soil Analysis:** Provider shall procure and coordinate all necessary soil exploration and analysis needed to determine road design requirements from the existing soil. Provider shall submit the geotechnical report with recommendations to the Parish upon completion.
3. **Hydrologic and Hydraulic Analysis:** The hydraulic design of the site shall include viable drainage alternates for the site in the preliminary design. These hydraulic designs shall be reviewed and approved by St. Tammany Parish Dept. of Public Works/ Engineering and LaDOTD. The requirements which govern these designs are specified in the current edition of the LADOTD Hydraulics Manual.
4. **Preliminary Design and Engineer's Opinion of Construction Cost:** Provider will develop design submittals for LADOTD review and approval utilizing the LADOTD approved conceptual plan included in the Stage 0 Feasibility Study. Provider will provide estimated costs for utility relocations, construction, and mitigation costs. Provider shall submit the required number of plan copies for each submittal per LADOTD. Submittals are required in accordance with the LADOTD Road Design Manual
5. **Permitting:** Provider will perform wetland assessment within the proposed right of way to determine the approximate mix of non-wet and wetlands. This assessment will include preliminary meetings and coordination with Corps of Engineers (USACE) to obtain an agreement on the methods and scope of a final wetland delineation to be used as a jurisdictional determination and final delineation. Provider will facilitate the issuance of the final jurisdictional determination by USACE. Upon completion of the wetlands determination, the Provider shall prepare and submit a 404 Corps Permit application. Provider shall submit any and all additional information required until the

permit process is complete. Provider shall prepare and submit LA DOTD Permits as required. This includes preparation of any plans and specifications as dictated by DOTD. Provider shall prepare and submit for any other permits which may be required such as, Coastal Use, Cultural Resource Surveys, Endangered Species Surveys, etc.

6. **Land Acquisition Services (OPTIONAL):** Provider shall procure and coordinate all services necessary for the purchase of any right-of-way required for the approved project design. Due to funding through LADOTD, land acquisition services shall be in accordance to current LaDOTD standards and procedures
 - a. **Land Acquisition Survey:** Provider shall procure and coordinate boundary surveys associated with land acquisition services. The surveyor will be required to identify all existing State/ Parish rights of way and to prepare all necessary land survey for the acquisition of all additional rights of way.

TASK 2 - FINAL PLANS

1. **Final Construction Plans and Specifications:** Based on final approval of the plans by the parish and LADOTD, Provider shall prepare construction plans and specifications for bidding purposes based on results of the above information. Final plans shall also include a recommended construction phasing plan. Plans and Specifications shall be stamped and signed by a Licensed Civil Engineer in the State of Louisiana. Provider shall provide to the LADOTD required number of plan copies for each submittal, required electronic formats, and one set of reproducible final plans. A final engineer's estimate of probable cost shall be included with this delivery. Submittals are required in accordance with the LADOTD Road Design Manual

TASK 3 - CONSTRUCTION ADMINISTRATION & INSPECTION SERVICES (OPTIONAL)

1. Provider shall provide Construction Administration and Inspection Services if the Parish chooses not to provide the services in house. The compensation for the service will be separate from the above tasks and accepted at the option of the Parish.

2.2 Period of Agreement

The term of the contract will be for two (2) years from date of issuance on the Notice to Proceed (NTP) issued by the Parish.

Prior to commencing each work task, the Provider will be required to communicate with the Parish prior to moving on to the next task.

2.3 Price Schedule

Omitted as not applicable to this RFQ.

2.4 Deliverables

The deliverables listed in Scope of Work/Services are the minimum desired from the successful Respondent. Every Respondent should describe what deliverables will be provided per their proposal and how the proposed deliverables will be provided.

2.5 Location

Omitted as not applicable to this RFQ

2.6 References

All designs and engineering documents will be prepared in accordance with the latest applicable editions, supplements and revisions of the following:

1. AASHTO Standards, ASTM Standards or DOTD Test Procedures
2. LADOTD Location and Survey Manual
3. LADOTD Roadway Design Procedures and Details
4. LADOTD Project Delivery Manual
5. LADOTD Hydraulics Manual
6. LADOTD Standard Specifications for Roads and Bridges, Latest Edition
7. Manual of Uniform Traffic Control Devices (MUTCD)
8. LADOTD Traffic Signal Design Manual
9. LADOTD Policy on Geometric Design of Highways and Streets
10. LADOTD Materials Sampling Manual
11. LADOTD Geotechnical Engineering Services Document
12. Code of Federal Regulations 29 CFR 1926 (OSHA)

PART III: EVALUATION

The evaluation committee shall assign points to its evaluation of each Proposal as follows:

Evaluation Criteria	Possible Points
Compliance with the RFQ	15
Understanding of the Project	15
Approach to the Project	15
Ability to perform within the stated estimated timeframe	20
Qualifications of the Respondent, including, but not limited to, its experience and personnel assigned to similar projects	20
Proposal quality and references	15
Total	100

The proposal will be evaluated in light of the material and the substantiating evidence presented to the Parish, not on the basis of what may be inferred.

The scores will be combined to determine the overall score. The Respondent(s) with the highest overall score will be recommended for award. The Parish reserves the right to contract with more than one Respondent.

PART IV: PERFORMANCE STANDARDS

4.1 Performance Requirements

Omitted as not applicable to this RFQ

4.2 Performance Measurement/Evaluation

Omitted as not applicable to this RFQ

PART V: GENERAL PROVISIONS

5.1 Legibility/Clarity

Responses to the requirements of this RFQ in the formats requested are desirable with all questions answered in as much detail as practicable. The Respondent's proposal is to demonstrate an understanding of the requirements. Proposals prepared simply and economically, providing a straightforward, concise description of the Respondent's ability to meet the requirements of the RFQ are also desired. Each Respondent is solely responsible for the accuracy and completeness of its proposal.

5.2 Confidential Information, Trade Secrets, and Proprietary Information

The designation of certain information as trade secrets and/or privileged or confidential proprietary information shall only apply to the technical portion of the proposal. The cost proposal will not be considered confidential under any circumstance. Any proposal copyrighted or marked as confidential or proprietary in its entirety may be rejected without further consideration or recourse.

For the purposes of this procurement, the provisions of the Louisiana Public Records Act (LSA-R.S. 44.1, *et. seq.*) will be in effect. Pursuant to this Act, all proceedings, records, contracts, and other public documents relating to this procurement shall be open to public inspection. Respondents are reminded that while trade secrets and other proprietary information they submit in conjunction with this procurement may not be subject to public disclosure, protections must be claimed by the Respondent at the time of submission of its Proposal. Respondents should refer to the Louisiana Public Records Act for further clarification.

The Respondent must clearly designate the part of the proposal that contains a trade secret and/or privileged or confidential proprietary information as "confidential" in order to claim protection, if any, from disclosure. The Respondent shall mark the cover sheet of the proposal with the following legend, specifying the specific section(s) of his proposal sought to be restricted in accordance with the conditions of the legend:

"The data contained in pages _____ of the proposal have been submitted in confidence and contain trade secrets and/or privileged or confidential information and such data shall only be disclosed for evaluation purposes, provided that if a contract is awarded to this Respondent as a result of or in connection with the submission of this proposal, the Parish of St. Tammany shall have the right to use or disclose the data therein to the extent provided in the contract. This restriction does not limit the Parish of St. Tammany's right to use or disclose data obtained from any source, including the Respondent, without restrictions."

Further, to protect such data, each page containing such data shall be specifically identified and marked "CONFIDENTIAL".

Respondents must be prepared to defend the reasons why the material should be held confidential. If a competing Respondent or other person seeks review or copies of another Respondent's confidential data, the Parish will notify the owner of the asserted data of the request.

If the owner of the asserted data does not want the information disclosed, it must agree to indemnify the Parish and hold the Parish harmless against all actions or court proceedings that may ensue (including attorney's fees), which seek to order the Parish to disclose the information. If the owner of the asserted data refuses to indemnify and hold the state harmless, the Parish may disclose the information.

The Parish reserves the right to make any proposal, including proprietary information contained therein, available to Parish personnel, the Parish Council, or other Parish and state agencies or organizations for the sole purpose of assisting the Parish in its evaluation of the proposal. The Parish shall require said individuals to protect the confidentiality of any specifically identified proprietary information or privileged business information obtained as a result of their participation in these evaluations.

If your proposal contains confidential information, you should also submit a redacted copy along with your proposal. If you do not submit the redacted copy, you will be required to submit this copy within 48 hours of notification from the Procurement Department. When submitting your redacted copy, you should clearly mark the cover as such - "REDACTED COPY" - to avoid having this copy reviewed by an evaluation committee member. The redacted copy should also state which sections or information have been removed.

5.3 Proposal Clarifications Prior to Submittal

5.3.1 Pre-proposal Conference

Omitted as not applicable to this RFQ.

5.3.2 Respondent Inquiry Periods

The Parish shall not and cannot permit an open-ended inquiry period, as this creates an unwarranted delay in the procurement cycle and Parish operations. The Parish reasonably expects and requires *responsible and interested* Respondents to conduct their in-depth proposal review and submit inquiries in a timely manner.

An inquiry period is hereby firmly set for all interested Respondents to perform a detailed review of the proposal documents and to submit any written inquiries relative thereto. *Without exception*, all inquiries MUST be submitted in writing by an authorized representative of the Respondent, clearly cross-referenced to the relevant solicitation section (even if an answer has already been given to an oral question during a Pre-proposal conference). All inquiries must be received by the close of business on the Inquiry Deadline date set forth in Section 1.3 Schedule of Events of this RFQ. Only those inquiries received by the established deadline shall be considered by the Parish. Inquiries received after the established deadline shall not be entertained.

Inquiries concerning this solicitation may be delivered by e-mail or hand-delivery to:

St. Tammany Parish Government Procurement Department
Attn: Anthony Smith
21454 Koop Drive, Suite 2F
Mandeville, Louisiana 70471
E-Mail: purchasing@stpgov.org

An addendum will be issued and posted at the Parish website, www.stpgov.org, to address all inquiries received and any other changes or clarifications to the solicitation. Thereafter, all proposal documents, including but not limited to the specifications, terms, conditions, plans, etc., will stand as written and/or amended by any addendum. No negotiations, decisions, or actions shall be executed by any Respondent as a result of any oral discussions with any Parish employee or Parish consultant. It is the Respondent's responsibility to check the Parish website frequently for any possible addenda that may be issued. The Parish is not responsible for a Respondent's failure to download any addenda documents required to complete an RFQ.

Respondent shall be aware that this RFQ is not subject to the Louisiana Public Bid Law or the Louisiana Procurement Code. As such, Respondents are not provided an opportunity to protest the process or results of this RFQ.

5.4 Errors and Omissions in Proposal

The Parish will not be liable for any error in the proposal. Respondent will not be allowed to alter proposal documents after the deadline for proposal submission, except under the following condition: the Parish reserves the right to make corrections or clarifications due to patent errors identified in proposals by the Parish or the Respondent. The Parish, at its option, has the right to request clarification or additional information from the Respondent.

5.5 Proposal Guarantee

Omitted as not applicable to this RFQ

5.6 Performance Bond

Omitted as not applicable to this RFQ

5.7 Changes, Addenda, Withdrawals

The Parish reserves the right to change the Schedule of Events or issue Addenda to the RFQ at any time. The Parish also reserves the right to cancel or reissue the RFQ.

If the Respondent needs to submit changes or addenda, such shall be submitted in writing, signed by an authorized representative of the Respondent, cross-referenced clearly to the relevant proposal section, prior to the proposal opening, and should be submitted in a sealed envelope. Such shall meet all requirements for the proposal.

5.8 Withdrawal of Proposal

A Respondent may withdraw a proposal that has been submitted at any time up to the proposal closing date and time. To accomplish this, a written request signed by the authorized representative of the Respondent must be submitted to the Procurement Department.

5.9 Material in the RFQ

Proposals shall be based only on the material contained in this RFQ. The RFQ includes official responses to questions, addenda, and other material, which may be provided by the Parish pursuant to the RFQ.

5.10 Waiver of Administrative Informalities

The Parish reserves the right, at its sole discretion, to waive administrative informalities contained in any proposal.

5.11 Proposal Rejection

Issuance of this RFQ in no way constitutes a commitment by the Parish to award a contract. The Parish reserves the right to accept or reject any or all proposals submitted or to cancel this RFQ if it is in the best interest of the Parish to do so.

5.12 Ownership of Proposal

All materials (paper content only) submitted in response to this request become the property of the Parish. Selection or rejection of a response does not affect this right. All proposals submitted will be retained by the Parish and not returned to Respondents. Any copyrighted materials in the response are not transferred to the Parish.

5.13 Cost of Offer Preparation

The Parish is not liable for any costs incurred by prospective Respondents or Contractors prior to issuance of or entering into a Contract. Costs associated with developing the proposal, preparing for oral presentations, and any other expenses incurred by the Respondent in responding to the RFQ are entirely the responsibility of the Respondent, and shall not be reimbursed in any manner by the Parish.

5.14 Non-negotiable Contract Terms

Non-negotiable contract terms include but are not limited to taxes, assignment of contract, audit of records, EEOC and ADA compliance, record retention, content of contract/order of precedence, contract changes, governing law, claims or controversies, and termination based on contingency of appropriation of funds.

5.15 Taxes

Any taxes, other than state and local sales and use taxes, from which the Parish is exempt, shall be assumed to be included within the Respondent's cost.

5.16 Proposal Validity

All proposals shall be considered valid for acceptance until such time an award is made, unless the Respondent provides for a different time period within its proposal response. However, the

Parish reserves the right to reject a proposal if the Respondent's acceptance period is unacceptable and the Respondent is unwilling to extend the validity of its proposal.

5.17 Prime Contractor Responsibilities

The selected Respondent shall be required to assume responsibility for all items and services offered in his proposal whether or not he produces or provides them. The Parish shall consider the selected Respondent to be the sole point of contact with regard to contractual matters, including payment of any and all charges resulting from the contract.

5.18 Use of Subcontractors

Each Contractor shall serve as the single prime contractor for all work performed pursuant to its contract. That prime contractor shall be responsible for all deliverables referenced in this RFQ. This general requirement notwithstanding, Respondents may enter into subcontractor arrangements. Respondents may submit a proposal in response to this RFQ, which identifies subcontract(s) with others, provided that the prime contractor acknowledges total responsibility for the entire contract.

If it becomes necessary for the prime contractor to use subcontractors, the Parish urges the prime contractor to use Louisiana vendors, including small and emerging businesses, a small entrepreneurship or a veteran or service-connected disabled veteran-owned small entrepreneurship, if practical. In all events, any subcontractor used by the prime should be identified to the Parish.

Information required of the prime contractor under the terms of this RFQ, is also required for each subcontractor and the subcontractors must agree to be bound by the terms of the contract. The prime contractor shall assume total responsibility for compliance.

5.19 Written or Oral Discussions/Presentations

Written or oral discussions may be conducted with Respondents who submit proposals determined to be reasonably susceptible of being selected for award; however, the Parish reserves the right to enter into an Agreement without further discussion of the proposal submitted based on the initial offers received. Any such written or oral discussion shall be initiated by the Parish.

Any commitments or representations made during these discussions, if conducted, may become formally recorded in the final contract.

Written or oral discussions/presentations for clarification may be conducted to enhance the Parish's understanding of any or all of the proposals submitted. Any such written or oral discussions/presentations shall be initiated by the Parish. Proposals may be accepted without such discussions.

5.20 Acceptance of Proposal Content

The mandatory RFQ requirements shall become contractual obligations if a contract ensues. Failure of the successful Respondent to accept these obligations shall result in the rejection of the proposal.

5.21 Evaluation and Selection

All responses received as a result of this RFQ are subject to evaluation by the Evaluation Committee for the purpose of selecting the Respondent with whom the Parish shall contract.

To evaluate all proposals, a committee whose members have expertise in various areas has been selected. This committee will determine which proposals are reasonably susceptible of being selected for award. If required, written or oral discussions may be conducted with any or all of the Respondents to make this determination. Any such written or oral discussions shall be initiated by the Evaluation Committee.

Results of the evaluations will be provided by the Evaluation Committee to the Procurement Director. Written recommendation for award shall be made for the Respondent(s) whose proposal, conforming to the RFQ, will be the most advantageous to the Parish, price and other factors considered.

The committee may reject any or all proposals if none is considered in the best interest of the Parish.

5.22 Contract Negotiations

If for any reason the Respondent whose proposal is most responsive to the Parish's needs, price and other evaluation factors set forth in the RFQ considered, does not agree to a contract, that proposal shall be rejected and the Parish may negotiate with the next most responsive Respondent. Negotiation may include revision of non-mandatory terms, conditions, and requirements. The Procurement Department must approve the final contract form and issue a purchase order, if applicable, to complete the process.

5.23 Contract Award and Execution

The Parish reserves the right to enter into a contract without further discussion of the proposal submitted based on the initial offers received.

The RFQ, including any addenda, and the proposal of the selected Contractor will become part of any contract initiated by the Parish.

Respondents are discouraged from submitting their own standard terms and conditions with their proposals. Respondents should address the specific language in the sample contract in Attachment "B" of this RFQ and submit any exceptions or deviations the Respondent wishes to negotiate. The proposed terms will be negotiated before a final contract is entered. Mandatory terms and conditions are not negotiable.

If the contract negotiation period exceeds thirty (30) days or if the selected Respondent fails to sign the contract within **twenty calendar** days of delivery of it, the Parish may elect to cancel the award and award the contract to the next-highest-ranked Respondent.

Award shall be made to the Respondent with the highest points, whose proposal, conforming to the RFQ, will be the most advantageous to the Parish, price and other factors considered.

The Parish may determine to contract with multiple Respondents.

5.24 Acknowledgment and Waiver of Protest Rights

Respondent shall execute an Acknowledgment and Waiver (the "Waiver") (Attachment "C") and shall produce same to the Parish along with its proposal. Such Waiver shall state that Respondent has read this RFQ and the Waiver, and understands that the Parish's obligations under this RFQ are not dictated by Louisiana Public Bid Law or the Louisiana Procurement Code. As such, Respondent understands that it is provided no opportunity for protest and waives all such rights.

5.25 Notice of Intent to Award

Upon review and approval of the evaluation committee's and agency's recommendation for award, the Procurement Department will issue a "Notice of Intent to Award" letter to the apparent successful Respondent(s). A contract shall be completed and signed by all parties concerned on or before the date indicated in the "Schedule of Events." If this date is not met, through no fault of the Parish, the Parish may elect to cancel the "Notice of Intent to Award" letter and make the award to the next most advantageous Respondent.

The Procurement Department will also notify all unsuccessful Respondents as to the outcome of the evaluation process. The evaluation factors, points, evaluation committee member names, and the completed evaluation summary and recommendation report will be made available to all interested parties after the "Notice of Intent to Award" letter has been issued.

5.26 Insurance Requirements

The Contractor shall comply with all insurance requirements of the Parish as contained in Attachment "D". All policies of insurance shall meet the requirements of the Parish prior to the commencing of any work. The Parish has the right, but not the duty, to approve all insurance policies prior to the commencing of any work. Contractor shall furnish the Parish with certificates of insurance effecting coverage(s) required by the RFQ (see Attachment "D"). The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates are to be received and approved by the Parish before work commences. The Parish reserves the right to require complete certified copies of all required policies, at any time.

5.27 Subcontractor Insurance

The Contractor shall include all subcontractors as insureds under its policies or shall insure that all subcontractors satisfy the same insurance requirements stated herein for the contractor.

5.28 Indemnification and Limitation of Liability

Neither party shall be liable for any delay or failure in performance beyond its control resulting from acts of God or *force majeure*. The parties shall use reasonable efforts to eliminate or minimize the effect of such events upon performance of their respective duties under the contract.

Contractor shall be fully liable for the actions of its agents, employees, partners, or subcontractors and shall fully indemnify and hold harmless the Parish from suits, actions, damages, and costs of every name and description relating to personal injury and damage to real or personal tangible property caused by Contractor, its agents, employees, partners or subcontractors in the performance of the contract, without limitation; provided, however, that the Contractor shall not indemnify for that portion of any claim, loss, or damage arising hereunder due to the negligent act or failure to act of the Parish. In connection therewith, the Contractor shall execute the Hold Harmless Agreement furnished by the Parish (Attachment "E"). Work may not commence until such Hold Harmless Agreement is executed by the Contractor and received by the Parish.

Contractor will indemnify, defend and hold the Parish harmless, ***without limitation***, from and against any and all damages, expenses (including reasonable attorneys' fees), claims judgments, liabilities and costs which may be finally assessed against the Parish in any action for infringement of a United States Letter Patent with respect to the Products, Materials, or Services furnished, or of any copyright, trademark, trade secret or intellectual property right, provided that the Parish shall give the Contractor: (i) prompt written notice of any action, claim or threat of infringement suit, or other suit, (ii) the opportunity to take over, settle or defend such action, claim or suit at Contractor's sole expense, and (iii) assistance in the defense of any such action at the expense of Contractor. Where a dispute or claim arises relative to a real or anticipated infringement, the Parish may require Contractor, at its sole expense, to submit such information and documentation, including formal patent attorney opinions, as the Parish shall require.

The Contractor shall not be obligated to indemnify that portion of a claim or dispute based upon: (i) Parish's unauthorized modification or alteration of a Product, Material, or Service; (ii) Parish's use of the Product, Material, or Service in combination with other products, materials, or services not furnished by Contractor; (iii) Parish's use in other than the specified operating conditions and environment.

In addition to the foregoing, if the use of any item(s) or part(s) thereof shall be enjoined for any reason or if Contractor believes that it may be enjoined, Contractor shall have the right, at its own expense and sole discretion as the Parish's exclusive remedy to take action in the following order of precedence: (i) to procure for the Parish the right to continue using such item(s) or part(s) thereof, as applicable; (ii) to modify the component so that it becomes non-infringing equipment of at least equal quality and performance; or (iii) to replace said item(s) or part(s) thereof, as applicable, with non-infringing components of at least equal quality and performance, or (iv) if none of the foregoing is commercially reasonable, then provide monetary compensation to the Parish up to the dollar amount of the Contract.

The Parish may, in addition to other remedies available to them at law or equity and upon notice to the Contractor, retain such monies from amounts due Contractor, or may proceed against the performance and payment bond, if any, as may be necessary to satisfy any claim for damages, penalties, costs and the like asserted by or against them.

5.29 Fidelity Bond Requirements

Omitted as not applicable to this RFQ

5.30 Payment

5.30.1 Payment for Services

The Contractor may invoice the Parish monthly, in accordance with the Pricing Schedule agreed to by the parties, at the billing address designated by the Parish . Payments will be made by the Parish within approximately thirty (30) days after receipt of a properly executed invoice, and approval by the Parish. Invoices shall include the purchase order number. Invoices submitted without this information will not be approved for payment until the required information is provided/reflected on the invoice.

5.31 Termination

5.31.1 Termination of the Contract for Cause

The Parish may terminate the contract for cause based upon the failure of the Contractor to comply with the terms and/or conditions of the contract, or failure to fulfill its performance obligations pursuant to the contract, provided that the Parish shall give the Contractor written notice specifying the Contractor's failure. If within thirty (30) days after receipt of such notice, the Contractor shall not have corrected such failure or, in the case of failure which cannot be corrected in thirty (30) days, begun in good faith to correct such failure and thereafter proceeded diligently to complete such correction, then the Parish may, at its option, place the Contractor in default and the contract shall terminate on the date specified in such notice.

The Contractor may exercise any rights available to it under Louisiana law to terminate for cause upon the failure of the Parish to comply with the terms and conditions of the contract, provided that the Contractor shall give the Parish written notice specifying the Parish's failure and a reasonable opportunity for the Parish to cure the defect.

5.31.2 Termination of the Contract for Convenience

The Parish may terminate the contract at any time by giving thirty (30) days written notice to the Contractor of such termination or negotiating with the Contractor an effective date.

The Contractor shall be entitled to payment for deliverables in progress, to the extent work has been performed satisfactorily.

5.31.3 Termination for Non-Appropriation of Funds

The continuance of the contract is contingent upon the appropriation of funds to fulfill the requirements of the contract by the Parish Council. If the Parish Council fails to appropriate sufficient monies to provide for the continuation of the contract, or if such appropriation is reduced for any lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the contract, the contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated.

5.32 Assignment

The Contractor shall not assign any interest in the contract by assignment, transfer, or novation, without prior written consent of the Parish. This provision shall not be construed to prohibit the contractor from assigning his bank, trust company, or other financial institution any money due or to become due from approved contracts without such prior written consent. Notice of any such assignment or transfer shall be furnished promptly to the Parish.

5.33 No Guarantee of Quantities

The quantities referenced in the RFQ are estimated to be the amount needed. In the event a greater or lesser quantity is needed, the right is reserved by the Parish to increase or decrease the amount, at the unit price stated in the proposal.

The Parish does not obligate itself to contract for or accept more than its actual requirements during the period of the contract, as determined by actual needs and availability of appropriated funds.

5.34 Audit of Records

The Parish Auditor, state auditors, federal auditors or others so designated by the Parish, shall have the option to audit all accounts directly pertaining to the resulting contract for a period of five (5) years after Project acceptance or as required by applicable State and Federal law. Records shall be made available during normal working hours for this purpose.

5.35 Civil Rights Compliance

The Contractor agrees to abide by the requirements of the following as applicable: Title VI and Title VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended, the Vietnam Era Veteran's Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, the Age Act of 1975, and Contractor agrees to abide by the requirements of the Americans with Disabilities Act of 1990. Contractor agrees not to discriminate in its employment practices, and will render services under the contract and any contract without regard to race, color, religion, sex, national origin, veteran status, political affiliation, or disabilities. Any act of discrimination committed by Contractor, or failure to comply with these statutory obligations when applicable shall be grounds for termination of the contract.

5.36 Record Retention

The Contractor shall maintain all records in relation to the contract for a period of at least five (5) years after final payment.

5.37 Record Ownership

All records, reports, documents, or other material related to any contract resulting from this RFQ and/or obtained or prepared by Contractor in connection with the performance of the services contracted for herein shall become the property of the Parish and shall, upon request, be returned by Contractor to the Parish, at Contractor's expense, at termination or expiration of the contract.

5.38 Content of Contract/ Order of Precedence

In the event of an inconsistency between the contract, the RFQ and/or the Contractor's Proposal, the inconsistency shall be resolved by giving precedence first to the final contract, then to the RFQ and subsequent addenda (if any) and finally, the Contractor's Proposal.

5.39 Contract Changes

No additional changes, enhancements, or modifications to any contract resulting from this RFQ shall be made without the prior approval of the Parish.

Changes to the contract include any change in: compensation; beginning/ ending date of the contract; scope of work; and/or Contractor change through the Assignment of Contract process. Any such changes, once approved, will result in the issuance of an amendment to the contract.

5.40 Substitution of Personnel

The Parish intends to include in any contract resulting from this RFQ the following condition:

Substitution of Personnel: If, during the term of the contract, the Contractor or subcontractor cannot provide the personnel as proposed and requests a substitution, that substitution shall meet or exceed the requirements stated herein. A detailed resume of qualifications and justification is to be submitted to the Parish for approval prior to any personnel substitution. It shall be acknowledged by the Contractor that every reasonable attempt shall be made to assign the personnel listed in the Contractor's proposal.

5.41 Governing Law

All activities associated with this RFQ process shall be interpreted under Louisiana Law. All proposals and contracts submitted are subject to provisions of the laws of the State of Louisiana and specifications listed in this RFQ. Jurisdiction and venue for any suit filed in connection with this RFQ process and contract shall be exclusive to the 22nd Judicial District Court for the Parish of St. Tammany, State of Louisiana.

5.42 Anti-Kickback Clause

The Contractor hereby agrees to adhere to the mandate dictated by the Copeland "Anti-Kickback" Act which provides that each Contractor or subgrantee shall be prohibited from inducing, by any means, any person employed in the completion of work, to give up any part of the compensation to which he is otherwise entitled.

5.43 Clean Air Act

The Contractor hereby agrees to adhere to the provisions which require compliance with all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act which prohibits the use under non-exempt Federal contracts, grants or loans of facilities included on the EPA list of Violating Facilities.

5.44 Energy Policy and Conservation Act

The Contractor hereby recognizes the mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (P.L. 94-163).

5.45 Clean Water Act

The Contractor hereby agrees to adhere to the provisions which require compliance with all applicable standards, orders, or requirements issued under Section 508 of the Clean Water Act which prohibits the use under non-exempt Federal contracts, grants or loans of facilities included on the EPA List of Violating Facilities.

5.46 Anti-Lobbying and Debarment Act

The Contractor will be expected to comply with Federal statutes required in the Anti-Lobbying Act and the Debarment Act.



DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

INTRADEPARTMENTAL CORRESPONDENCE

REFERRED TO

- REFERRED FOR ACTION
ANSWER FOR MY SIGNATURE
FOR FILE
FOR YOUR INFORMATION
FOR SIGNATURE
RETURN TO ME
PLEASE SEE ME
PLEASE TELEPHONE ME
FOR APPROVAL
PLEASE ADVISE ME

BY DATE
BY DATE
BY DATE

ADDENDUM TO PROJECT NUMBER H.010274
STAGE 0 FEASIBILITY STUDY
US 190 (LA 433 TO US 11)
ST TAMMANY PARISH
DISTRICT 62

Memo to file:

The local government and LADOTD have begun numerous phases of the US 190 (LA 433 to US 11) Stage 0 Corridor study (H.010274), completed in 2014 by Neel Schaffer. This memo is to update a portion of the study and to create a phase along US 190 at its intersections with Westminster Dr, Maris Stella St, and Carroll/Sunset Rd.

Due to the Stage 0 data being over 5 years old and the need to determine if this section of roadway is feasible to construct as a standalone phase, we have revisited and collected new data for these intersections. The US 190 proposed single lane roundabouts at Westminster Dr, Maris Stella St, and Carroll/Sunset Rd still perform at an acceptable level with the updated 2019 turning movement counts.

Analysis shows that the 3 roundabouts operate just over capacity in 20 years (see attached). This is acceptable because the approach delays will still be low, and there are no plans at this time to widen US 190 in this area to add to the current capacity up and downstream of the study area.

This phase should consist of a 3-Lane section, along with splitter islands in the functional area of the intersections; from approximately 250 feet west of Westminster Dr to approximately 250 feet east of Maris Stella St.

The updated Sidra analysis movement summaries are attached, along with the 2019 turning movement counts.

Maris Stella St:

Westminster Dr.

1) Conceptual does not show how Blvd ties into Roundabout - could make Footprint 1/2 R/W impacts larger.

- 1. BADAON Rd will need a break in Median - MAY ALSO need to be realigned to get away from Yield line
2. Conceptual Drawing doesn't show how Blvd will tie into Roundabout - Needs updating
Tie-in May impact Gas Station on SW Approach

Carroll Rd

- 1) Right of way impacts
2) Sub-surface Drainage & utility impacts could be costly
3) Could improve geometry on NB App

RECOMMENDED FOR APPROVAL
RECOMMENDED FOR APPROVAL
RECOMMENDED FOR APPROVAL
APPROVED
DATE 4/11/20
DATE 4/16/20
DATE 4/17/20

DOTD Update 2020

US 190 @ Westminster Dr, Maris Stella St, and Carroll Rd/Sunset Dr

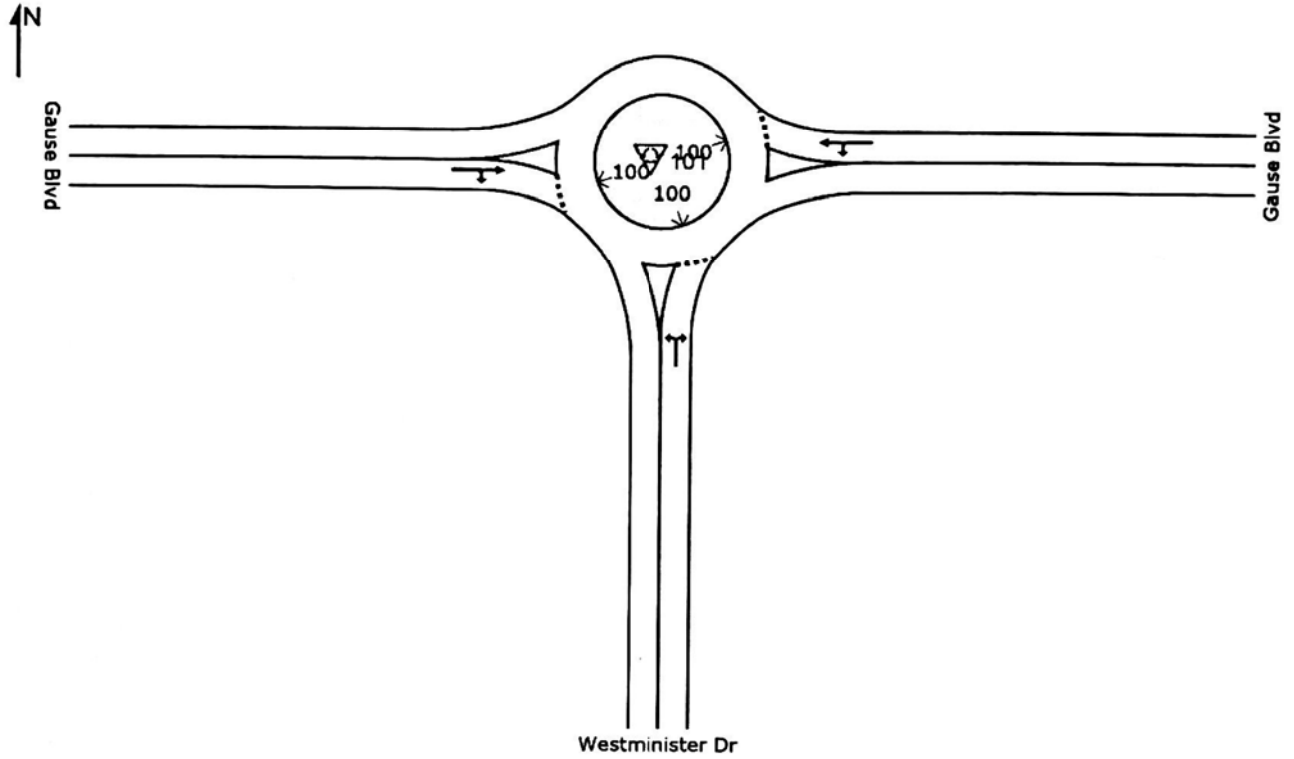
This document includes:

- I. Updated Sidra future analysis of US 190 where it intersects at Westminster Dr, Maris Stella St, and Carroll Rd/Sunset Dr. It features a single lane roundabout for all three intersections. It also includes a second alternative of Carroll Rd/Sunset Dr with an eastbound slip lane.
- II. 2019 Turning Movement Counts, with demand, and observations
- III. Stage 0 Feasibility Study

SITE LAYOUT

Site: 101 [2029 Westminister PM Single]

New Site
Roundabout



MOVEMENT SUMMARY

 Site: 101 [2029 Westminister PM Single]

New Site
Roundabout
Design Life Analysis (Final Year): Results for 20 years

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Westminister Dr											
3	L2	127	1.0	0.730	25.9	LOS C	8.1	204.2	1.00	1.20	25.8
18	R2	134	1.0	0.730	25.9	LOS C	8.1	204.2	1.00	1.20	25.2
Approach		261	1.0	0.730	25.9	LOS C	8.1	204.2	1.00	1.20	25.5
East: Gause Blvd											
1	L2	158	1.0	1.040	30.7	LOS F ¹¹	57.5	1447.7	1.00	1.11	25.0
6	T1	1028	1.0	1.040	30.7	LOS F ¹¹	57.5	1447.7	1.00	1.11	25.0
Approach		1186	1.0	1.040	30.7	LOS C	57.5	1447.7	1.00	1.11	25.0
West: Gause Blvd											
2	T1	1053	1.0	1.047	35.3	LOS F ¹¹	56.6	1425.2	1.00	1.26	23.9
12	R2	110	1.0	1.047	35.3	LOS F ¹¹	56.6	1425.2	1.00	1.26	23.4
Approach		1163	1.0	1.047	35.3	LOS D	56.6	1425.2	1.00	1.26	23.9
All Vehicles		2611	1.0	1.047	32.3	LOS C	57.5	1447.7	1.00	1.19	24.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option is selected.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

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Organisation: LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT | Processed: Friday, January 24, 2020 7:29:15 AM
Project: Z:\District 62\ST. TAMMANY PARISH\US 190\US 190 (Gause Blvd) at Westminister,Carroll,and Maris\Sidra\3 Roundabouts.sip7

MOVEMENT SUMMARY

 **Site: 101 [2029 Westminister AM Single]**

New Site
 Roundabout
 Design Life Analysis (Final Year): Results for 20 years

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Westminister Dr											
3	L2	107	1.0	0.637	16.6	LOS B	6.4	162.2	1.00	1.15	29.0
18	R2	175	2.0	0.637	16.7	LOS B	6.4	162.2	1.00	1.15	28.2
Approach		283	1.6	0.637	16.7	LOS B	6.4	162.2	1.00	1.15	28.5
East: Gause Blvd											
1	L2	73	3.0	0.644	1.3	LOS A	7.4	189.9	0.62	0.36	35.8
6	T1	662	3.0	0.644	1.3	LOS A	7.4	189.9	0.62	0.36	35.7
Approach		735	3.0	0.644	1.3	LOS A	7.4	189.9	0.62	0.36	35.7
West: Gause Blvd											
2	T1	919	3.0	0.836	1.7	LOS A	15.5	397.2	0.80	0.42	35.3
12	R2	82	1.0	0.836	1.6	LOS A	15.5	397.2	0.80	0.42	34.3
Approach		1002	2.8	0.836	1.6	LOS A	15.5	397.2	0.80	0.42	35.2
All Vehicles		2019	2.7	0.836	3.6	LOS A	15.5	397.2	0.76	0.50	34.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option is selected.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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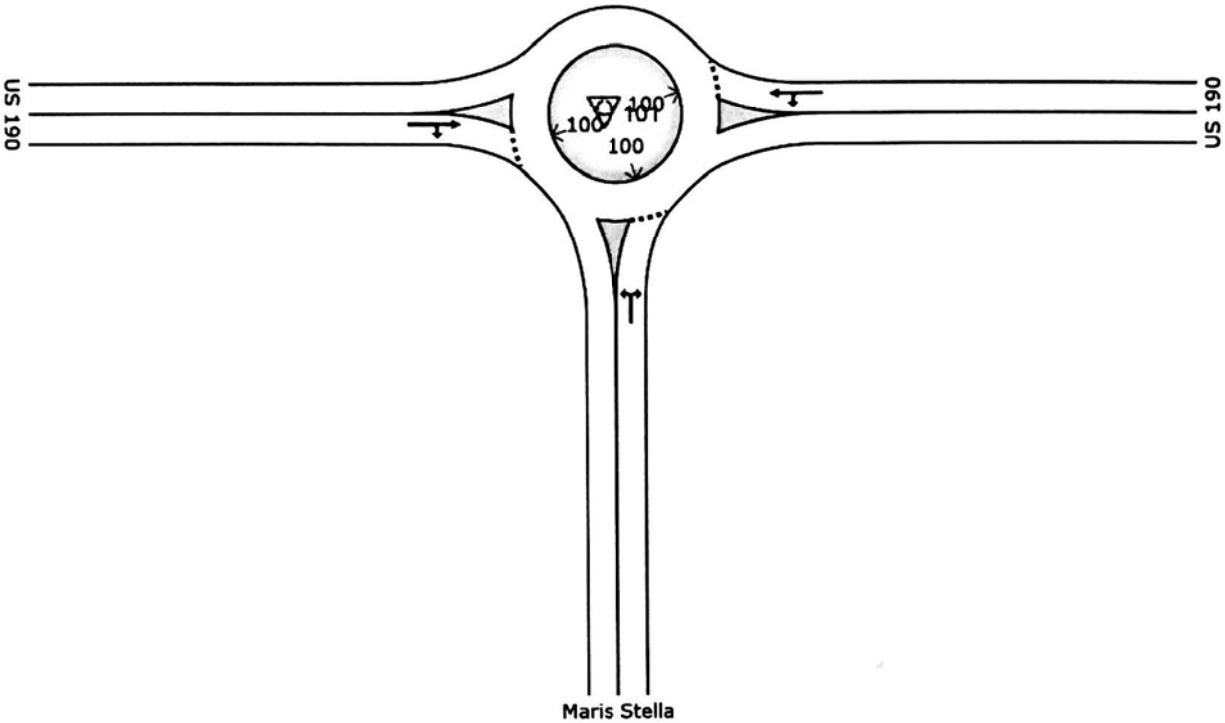
Organisation: LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOP | Processed: Friday, January 24, 2020 7:29:17 AM

Project: Z:\District 62\ST. TAMMANY PARISH\US 190\US 190 (Gause Blvd) at Westminister,Carroll,and Maris\Sidra\3 Roundabouts.sip7

SITE LAYOUT

Site: 101 [2029 Maris Stella PM Single]

New Site
Roundabout



MOVEMENT SUMMARY

 Site: 101 [2029 Maris Stella PM Single]

New Site
Roundabout
Design Life Analysis (Final Year): Results for 20 years

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Maris Stella											
3	L2	31	1.0	0.125	6.4	LOS A	0.7	18.6	0.79	0.70	33.2
18	R2	34	1.0	0.125	6.4	LOS A	0.7	18.6	0.79	0.70	32.2
Approach		65	1.0	0.125	6.4	LOS A	0.7	18.6	0.79	0.70	32.7
East: US 190											
1	L2	37	1.0	1.079	43.6	LOS F ¹¹	147.1	3706.8	1.00	0.59	22.0
6	T1	1225	1.0	1.079	43.6	LOS F ¹¹	147.1	3706.8	1.00	0.59	22.0
Approach		1263	1.0	1.079	43.6	LOS D	147.1	3706.8	1.00	0.59	22.0
West: US 190											
2	T1	808	1.0	0.743	0.7	LOS A	12.7	319.5	0.50	0.20	36.4
12	R2	54	1.0	0.743	0.7	LOS A	12.7	319.5	0.50	0.20	35.3
Approach		862	1.0	0.743	0.7	LOS A	12.7	319.5	0.50	0.20	36.3
All Vehicles		2189	1.0	1.079	25.6	LOS C	147.1	3706.8	0.80	0.44	26.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option is selected.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

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Organisation: LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT | Processed: Friday, January 24, 2020 7:29:24 AM
Project: Z:\District 62\ST. TAMMANY PARISH\US 190\US 190 (Gause Blvd) at Westminster, Carroll, and Maris\Sidra\3 Roundabouts.sip7

MOVEMENT SUMMARY

 Site: 101 [2029 Maris Stella AM Single]

New Site
Roundabout
Design Life Analysis (Final Year): Results for 20 years

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Maris Stella											
3	L2	56	2.0	0.254	10.4	LOS B	1.7	42.3	0.93	0.92	31.1
18	R2	34	1.0	0.254	10.2	LOS B	1.7	42.3	0.93	0.92	30.2
Approach		90	1.6	0.254	10.3	LOS B	1.7	42.3	0.93	0.92	30.7
East: US 190											
1	L2	25	6.0	0.655	0.9	LOS A	8.3	212.3	0.50	0.24	36.2
6	T1	699	3.0	0.655	0.9	LOS A	8.3	212.3	0.50	0.24	36.2
Approach		724	3.1	0.655	0.9	LOS A	8.3	212.3	0.50	0.24	36.2
West: US 190											
2	T1	1003	2.0	0.880	1.1	LOS A	25.1	638.1	0.71	0.26	35.6
12	R2	25	1.0	0.880	1.1	LOS A	25.1	638.1	0.71	0.26	34.6
Approach		1028	2.0	0.880	1.1	LOS A	25.1	638.1	0.71	0.26	35.6
All Vehicles		1842	2.4	0.880	1.5	LOS A	25.1	638.1	0.64	0.28	35.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option is selected.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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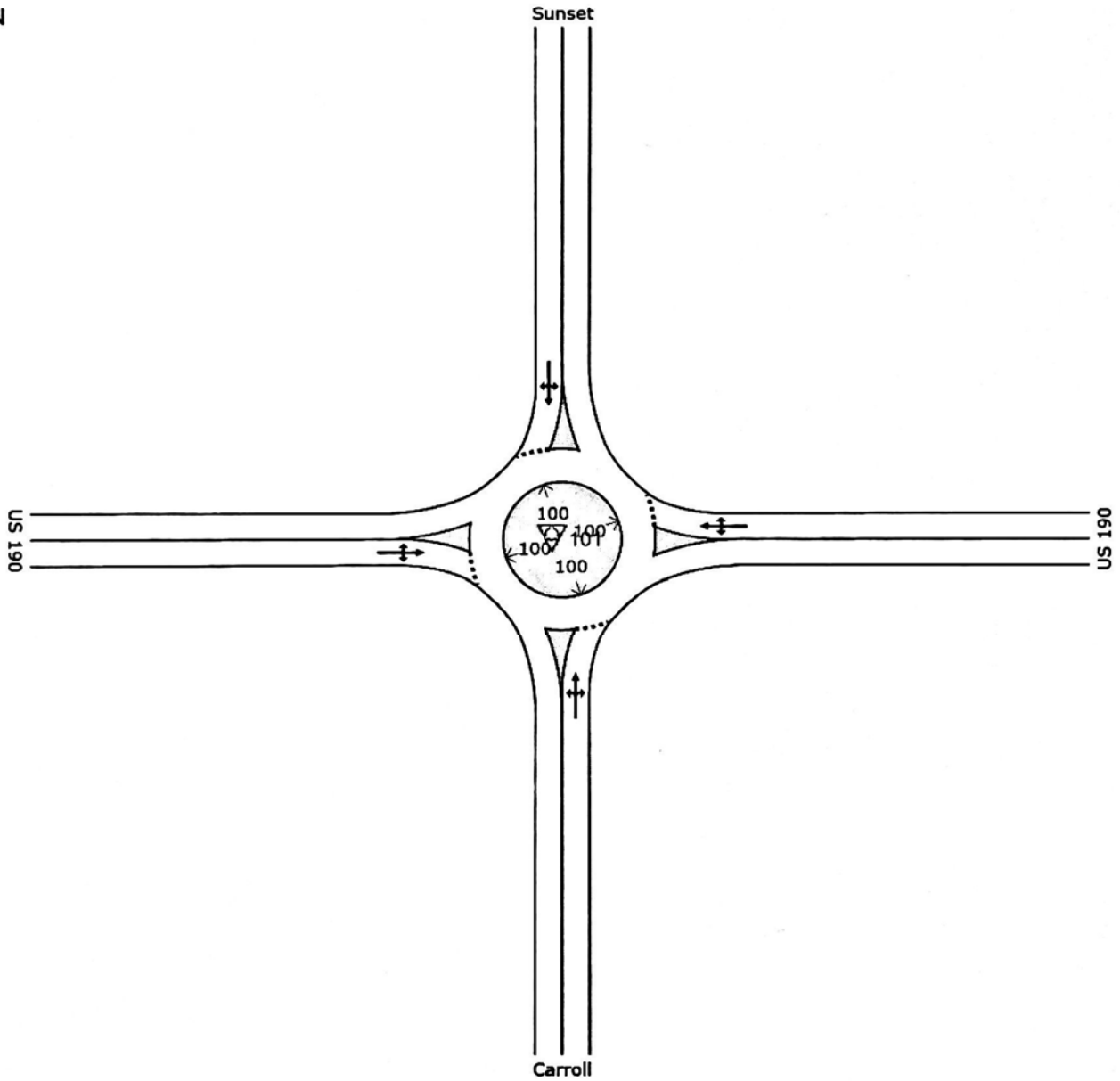
Organisation: LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOP | Processed: Friday, January 24, 2020 7:29:22 AM

Project: Z:\District 62\ST. TAMMANY PARISH\US 190\US 190 (Gause Blvd) at Westminster,Carroll,and Maris\Sidra3 Roundabouts.sip7

SITE LAYOUT

Site: 101 [2029 Carroll PM Single]

New Site
Roundabout



MOVEMENT SUMMARY

 Site: 101 [2029 Carroll PM Single]

New Site
Roundabout
Design Life Analysis (Final Year): Results for 20 years

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Carroll											
3	L2	241	1.0	0.687	17.2	LOS B	7.4	186.7	1.00	1.17	28.2
8	T1	28	1.0	0.687	17.2	LOS B	7.4	186.7	1.00	1.17	28.2
18	R2	42	1.0	0.687	17.2	LOS B	7.4	186.7	1.00	1.17	27.5
Approach		312	1.0	0.687	17.2	LOS B	7.4	186.7	1.00	1.17	28.1
East: US 190											
1	L2	40	1.0	1.064	46.9	LOS F ¹¹	51.1	1286.6	1.00	1.74	21.3
6	T1	949	1.0	1.064	46.9	LOS F ¹¹	51.1	1286.6	1.00	1.74	21.3
16	R2	48	1.0	1.064	46.9	LOS F ¹¹	51.1	1286.6	1.00	1.74	20.9
Approach		1037	1.0	1.064	46.9	LOS D	51.1	1286.6	1.00	1.74	21.3
North: Sunset											
7	L2	60	1.0	0.381	14.8	LOS B	2.9	74.2	1.00	1.02	29.6
4	T1	36	1.0	0.381	14.8	LOS B	2.9	74.2	1.00	1.02	29.5
14	R2	21	1.0	0.381	14.8	LOS B	2.9	74.2	1.00	1.02	28.8
Approach		117	1.0	0.381	14.8	LOS B	2.9	74.2	1.00	1.02	29.4
West: US 190											
5	L2	14	1.0	1.072	43.4	LOS F ¹¹	67.0	1688.6	1.00	1.33	22.0
2	T1	874	1.0	1.072	43.4	LOS F ¹¹	67.0	1688.6	1.00	1.33	22.0
12	R2	340	1.0	1.072	43.4	LOS F ¹¹	67.0	1688.6	1.00	1.33	21.6
Approach		1228	1.0	1.072	43.4	LOS D	67.0	1688.6	1.00	1.33	21.8
All Vehicles		2694	1.0	1.072	40.5	LOS D	67.0	1688.6	1.00	1.45	22.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option is selected.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

MOVEMENT SUMMARY

 Site: 101 [2029 Carroll AM Single]

New Site
Roundabout
Design Life Analysis (Final Year): Results for 20 years

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Carroll											
3	L2	142	7.0	0.596	16.3	LOS B	5.4	143.7	1.00	1.12	28.6
8	T1	33	4.0	0.596	15.9	LOS B	5.4	143.7	1.00	1.12	28.6
18	R2	45	14.0	0.596	17.1	LOS B	5.4	143.7	1.00	1.12	27.8
Approach		220	8.0	0.596	16.4	LOS B	5.4	143.7	1.00	1.12	28.4
East: US 190											
1	L2	36	1.0	0.637	1.9	LOS A	6.5	166.7	0.73	0.47	35.6
6	T1	599	4.0	0.637	2.0	LOS A	6.5	166.7	0.73	0.47	35.4
16	R2	26	1.0	0.637	1.9	LOS A	6.5	166.7	0.73	0.47	34.4
Approach		662	3.7	0.637	2.0	LOS A	6.5	166.7	0.73	0.47	35.4
North: Sunset											
7	L2	38	6.0	0.170	6.1	LOS A	1.1	28.0	0.81	0.74	33.3
4	T1	33	1.0	0.170	5.7	LOS A	1.1	28.0	0.81	0.74	33.4
14	R2	20	20.0	0.170	7.3	LOS A	1.1	28.0	0.81	0.74	32.1
Approach		92	7.2	0.170	6.2	LOS A	1.1	28.0	0.81	0.74	33.1
West: US 190											
5	L2	2	1.0	0.942	6.3	LOS A	27.7	709.0	1.00	0.67	34.6
2	T1	893	2.0	0.942	6.4	LOS A	27.7	709.0	1.00	0.67	34.5
12	R2	196	7.0	0.942	6.7	LOS A	27.7	709.0	1.00	0.67	33.4
Approach		1090	2.9	0.942	6.5	LOS A	27.7	709.0	1.00	0.67	34.3
All Vehicles		2063	3.9	0.942	6.1	LOS A	27.7	709.0	0.90	0.66	33.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option is selected.

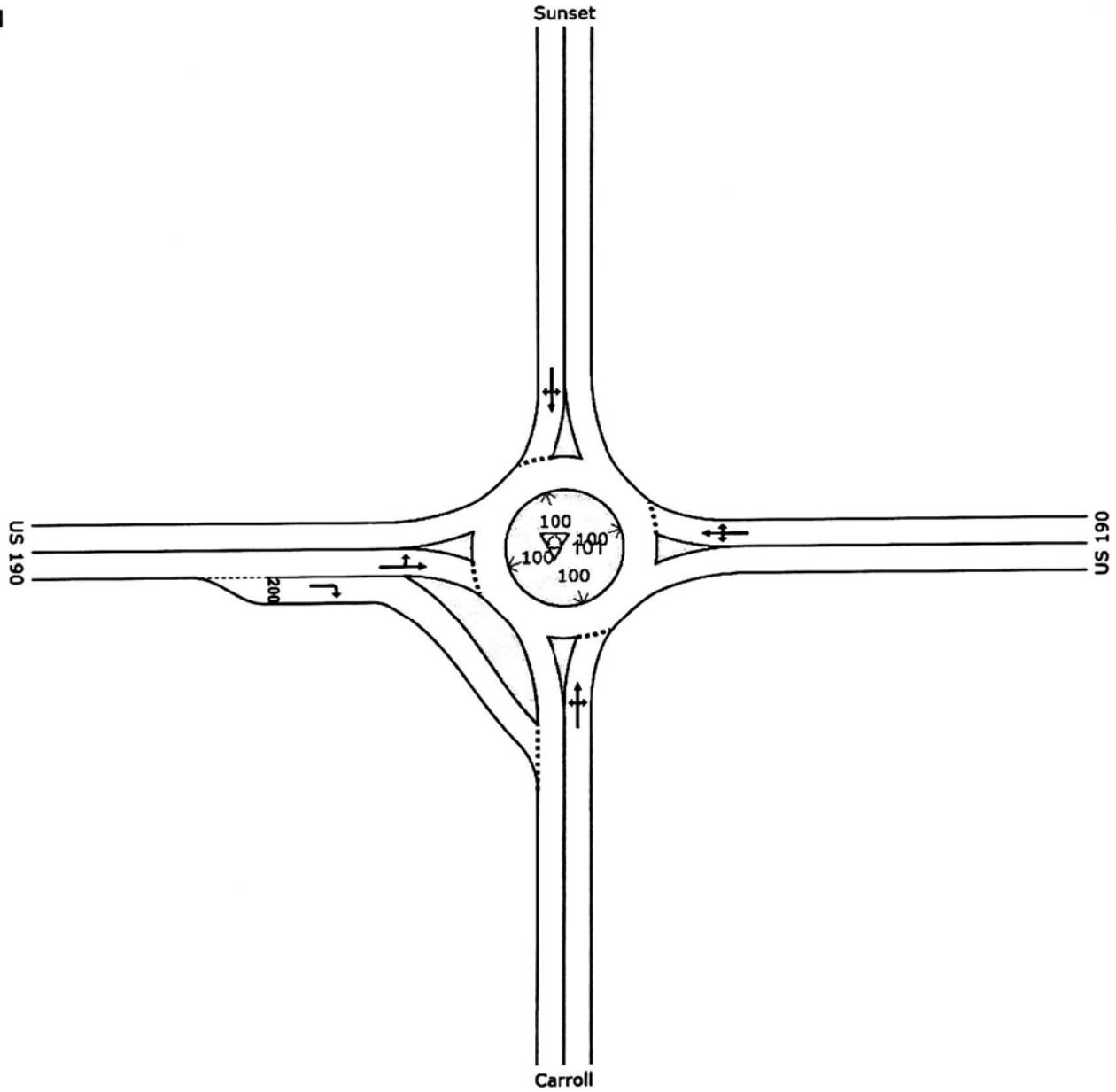
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

▽ Site: 101 [2029 Carroll PM Single Slip]

New Site
Roundabout



MOVEMENT SUMMARY

 Site: 101 [2029 Carroll AM Single Slip]

New Site
Roundabout
Design Life Analysis (Final Year): Results for 20 years

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Carroll											
3	L2	142	7.0	0.477	12.3	LOS B	3.8	100.0	0.94	1.02	30.1
8	T1	33	4.0	0.477	11.9	LOS B	3.8	100.0	0.94	1.02	30.1
18	R2	45	14.0	0.477	13.1	LOS B	3.8	100.0	0.94	1.02	29.2
Approach		220	8.0	0.477	12.4	LOS B	3.8	100.0	0.94	1.02	29.9
East: US 190											
1	L2	36	1.0	0.635	1.9	LOS A	6.4	164.4	0.72	0.47	35.6
6	T1	599	4.0	0.635	2.0	LOS A	6.4	164.4	0.72	0.47	35.4
16	R2	26	1.0	0.635	1.9	LOS A	6.4	164.4	0.72	0.47	34.4
Approach		662	3.7	0.635	2.0	LOS A	6.4	164.4	0.72	0.47	35.4
North: Sunset											
7	L2	38	6.0	0.170	6.1	LOS A	1.1	27.9	0.81	0.73	33.3
4	T1	33	1.0	0.170	5.7	LOS A	1.1	27.9	0.81	0.73	33.4
14	R2	20	20.0	0.170	7.3	LOS A	1.1	27.9	0.81	0.73	32.1
Approach		92	7.2	0.170	6.2	LOS A	1.1	27.9	0.81	0.73	33.1
West: US 190											
5	L2	2	1.0	0.639	0.9	LOS A	6.9	174.8	0.52	0.28	36.4
2	T1	893	2.0	0.639	1.0	LOS A	6.9	174.8	0.52	0.28	36.2
12	R2	196	7.0	0.141	0.3	LOS A	0.8	21.1	0.22	0.09	36.3
Approach		1090	2.9	0.639	0.8	LOS A	6.9	174.8	0.47	0.25	36.2
All Vehicles		2063	3.9	0.639	2.7	LOS A	6.9	174.8	0.61	0.42	35.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option is selected.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: 101 [2029 Carroll PM Single Slip]

New Site
Roundabout
Design Life Analysis (Final Year): Results for 20 years

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Carroll											
3	L2	241	1.0	0.628	16.5	LOS B	6.3	159.9	1.00	1.16	28.5
8	T1	28	1.0	0.628	16.5	LOS B	6.3	159.9	1.00	1.16	28.4
18	R2	42	1.0	0.628	16.5	LOS B	6.3	159.9	1.00	1.16	27.7
Approach		312	1.0	0.628	16.5	LOS B	6.3	159.9	1.00	1.16	28.3
East: US 190											
1	L2	40	1.0	1.065	47.2	LOS F ¹¹	51.2	1290.1	1.00	1.74	21.3
6	T1	949	1.0	1.065	47.2	LOS F ¹¹	51.2	1290.1	1.00	1.74	21.2
16	R2	48	1.0	1.065	47.2	LOS F ¹¹	51.2	1290.1	1.00	1.74	20.8
Approach		1037	1.0	1.065	47.2	LOS D	51.2	1290.1	1.00	1.74	21.2
North: Sunset											
7	L2	60	1.0	0.381	14.8	LOS B	2.9	74.0	1.00	1.02	29.6
4	T1	36	1.0	0.381	14.8	LOS B	2.9	74.0	1.00	1.02	29.5
14	R2	21	1.0	0.381	14.8	LOS B	2.9	74.0	1.00	1.02	28.8
Approach		117	1.0	0.381	14.8	LOS B	2.9	74.0	1.00	1.02	29.4
West: US 190											
5	L2	14	1.0	0.644	1.1	LOS A	7.1	178.4	0.59	0.33	36.1
2	T1	874	1.0	0.644	1.1	LOS A	7.1	178.4	0.59	0.33	36.0
12	R2	340	1.0	0.233	0.3	LOS A	1.5	37.9	0.26	0.11	36.3
Approach		1228	1.0	0.644	0.9	LOS A	7.1	178.4	0.50	0.27	36.1
All Vehicles		2694	1.0	1.065	21.1	LOS C	51.2	1290.1	0.77	0.97	27.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option is selected.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

LA DOTD

685 N. Morrison Blvd
Hammond, LA 70401

US 190 @ Carroll
Slidell, LA

St. Tammany Parish

7:00 - 9:00 AM 10-23-2019

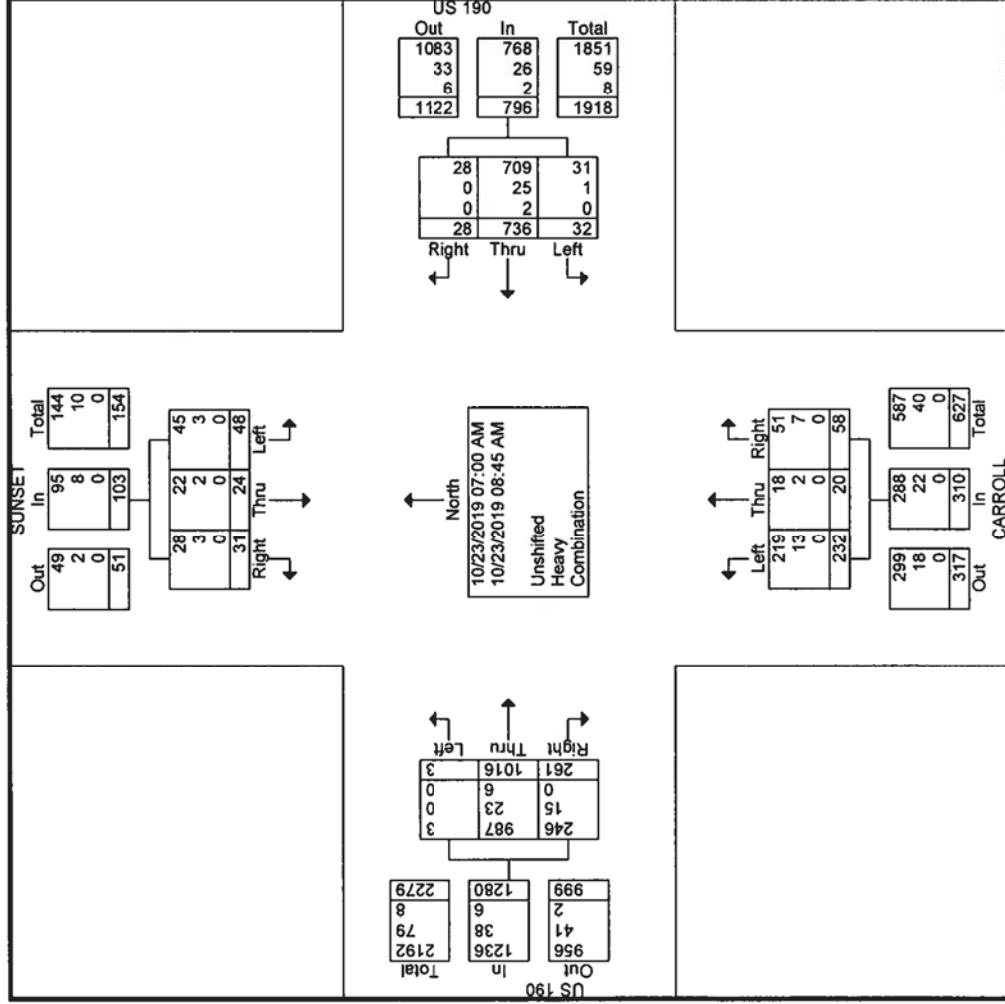
File Name : US 190 @ Carroll
Site Code : 00000000
Start Date : 10/23/2019
Page No : 1

Groups Printed- Unshifted - Heavy - Combination

Start Time	SUNSET Southbound					US 190 Westbound					CARROLL Northbound					US 190 Eastbound				
	Left	Thru	Right	App. Total	Int. Total	Left	Thru	Right	App. Total	Int. Total	Left	Thru	Right	App. Total	Int. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	1	3	3	2	63	2	67	23	18	1	4	23	0	96	27	123	216	
07:15 AM	4	2	3	9	9	2	94	5	101	32	29	1	2	32	0	98	34	132	274	
07:30 AM	11	7	1	19	19	5	93	5	103	35	27	3	5	35	1	132	24	157	314	
07:45 AM	4	3	1	8	8	5	108	2	115	46	33	5	8	46	0	153	45	198	367	
Total	21	12	6	39	39	14	358	14	386	136	107	10	19	136	1	479	130	610	1171	
08:00 AM	8	4	9	21	21	3	100	3	106	39	31	2	6	39	0	163	32	195	361	
08:15 AM	8	2	7	17	17	8	98	7	113	49	24	5	20	49	0	124	35	159	338	
08:30 AM	7	3	6	16	16	4	97	2	103	44	35	1	8	44	0	123	28	151	314	
08:45 AM	4	3	3	10	10	3	83	2	88	42	35	2	5	42	2	127	36	165	305	
Total	27	12	25	64	64	18	378	14	410	174	125	10	39	174	2	537	131	670	1318	
Grand Total	48	24	31	103	103	32	736	28	796	310	232	20	58	310	3	1016	261	1280	2489	
Approch %	46.6	23.3	30.1			4	92.5	3.5			74.8	6.5	18.7		0.2	79.4	20.4			
Total %	1.9	1	1.2	4.1		1.3	29.6	1.1	32	12.5	9.3	0.8	2.3		0.1	40.8	10.5	51.4		
% Unshifted	45	22	28	95		31	709	28	768	288	219	18	51		3	987	246	1236	2387	
Heavy	93.8	91.7	90.3	92.2		96.9	96.3	100	96.5	92.9	94.4	90	87.9		100	97.1	94.3	96.6	95.9	
% Heavy	3	2	3	8		1	25	0	26	22	13	2	7		0	23	15	38	94	
Combination	6.2	8.3	9.7	7.8		3.1	3.4	0	3.3	7.1	5.6	10	12.1		0	2.3	5.7	3	3.8	
% Combination	0	0	0	0		0	0.3	0	0.3	0	0	0	0		0	0.6	0	0.5	0.8	

LA DOTD
 685 N. Morrison Blvd
 Hammond, LA 70401

File Name : US 190 @ Carroll
 Site Code : 00000000
 Start Date : 10/23/2019
 Page No : 2



LA DOTD
685 N. Morrison Blvd
Hammond, LA 70401

File Name : US 190 @ Carroll
Site Code : 00000000
Start Date : 10/23/2019
Page No : 1

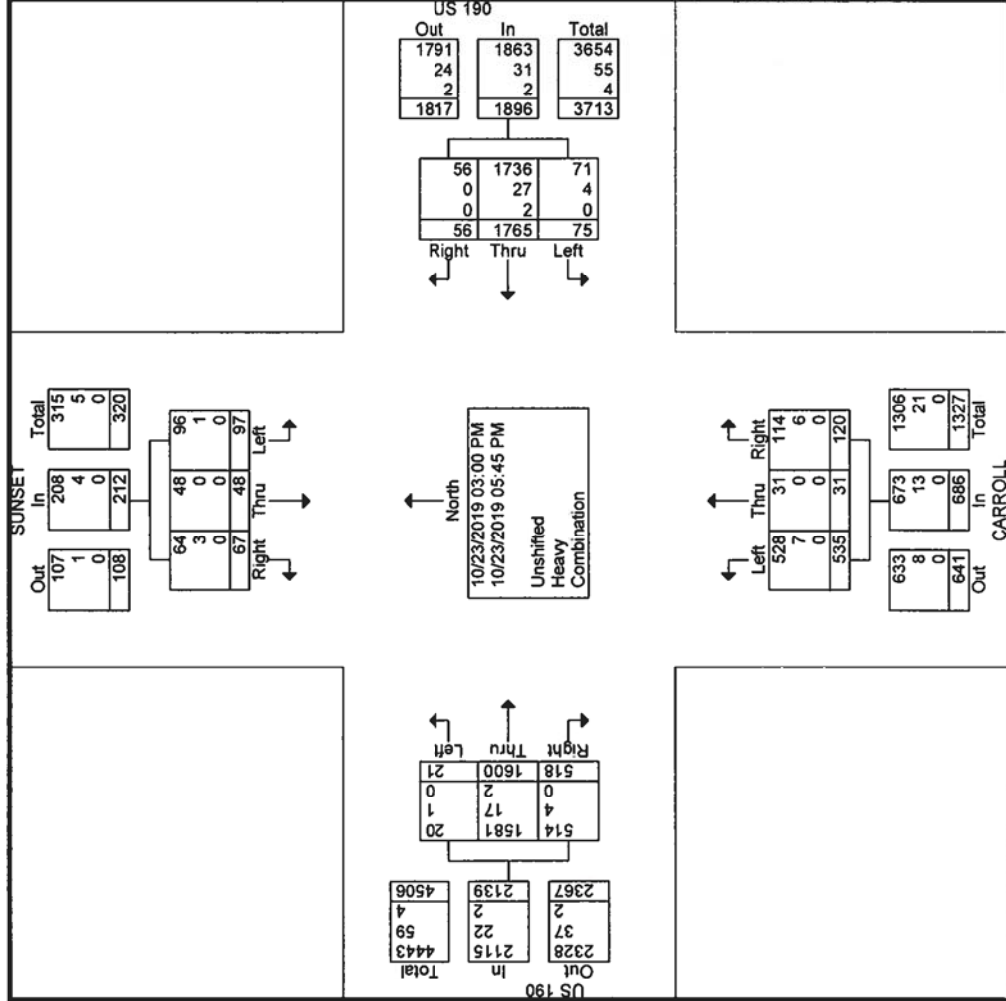
US 190 @ Carroll
Slidell, LA
St. Tammany Parish
3:00 - 6:00 PM 10-23-2019

Groups Printed- Unshifted - Heavy - Combination

Start Time	SUNSET						US 190						CARROLL						US 190																				
	Southbound			Westbound			Eastbound			Northbound			Westbound			Northbound			Eastbound			Westbound			Northbound			Eastbound											
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
03:00 PM	5	2	9	6	130	4	140	28	1	14	43	3	140	35	3	140	35	3	140	35	3	140	35	3	140	35	3	140	35	3	140	35	3	140	35	178	377		
03:15 PM	10	7	5	6	141	4	151	48	5	14	67	3	140	38	3	140	38	3	140	38	3	140	38	3	140	38	3	140	38	3	140	38	3	140	38	181	421		
03:30 PM	4	4	5	2	143	2	147	49	2	5	56	1	139	32	1	139	32	1	139	32	1	139	32	1	139	32	1	139	32	1	139	32	1	139	32	172	388		
03:45 PM	3	2	4	9	160	2	171	51	4	17	72	0	109	30	0	109	30	0	109	30	0	109	30	0	109	30	0	109	30	0	109	30	0	109	30	139	391		
Total	22	15	23	23	574	12	609	176	12	50	238	7	528	135	7	528	135	7	528	135	7	528	135	7	528	135	7	528	135	7	528	135	7	528	135	670	1577		
04:00 PM	7	2	9	7	159	0	166	50	1	11	62	2	137	40	2	137	40	2	137	40	2	137	40	2	137	40	2	137	40	2	137	40	2	137	40	179	425		
04:15 PM	8	3	5	6	152	6	164	43	6	8	57	1	131	42	1	131	42	1	131	42	1	131	42	1	131	42	1	131	42	1	131	42	1	131	42	174	411		
04:30 PM	9	3	7	6	153	3	162	45	0	9	54	3	143	51	3	143	51	3	143	51	3	143	51	3	143	51	3	143	51	3	143	51	3	143	51	197	432		
04:45 PM	6	1	7	7	153	4	164	39	2	10	51	1	110	31	1	110	31	1	110	31	1	110	31	1	110	31	1	110	31	1	110	31	1	110	31	142	371		
Total	30	9	28	26	617	13	656	177	9	38	224	7	521	164	7	521	164	7	521	164	7	521	164	7	521	164	7	521	164	7	521	164	7	521	164	692	1639		
05:00 PM	9	6	5	3	139	7	149	49	3	8	60	3	147	47	3	147	47	3	147	47	3	147	47	3	147	47	3	147	47	3	147	47	3	147	47	197	426		
05:15 PM	10	5	1	10	158	6	174	49	3	5	57	1	147	52	1	147	52	1	147	52	1	147	52	1	147	52	1	147	52	1	147	52	1	147	52	200	447		
05:30 PM	7	5	5	9	129	8	146	48	4	11	63	3	131	52	3	131	52	3	131	52	3	131	52	3	131	52	3	131	52	3	131	52	3	131	52	186	412		
05:45 PM	19	8	5	4	148	10	162	36	0	8	44	0	126	68	0	126	68	0	126	68	0	126	68	0	126	68	0	126	68	0	126	68	0	126	68	194	432		
Total	45	24	16	26	574	31	631	182	10	32	224	7	551	219	7	551	219	7	551	219	7	551	219	7	551	219	7	551	219	7	551	219	7	551	219	777	1717		
Grand Total	97	48	67	75	1765	56	1896	535	31	120	686	21	1600	518	21	1600	518	21	1600	518	21	1600	518	21	1600	518	21	1600	518	21	1600	518	21	1600	518	2139	4933		
Approach %	45.8	22.6	31.6	4	93.1	3	38.4	78	4.5	17.5	13.9	1	74.8	24.2	1	74.8	24.2	1	74.8	24.2	1	74.8	24.2	1	74.8	24.2	1	74.8	24.2	1	74.8	24.2	1	74.8	24.2	43.4			
Total %	2	1	1.4	1.5	35.8	1.1	4.3	10.8	0.6	2.4	10.5	0.4	32.4	10.5	0.4	32.4	10.5	0.4	32.4	10.5	0.4	32.4	10.5	0.4	32.4	10.5	0.4	32.4	10.5	0.4	32.4	10.5	43.4						
Unshifted	96	48	64	71	1736	56	1863	528	31	114	673	20	1581	514	20	1581	514	20	1581	514	20	1581	514	20	1581	514	20	1581	514	20	1581	514	2115	4859					
% Unshifted	99	100	95.5	94.7	98.4	100	98.3	98.7	100	95	98.1	95.2	98.8	99.2	95.2	98.8	99.2	95.2	98.8	99.2	95.2	98.8	99.2	95.2	98.8	99.2	95.2	98.8	99.2	95.2	98.8	99.2	98.9	98.5					
Heavy	1	0	3	4	27	0	31	7	0	6	13	1	17	4	1	17	4	1	17	4	1	17	4	1	17	4	1	17	4	1	17	4	22	70					
% Heavy	1	0	4.5	5.3	1.5	0	1.6	1.3	0	5	1.9	4.8	1.1	0.8	4.8	1.1	0.8	4.8	1.1	0.8	4.8	1.1	0.8	4.8	1.1	0.8	4.8	1.1	0.8	4.8	1.1	0.8	1	1.4					
Combination	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4					
% Combination	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1	0	0.1	0.1					

LA DOTD
 685 N. Morrison Blvd
 Hammond, LA 70401

File Name : US 190 @ Carroll
 Site Code : 00000000
 Start Date : 10/23/2019
 Page No : 2



Location:

US 190 @ Carroll Rd

Date:

10/23/19

Peak Hour:

7:00 - 8:00 AM

Observer:

J. Perry

EB Approach:

US 190

SB Approach:

Sunset Dr.

15-min Period:

8:00

5

7:45

4

7:30

3

7:15

2

7:00

1

Time Segment



WB Approach:

US 190

0 0 0 0 0 →

9 6 0 0 0 →

0 0 0 0 0 ↓

↑ / / / / /

← 0 0 0 5 0

↓ 0 0 1 0 1

5 4 3 2 1

Time Segment:

NOTES:

← ↑ →

/ 2 /

/ 0 /

/ 1 /

/ 1 /

/ 5 /

NB Approach:

Carroll Rd.

1 2 3 4 5

Time Segment:

1

2

3

4

5

Time Segment:

Location:

US 190 @ Carroll Rd.

Date:

10/23/19

Peak Hour:

8:00 - 9:00 AM

Observer:

J. Perry

EB Approach:

US 190

SB Approach:

Sunset Dr.



15-min Period:

9:00

5

8:45

4

8:30

3

8:15

2

8:00

1

Time Segment

WB Approach:

US 190

/	0	/
/	1	/
/	0	/
/	3	/
/	1	/

← ↓ →

0	0	0	0	0	↑
2	4	2	5	9	→
0	0	0	0	0	↓

/	/	/	/	/	↑
0	0	0	3	3	←
1	0	0	0	0	↓

5 4 3 2 1

Time Segment:

NOTES:

/	5	/
/	2	/
/	1	/
/	1	/
/	0	/

← ↑ →

NB Approach:

1 2 3 4 5

Time Segment:

1
2
3
4
5

Time Segment:

Peak Period Observations

Intersection:	US 190 @ Carroll Rd.				
Date:	10/23/19				
Peak Hour:	7:00 - 9:00 AM				
Observer:	J. Perry				
15-min Period	Time	Queue (veh)	Direction	Dissipated by	General Observations:
7:00 - 7:15	7:10				WB vehicle used EB LTL to turn into C-Store.
					No Queues observed
7:15 - 7:30	7:19	5	NB	7:20	
	7:24	8	NB	7:24	
	7:26	6	NB	7:26	
	7:28	6	NB	7:28	
7:30 - 7:45	7:35	12	EB	7:36	
	7:37	7/9	NB/EB	7:37	
	7:40	9	EB	7:40	
	7:42	12	EB	7:43	
7:45 - 8:00	7:50	16	EB	7:51	
	7:54	7/9/21	NB/WB/EB	7:56	EB traffic slow due to bicyclist and sunlight
	7:57	23	EB	7:58	
	7:58	7	NB	7:58	3 Hvy. vehicles in queue
	7:59	20	EB	7:59	
8:00 - 8:15	8:03	10	EB	8:04	
	8:07	5/8	SB/WB	8:08	
	8:08	8/16	WB/EB	8:09	4 Hvy. vehicles in queue (EB) - 3 school buses
	8:10	12	EB	8:10	
8:15 - 8:30	8:17	16	EB	8:18	
	8:20	10	NB	8:21	1 Ped. crossed US 190 (south to north)
	8:21	11/8	EB/WB	8:22	
	8:25	9	EB	8:25	
	8:27				1 Ped. SB sunset to WB US 190
8:30 - 8:45	8:31	7	NB		
	8:34	8/11	NB/EB		
	8:37	9	8:38		
	8:40				1 Ped. crossed US 190 (south to north)
8:45 - 9:00	8:55	8/9	NB/EB	8:55	
Other Observations:					

Location:
US 190 @ Carroll Rd.

Date:
10/23/19

Peak Hour:
3:00-4:00 PM

Observer:
J. Perry

EB Approach:
US 190

SB Approach:
Sunset Dr.

/	2	/
/	0	/
/	2	/
/	0	/
/	1	/
←	↓	→

15-min Periods:

4:00	5
3:45	4
3:30	3
3:15	2
3:00	1

WB Approach:
US 190



0	0	0	1	0	↑
2	6	9	7	1	→
0	0	0	0	0	↓

↑	/	/	/	/	/
←	1	2	20	32	12
↓	0	0	0	0	0

5 4 3 2 1
Time Segment:

NOTES:

←	↑	→
/	5	/
/	4	/
/	4	/
/	2	/
/	10	/
←	↑	→

NB Approach:
Carroll Rd.

1	2	3	4	5	Time Segment:
1					
2					
3					
4					
5					

Location:
US 190 @ Carroll Rd.

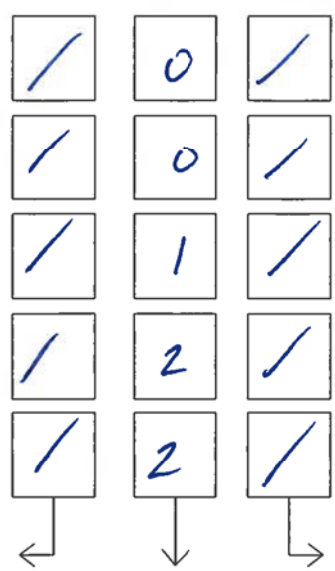
Date:
10/23/19

Peak Hour:
4:00-5:00pm

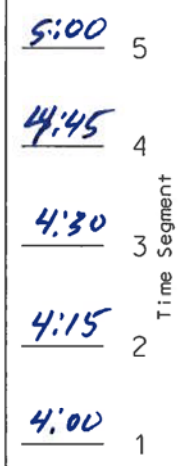
Observer:
J. Perry

EB Approach:
US 190

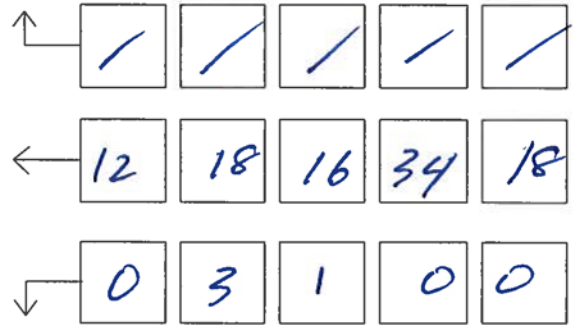
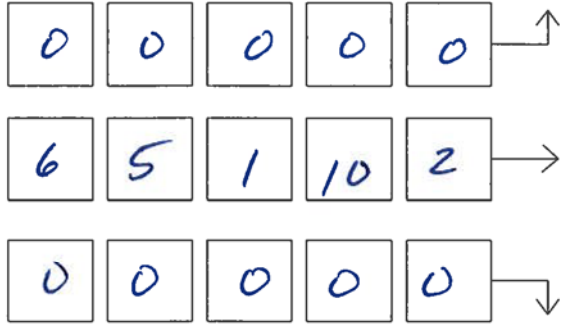
SB Approach:
Sunset Dr.



15-min Period:

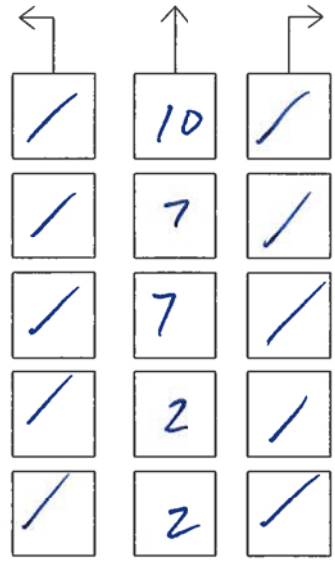


WB Approach:
US 190



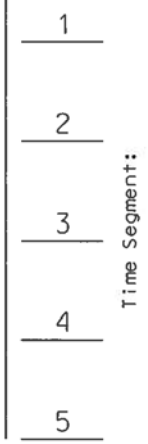
5 4 3 2 1
Time Segment:

NOTES:



NB Approach:
Carroll Rd.

1 2 3 4 5
Time Segment:



Location:

US 190 @ Carroll Rd.

Date:

10/23/19

Peak Hour:

5:00 - 6:00 PM

Observer:

J. Perry

EB Approach:

US 190

SB Approach:

Sunset Dr.

15-min Period:

6:00

5

5:45

4

5:30

3

5:15

2

5:00

1

WB Approach:

US 190



/	0	/
/	3	/
/	0	/
/	0	/
/	0	/

← ↓ ↓

/	/	/	/	/	
←	18	14	0	3	4
↓	0	0	0	0	0

0	0	1	1	0	↑
1	6	0	0	6	→
0	0	0	0	0	↓

/	2	/
/	0	/
/	5	/
/	2	/
/	2	/

← ↑ ↓

1	2	3	4	5
Time Segment:				
1				
2				
3				
4				
5				

5 4 3 2 1

Time Segment:

Time Segment:

NOTES:

NB Approach:

Carroll Rd.

Peak Hour Observations

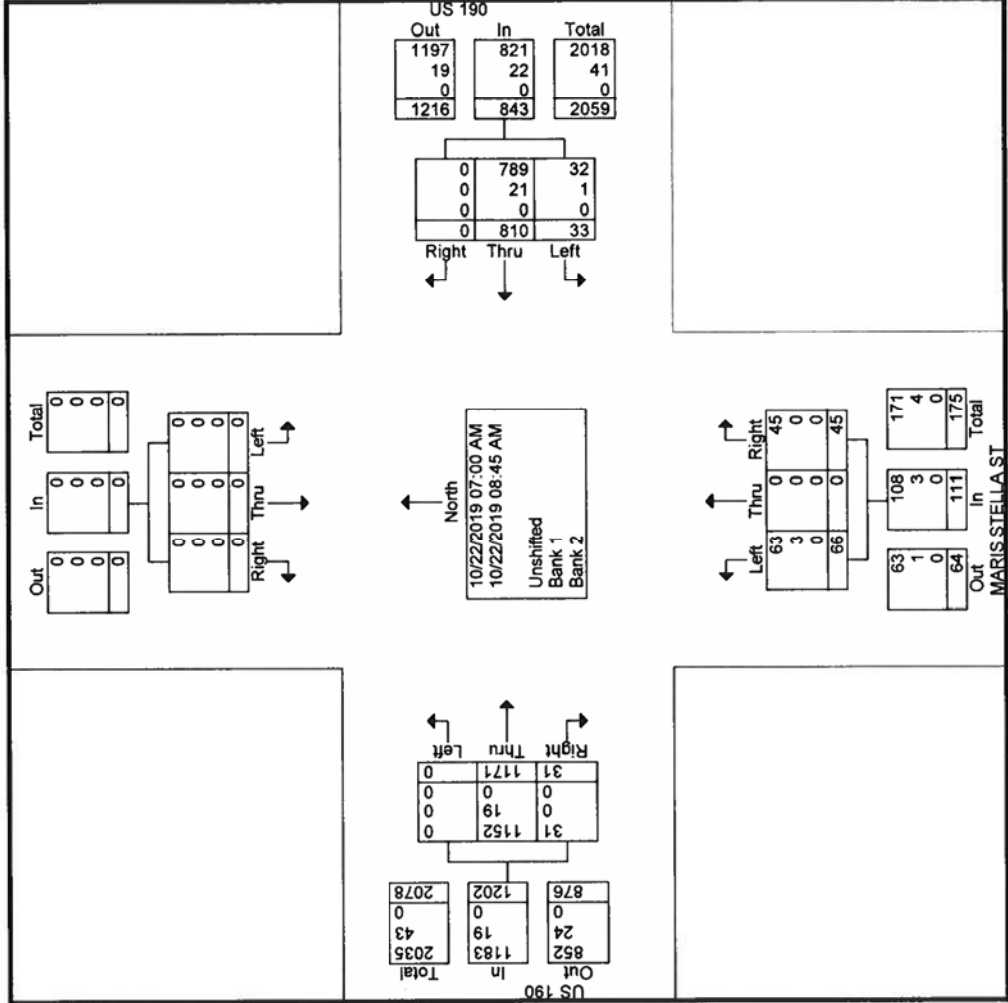
Intersection:	US 190 @ Carroll Rd.				
Date:	10/23/19				
Peak Hour:	3:00 - 4:00 PM				
Observer:	J. Perry				
15-min Period	Time	Queue (veh)	Direction	Dissipated by	General Observations:
3:00- 3:15	3:05	7	NB	3:05	
	3:08	13/12	EB/WB	3:09	
	3:13	10	NB	3:14	
3:15- 3:30	3:20	9/14	NB/WB	3:21	
	3:22	10/19	NB/WB	3:23	
	3:28	13	WB	3:28	
3:30- 3:45 ↓	3:30	9/20	EB/WB	3:31	
	3:32	7	NB	3:32	
	3:32	28+	WB	3:35	past signal at Maris Stella
	3:35	13/23	EB/WB	3:36/3:38	
	3:38	7	NB	3:39	
	3:40	28	WB	3:43	
3:45- 4:00 ↓	3:45	32+	WB	3:47	through signal @ Maris Stella
	3:48	10	NB	3:48	
	3:50	15	NB	3:52	2 cycles to clear queue
	3:50	33	WB	3:52	
	3:53	14	NB	3:55	
	3:53	9	WB	3:54	4 Buses in queue
	3:56	12	NB	3:57	
	3:58	13	NB	3:59	
	3:59	14	WB	3:59	
Other Observations:					

Peak Hour Observations

Intersection:	us 190 @ Carroll Rd.				
Date:	10/23/19				
Peak Hour:	4:00-6:00 PM				
Observer:	J. Perry				
15-min Period	Time	Queue (veh)	Direction	Dissipated by	General Observations:
4:00-4:15	4:03	17/12	NB/WB	4:05/4:03	
	4:04	34	WB	4:06	to signal @ Maris Stella
	4:10	30+	WB	4:12	rolling queue through signal
	4:14	18	WB	4:15	
4:15-4:30	4:16				1 Ped us 190 (from West to East)
	4:17	10/28	EB/WB	4:19	
	4:20	18/30+	EB/WB	4:22	WB through signal @ Maris Stella
	4:24		WB		Queue approximately 40 veh. past signal @ Maris Stella (~4 min. from back)
4:30-4:45	4:31	11	WB	4:32	
	4:34	31+	WB	4:37	through signal @ Maris Stella
	4:38			4:45	18-wheeler block EB lane 250' East of signal to make delivery. Vehicles past in TWLTL
4:45-5:00	4:45	34+	WB	4:48	through signal @ Maris Stella
	4:51	30	WB	4:54	
5:00-5:15	5:09	10/10	EB/WB	5:10	
	5:10	11	NB	5:11	
	5:11	17	WB	5:13	
5:15-5:30	5:18	15	WB	5:19	
	5:20	20	WB	5:21	
	5:21	17/20	EB/WB	5:22	
	5:24	22/15	EB/WB	5:26	
	5:26	10	NB	5:27	
5:30-5:45	5:36	7/9	NB/EB	5:36	
	5:38	11	WB	5:38	
	5:39	12	NB	5:41	
	5:42	12	EB	5:43	
	5:44				
5:45-6:00	5:48				1 Ped. crossed Carroll Rd. (E. to W.)
	5:53	14	WB	5:54	
	5:56	6	NB	5:56	
Other Observations:					

La DSD
 685 N. Morrison Blvd.
 Hammond, La 70401

File Name : US 190 @ Maris Stella
 Site Code : 00000000
 Start Date : 10/22/2019
 Page No : 2

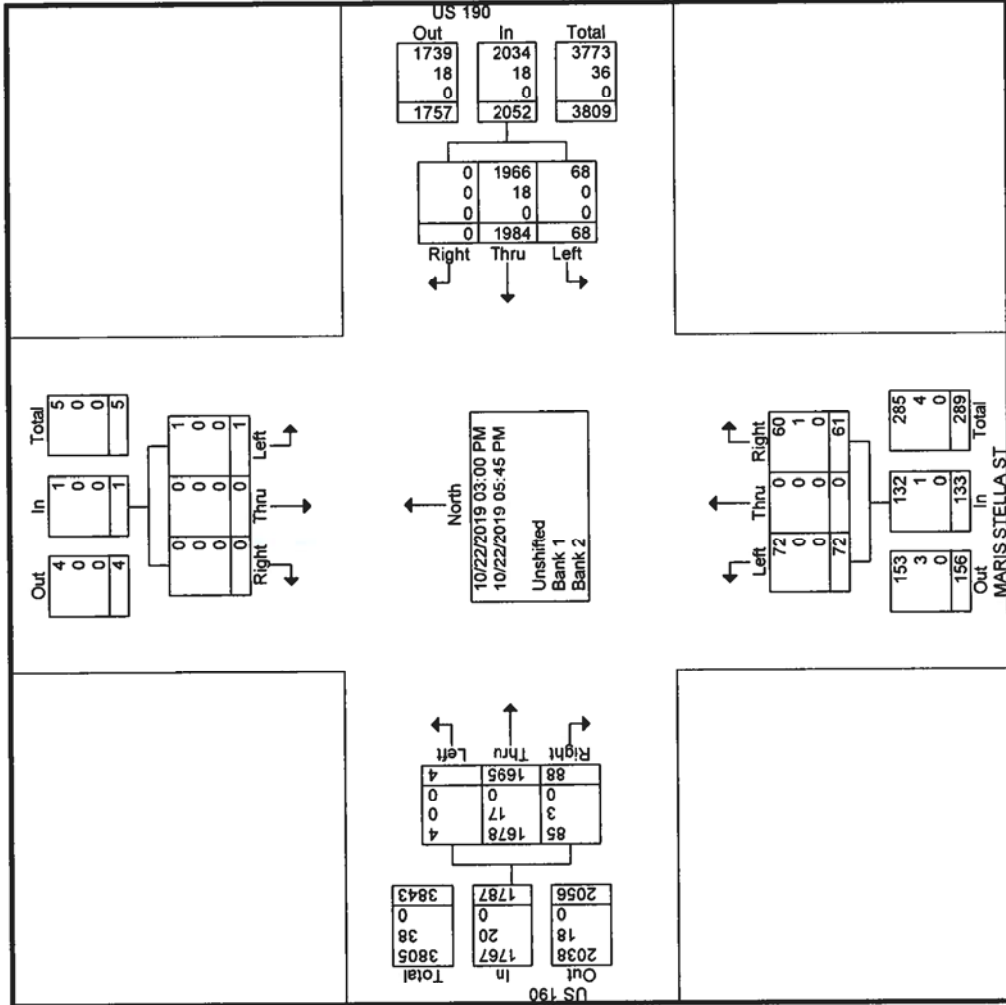


La DSD
 685 N. Morrison Blvd.
 Hammond, La 70401

**US 190 @ Maris Stella
 Slidell
 St. Tammany Parish
 10-22-19 3:00 PM - 6:00 PM**

Start Time	US 190												US 190																
	Southbound						Westbound						Northbound						Eastbound										
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total				
03:00 PM	0	0	0	0	3	148	0	151	3	0	1	4	0	147	5	152	0	0	0	0	0	147	5	152	0	0	0	0	307
03:15 PM	0	0	0	0	2	148	0	150	8	0	5	13	0	133	7	140	0	0	0	0	0	133	7	140	0	0	0	0	303
03:30 PM	0	0	0	0	3	163	0	166	7	0	3	10	0	149	6	155	0	0	0	0	0	149	6	155	0	0	0	0	331
03:45 PM	0	0	0	0	7	182	0	189	2	0	7	9	0	164	8	172	0	0	0	0	0	164	8	172	0	0	0	0	370
Total	0	0	0	0	15	641	0	656	20	0	16	36	0	593	26	619	0	0	0	0	0	593	26	619	0	0	0	0	1311
04:00 PM	0	0	0	0	4	177	0	181	7	0	4	11	0	131	6	137	0	0	0	0	0	131	6	137	0	0	0	0	329
04:15 PM	0	0	0	0	11	171	0	182	5	0	3	8	4	156	3	163	0	0	0	0	4	156	3	163	0	0	0	0	353
04:30 PM	0	0	0	0	5	182	0	187	13	0	11	24	0	139	11	150	0	0	0	0	0	139	11	150	0	0	0	0	361
04:45 PM	0	0	0	0	9	138	0	147	7	0	4	11	0	156	7	163	0	0	0	0	0	156	7	163	0	0	0	0	321
Total	0	0	0	0	29	668	0	697	32	0	22	54	4	582	27	613	0	0	0	0	4	582	27	613	0	0	0	0	1364
05:00 PM	1	0	0	1	4	169	0	173	7	0	5	12	0	133	12	145	0	0	0	0	0	133	12	145	0	0	0	0	331
05:15 PM	0	0	0	0	7	164	0	171	4	0	7	11	0	139	7	146	0	0	0	0	0	139	7	146	0	0	0	0	328
05:30 PM	0	0	0	0	9	178	0	187	5	0	6	11	0	122	8	130	0	0	0	0	0	122	8	130	0	0	0	0	328
05:45 PM	0	0	0	0	4	164	0	168	4	0	5	9	0	126	8	134	0	0	0	0	0	126	8	134	0	0	0	0	311
Total	1	0	0	1	24	675	0	699	20	0	23	43	0	520	35	555	0	0	0	0	0	520	35	555	0	0	0	0	1298

La DOD
 685 N. Morrison Blvd.
 Hammond, La 70401



Location:

US 190 @ Maris Stella

Date:

10/22/19

Peak Hour:

7-8 AM

Observer:

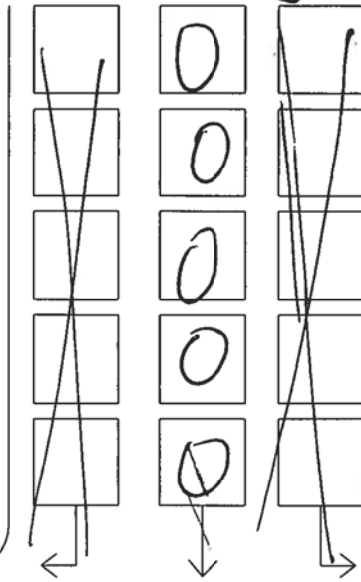
P. Lala

EB Approach:

US190

SB Approach:

driveway



15-min Period:

8:00 5

7:45 4

7:30 3

7:15 2

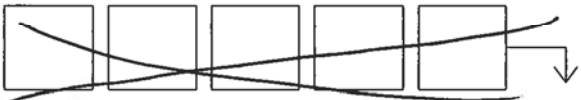
7:00 1

Time Segment



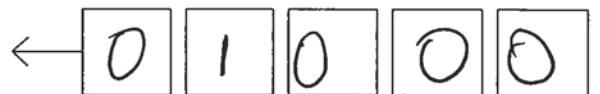
WB Approach:

US190



5 4 3 2 1

Time Segment:

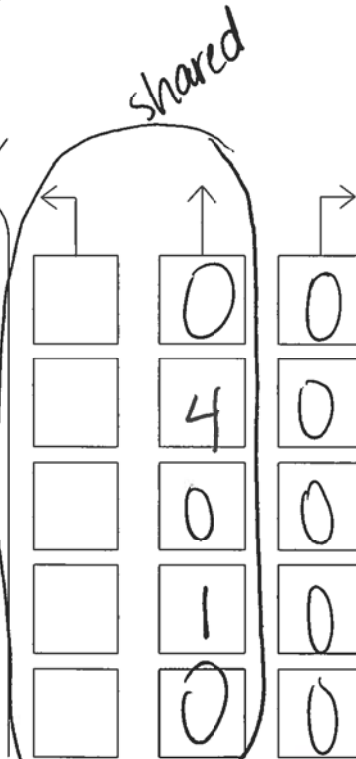


1 2 3 4 5

Time Segment:

NOTES:

See observations sheet



NB Approach:

Maris Stella

1

2

3

4

5

Time Segment:

Location:

US 190 @ Maris Stella

Date:

10/22/19

Peak Hour:

8-9 AM

Observer:

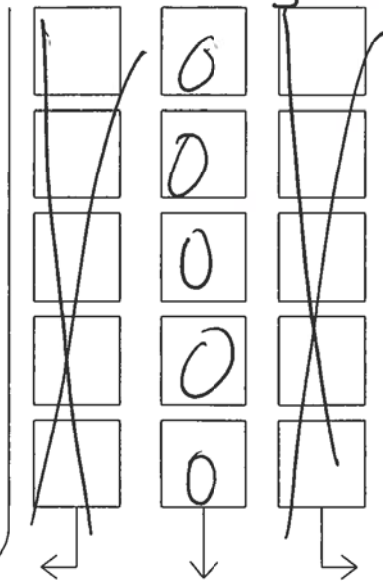
P. Lala

EB Approach:

US 190

SB Approach:

Driveway



15-min Period:

9:00

5

8:45

4

8:30

3

8:15

2

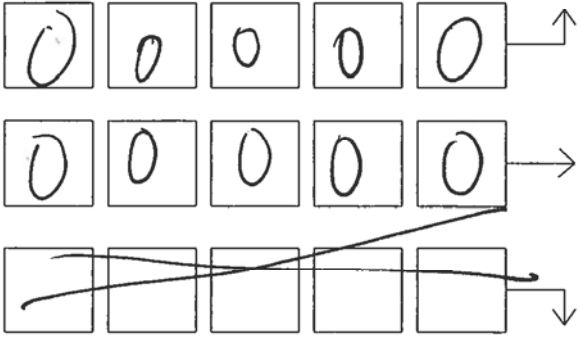
8:00

1

Time Segment

WB Approach:

US 190



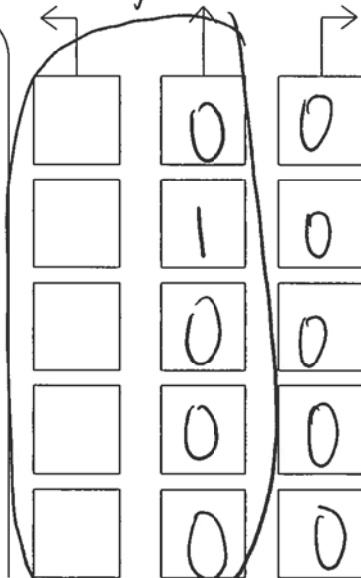
5 4 3 2 1

Time Segment:

NOTES:

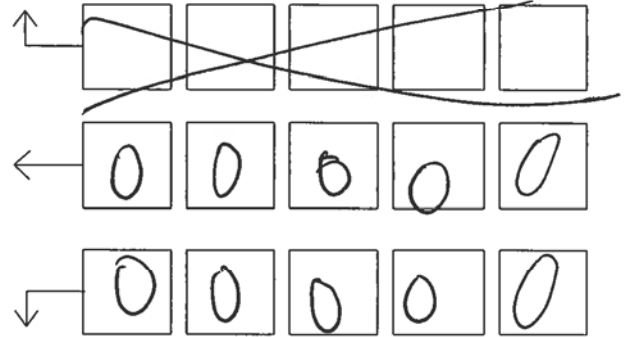
see observations sheet

shared



NB Approach:

Maris Stella



1 2 3 4 5

Time Segment:

1

2

3

4

5

Time Segment:

Peak Period Observations

Intersection: US190 @ Maris Stella					
Date: 10/22/19					
Peak Hour: 7-9 AM					
Observer: P. Lala					
15-min Period	Time	Queue (veh)	Direction	Dissipated by	General Observations:
7-7:15 AM	7:04	4	WB	7:05	
	7:09	2	NB	7:10	
7:15-7:30 AM	7:21	2	NB	7:22	
	7:21	5	EB	7:22	
7:30-7:45 AM	7:36	1	NB	7:37	
	7:38	4	WB	7:39	
	7:42	2	NB	7:43	
7:45-8 AM	7:49	2	NB	7:50	
	7:50	3	WB	7:50	- queued for ~ 30 seconds
	7:53	1	NB	7:54	
	7:54	6	WB	7:55	
	7:54	3	EB	7:55	
8-8:15 AM	8:02	2	NB	8:02	- queued for < 30 seconds
	8:04	2	WBL	8:05	
	8:06	4	NB	8:07	- 1 st vehicle in queue is school bus
8:15-8:30 AM	8:19	2	NB	8:20	
	8:22	2	WBL	8:23	
	8:22	5	EB	8:23	
8:30-8:45 AM	8:35	2	NB	8:36	
	8:40	3	WB	8:40	- queued for < 30 seconds
8:45-9 AM	8:51	1	NB	8:52	
	8:51	1	WBL	8:51	- queued for < 30 seconds
	8:53	4	NB	8:54	
Other Observations:					

Location:

US190 @ Maris Stella

Date:

10/22/19

Peak Hour:

3-4 PM

Observer:

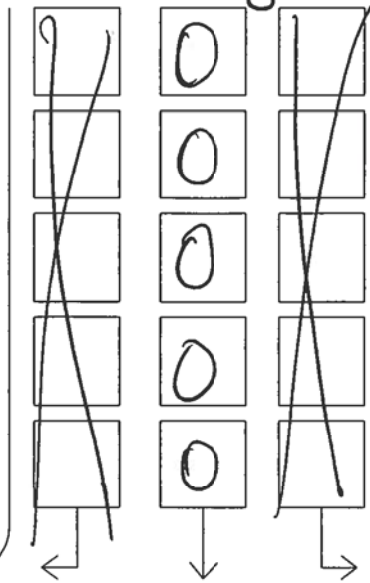
P. Lala

EB Approach:

US190

SB Approach:

driveway



15-min Period:

4:00

5

3:45

4

3:30

3

3:15

2

3:00

1

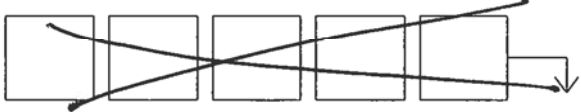
Time Segment

N



WB Approach:

US190



5 4 3 2 1

Time Segment:

NOTES:

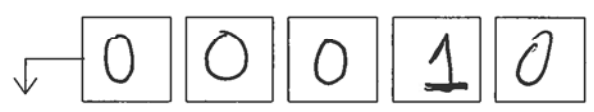
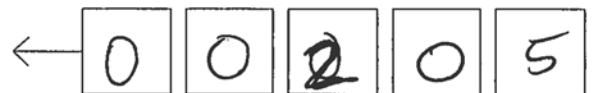
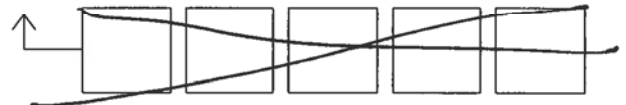
See Observations Sheet

shared



NB Approach:

Maris Stella



1 2 3 4 5

Time Segment:

1

2

3

4

5

Time Segment:

Peak Period Observations

Intersection:		US190 @ Maris Stella			
Date:		10/22/19			
Peak Hour:		3-4 PM			
Observer:		P. Lala			
15-min Period	Time	Queue (veh)	Direction	Dissipated by	General Observations:
3-3:15 PM	3:02	11	WB	3:03	
	3:06	1	NB	3:07	
	3:15	7	EB	3:16	
3:15-3:30 PM	3:16	4	NB	3:17	
	3:17	1	WBL	3:18	
	3:20	3	EB	3:20	queued cleared < 30 seconds
	3:28	11	EB	3:29	
3:30-3:45 PM	3:31	3	NB	3:32	
	3:40	2	WB	3:41	queued from Carroll Rd signal
3:45-4 PM	3:47	5	WB	3:48	queued from Carroll Rd signal
	3:50	7	WB	3:51	queued from Carroll Rd signal
	3:54	7	WB	3:55	queued from Carroll Rd signal
	3:56	7	WB	3:57	queued from Carroll Rd signal
Other Observations:					

Location:

US190@ Maris Stella

Date:

10/22/19

Peak Hour:

4-5 PM

Observer:

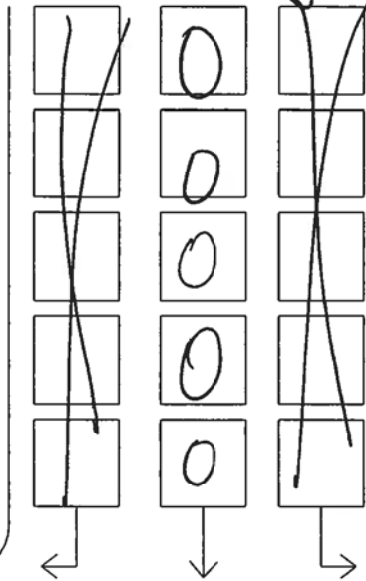
P. Lala

EB Approach:

US190

SB Approach:

driveway



15-min Period:

5:00

5

4:45

4

4:30

3

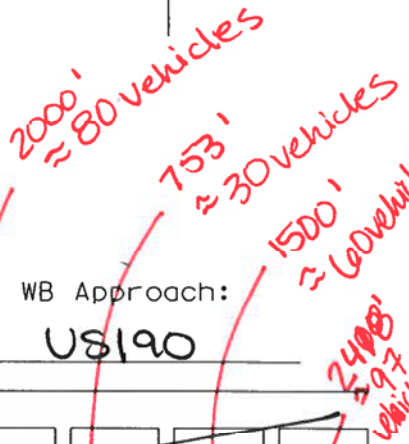
4:15

2

4:00

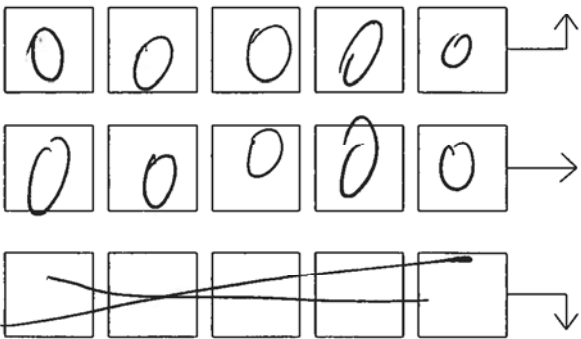
1

Time Segment



WB Approach:

US190



5 4 3 2 1

Time Segment:

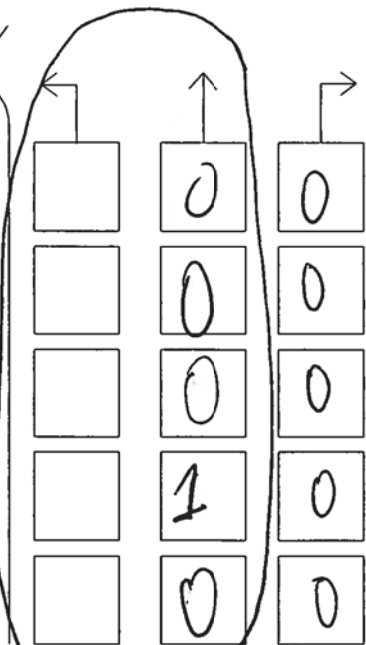
NOTES:

see observations sheet

multiple vehicles used
wb left turn lane as
thru lane throughout
the peak
(at least 5 to 10)

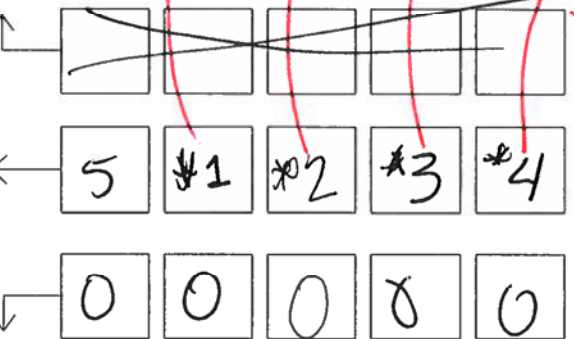
westbound queued due to
Carroll Rd signal

shared



NB Approach:

Maris Stella



1 2 3 4 5

Time Segment:

1

2

3

4

5

Time Segment:

Start
#1: to ~~end~~ of gore
leading to
bridge
(east side)

≈ 3min to ~~clear~~
get through
Maris Stella

#2: to blue building
on right
side of road

#4: St. Tammany Ave
≈ 4min to get through
Maris Stella

#3 the bridge

Location:

US190@ Maris Stella

Date:

10/22/19

Peak Hour:

5-6 PM

Observer:

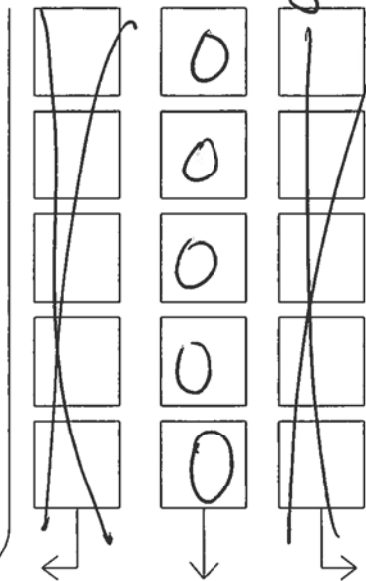
P. Lala

EB Approach:

US190

SB Approach:

driveway



15-min Period:

6:00

5

5:45

4

5:30

3

5:15

2

5:00

1

Time Segment



WB Approach:

US190



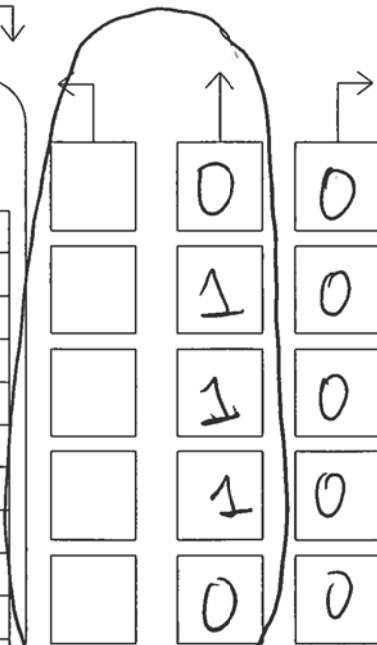
5 4 3 2 1

Time Segment:

NOTES:

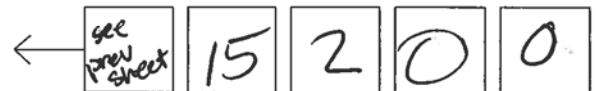
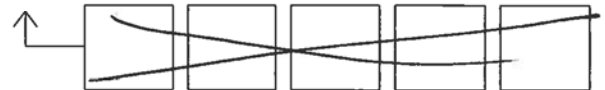
See observations sheet

shared



NB Approach:

Maris Stella



1 2 3 4 5

Time Segment:

1

2

3

4

5

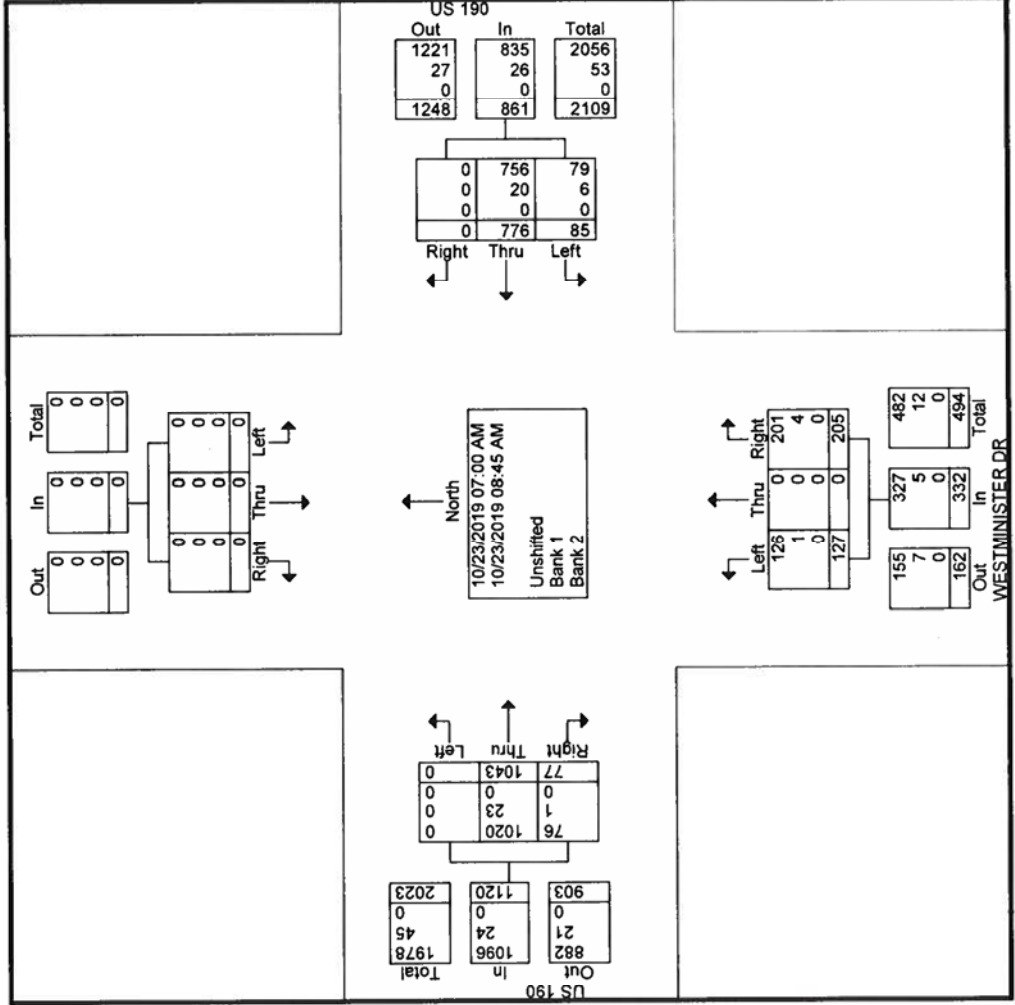
Time Segment:

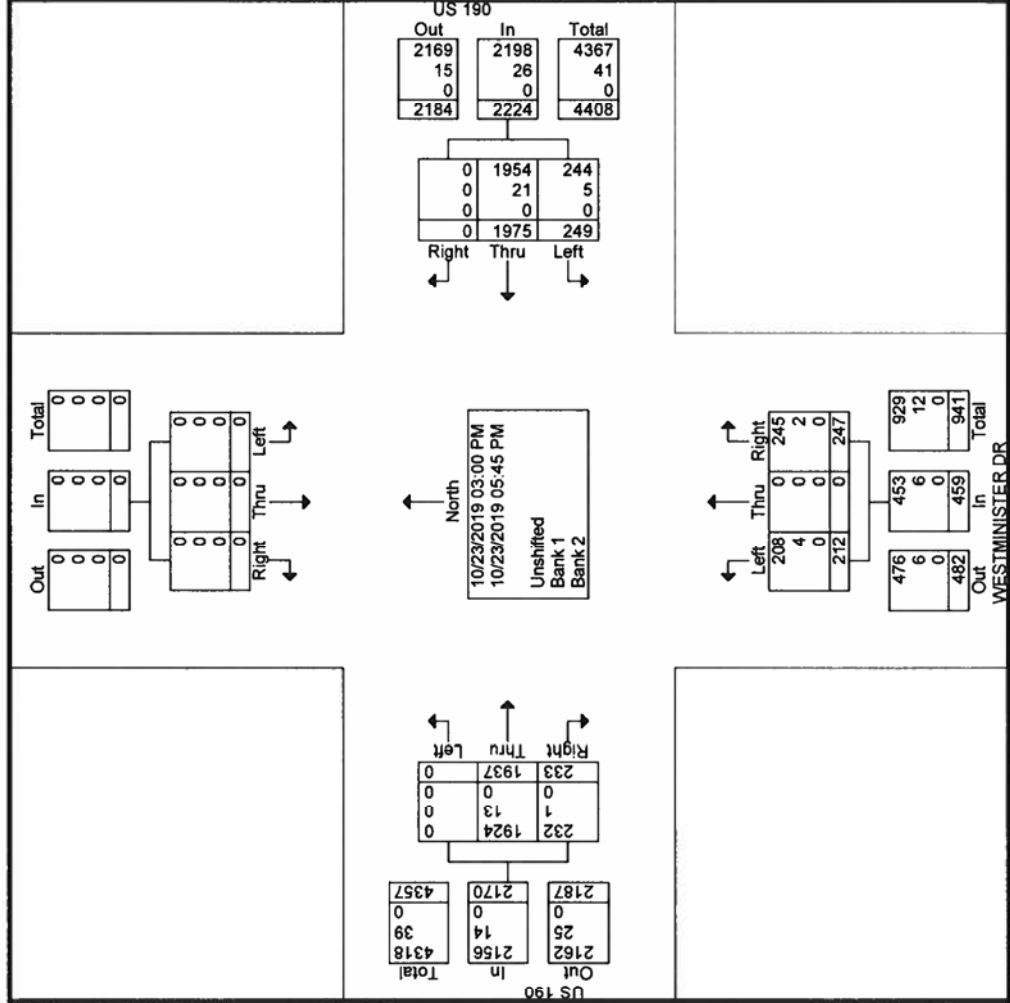
Peak Period Observations

Intersection: US190 @ Maris Stella					
Date: 10/22/19					
Peak Hour: 4-6 PM					
Observer: P. Lala					
15-min Period	Time	Queue (veh)	Direction	Dissipated by	General Observations:
4-4:15 PM	4:03	12	WB	4:06	queued from Carroll Rd signal - multiple vehicles used left
	4:04	3	EB	4:04 (<30sec)	turn lane as thru lane
	4:06	19	WB	4:08	queued from Carroll Rd signal original 19 cleared - still queued
4:15-4:30 PM					westbound Stayed queued due to Carroll Rd queuing
4:30-4:45 PM					westbound Stayed queued as far as I could see due to Carroll Rd queuing
4:45-5 PM					westbound Stayed queued as far as I could see due to Carroll Rd queuing
5-5:15 PM					WB 5:17 queue cleared at Maris Stella "the steady queue"
5:15-5:30 PM	5:24	6	EB	5:25	
	5:28	2	NB	5:29	
5:30-5:45 PM	5:35	6	WB	5:36	
	5:43	2	NB	5:44	
5:45-6 PM	5:53	3	EB	5:53	queued for < 30 seconds
Other Observations:	WB stayed queued due to Carroll Rd signal ~4-5:17 PM ↳ que. cleared at Maris Stella				

La DSD
 685 N. Morrison Blvd.
 Hammond, La 70401

File Name : US 190 @ Westminster
 Site Code : 00000000
 Start Date : 10/23/2019
 Page No : 2





Location:

US190@ Westminster

Date:

10/23/19

Peak Hour:

7-8 AM

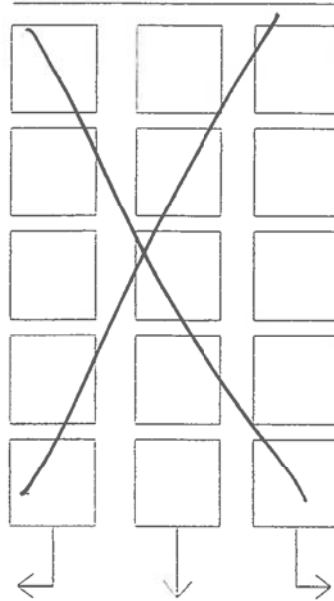
Observer:

P.lala

EB Approach:

US190

SB Approach:



15-min Period:

8:00

5

7:45

4

7:30

3

7:15

2

7:00

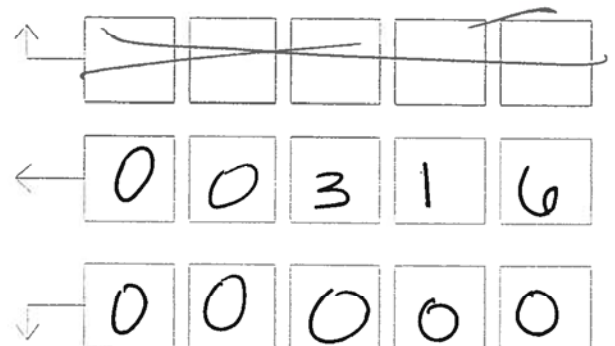
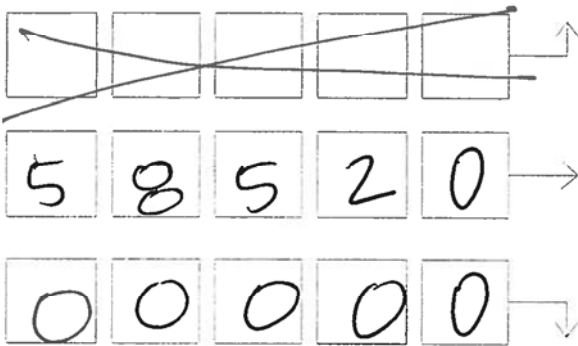
1

Time Segment



WB Approach:

US190

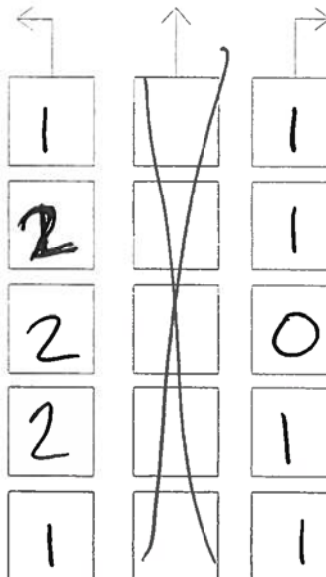


5 4 3 2 1

Time Segment:

NOTES:

See observations sheet



NB Approach:

Westminster

1 2 3 4 5

Time Segment:

Time Segment:

Location:

US190 @ Westminster

Date:

10/23/19

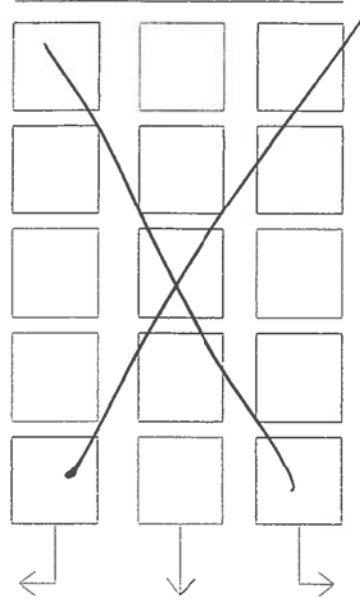
Peak Hour:

8-9 AM

Observer:

P. Lala

SB Approach:



15-min Period:

9:00

5

8:45

4

8:30

3

8:15

2

8:00

1

Time Segment

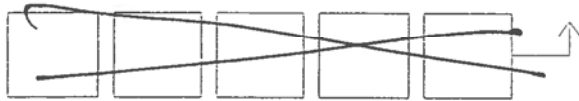


WB Approach:

US190

EB Approach:

US190



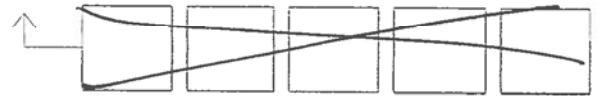
0 8 3 3 5 →

0 0 0 0 0 ↓

5 4 3 2 1

Time Segment:

NOTES:
see observations sheet



← 6 3 1 0 0

↓ 0 0 0 0 0

1 2 3 4 5

Time Segment:

1

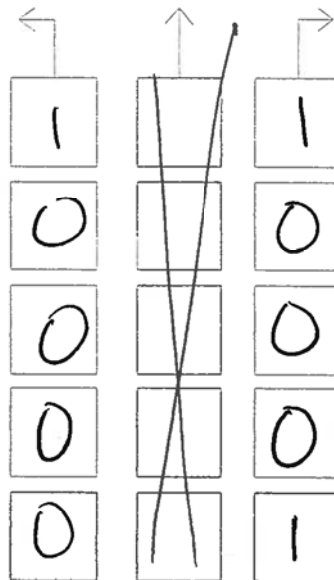
2

3

4

5

Time Segment:



NB Approach:

Westminster

Peak Period Observations

Intersection:		US190 @ Westminster			
Date:		10/23/19			
Peak Hour:		7-9 AM			
Observer:		P. Lala			
15-min Period	Time	Queue (veh)	Direction	Dissipated by	General Observations:
7-7:15 AM	7:01	2	NBL	7:02	1 st vehicle school bus
	7:04	6	EB	7:05	
	7:13	3	NBL	7:14	
7:15-7:30 AM	7:17	5	EB	7:18	
	7:20	4	NBL		
			EB		
7:30-7:45 AM	7:33	20	EB	7:35 7:35	EB steady queue 7:33-7:39 * initial 20 cleared
	7:37	4	NBL ^{left}	7:38	could not see end
	7:38	5	WB	7:39	
	7:41	3	NBR	7:42	
7:45-8 AM	7:47	3	NBR	7:48	
	7:53				EB queued due to Carroll Rd queuing
8-8:15 AM	8:03	8	EB		steady queue until 8:10
	8:07	3	NBL	8:08	
	8:10	5	WB	8:11	
8:15-8:30 AM	8:20	8	EB	8:21	
8:30-8:45 AM	8:34	2	NBL	8:35	queued < 30 seconds
	8:34	2	WBL	8:34	
	8:35	9	WB	8:36	
	8:40	3	NBR	8:41	
8:45-9 AM	8:46	3	EB	8:47	
	8:47	6	EB	8:48	
	8:48	3	WBL	8:49	
Other Observations:					

Location:

US 190 @ Westminster

Date:

10/23/19

Peak Hour:

3-4 PM

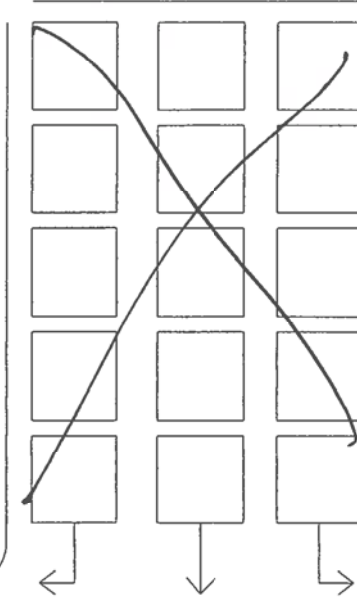
Observer:

P. Lala

EB Approach:

US 190

SB Approach:



15-min Period:

4:00

5

3:45

4

3:30

3

3:15

2

3:00

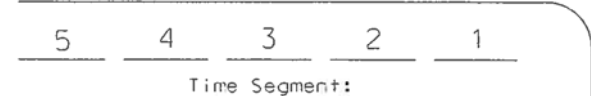
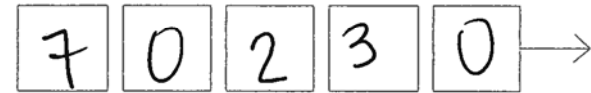
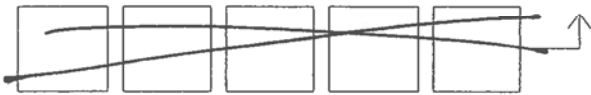
1

Time Segment

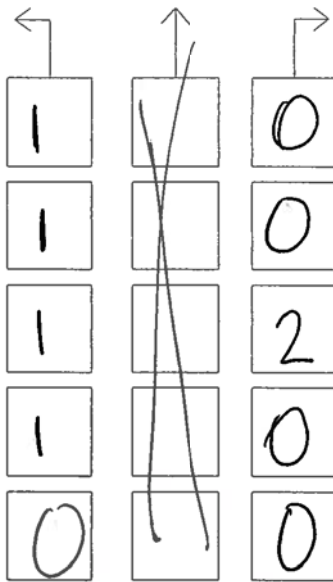
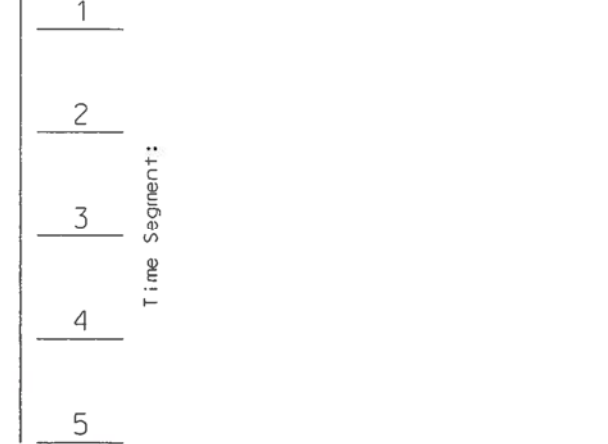
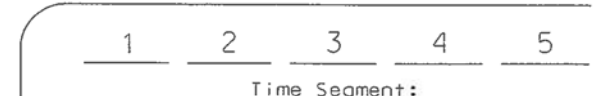
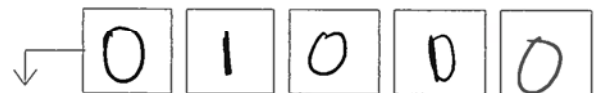
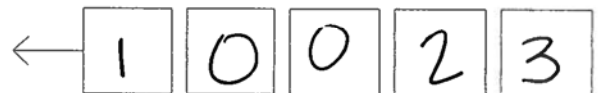


WB Approach:

US 190



NOTES:
see observations sheet



NB Approach:

Westminster

Peak Period Observations

Intersection:		US190 @ Westminster			
Date:		10/23/19			
Peak Hour:		3-4 PM			
Observer:		P. Lala			
15-min Period	Time	Queue (veh)	Direction	Dissipated by	General Observations:
3-3:15 PM	3:02	2	NBL	3:03	
	3:04	9	EB	3:05	
	3:08	8	EB	3:09	
	3:09	2	WBL	3:10	
	3:12	9	EB	3:13	
3:15-3:30 PM	3:16	15	EB	3:17	
	3:18	34	NBL	3:19	
3:30-3:45 PM	3:31	4	NBL	3:32	
	3:32	5	EB	3:33	
	3:34	10	EB	3:35	
	3:36	3	WB	3:36	queued < 30 seconds
3:45-4 PM	3:47	10	EB	3:48	
	3:47	4	NBL	3:49	
	3:52	6	WB	3:53	
	3:54	1	NB	3:55	School bus in queue
Other Observations:					

Location:

US190@ Westminster

Date:

10/23/19

Peak Hour:

4-5 PM

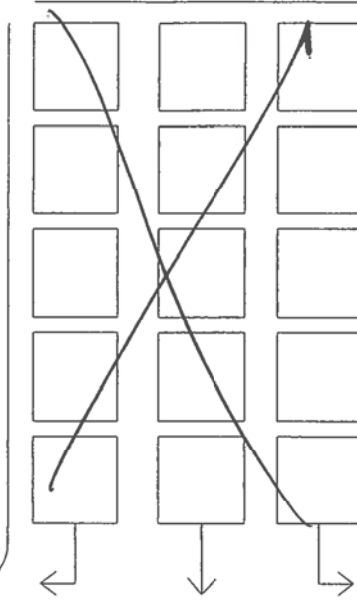
Observer:

P. Lal

EB Approach:

US 190

SB Approach:



15-min Period:

5:00

5

4:45

4

4:30

3

4:15

2

4:00

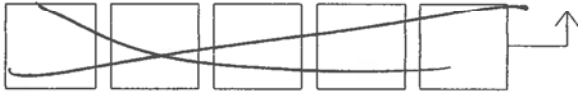
1

Time Segment



WB Approach:

US 190



0 2 1 8 7 →

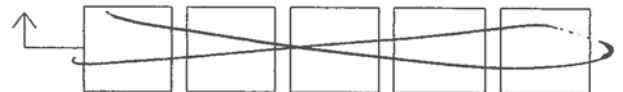
1 0 0 0 0 ↓

5 4 3 2 1

Time Segment:

NOTES:

See observations sheet



← 3 1 1 0 0

↓ 0 1 1 0 0

1 2 3 4 5

Time Segment:

1

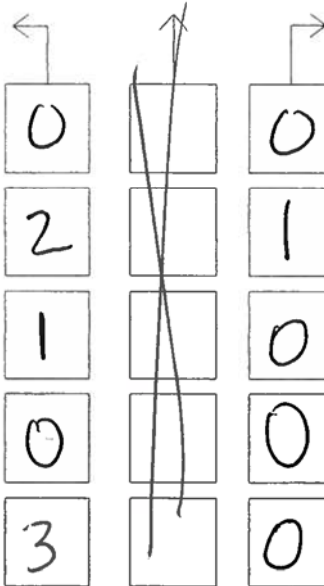
2

3

4

5

Time Segment:



NB Approach:

Westminster

Location:

US 190 @ Westminster

Date:

10/23/19

Peak Hour:

5-6 PM

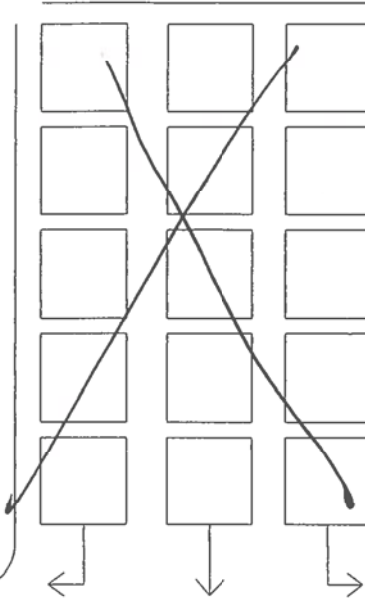
Observer:

P. Lala

EB Approach:

US 190

SB Approach:



15-min Period:

6:00

5

5:45

4

5:30

3

5:15

2

5:00

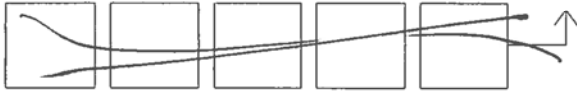
1

Time Segment



WB Approach:

US 190



0 0 5 1 0 →

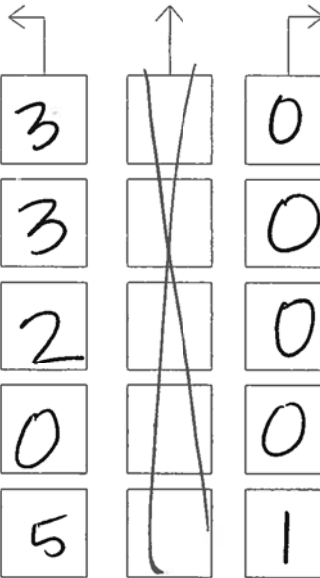
0 0 0 0 1 ↓

5 4 3 2 1

Time Segment:

NOTES:

see observations sheet



NB Approach:

Westminster



← 0 1 2 0 0

↓ 0 0 0 0 1

1 2 3 4 5

Time Segment:

1

2

3

4

5

Time Segment:

Peak Period Observations

Intersection: US190 @ Westminster					
Date: 10/23/19					
Peak Hour: 4-6 PM					
Observer: P. Lala					
15-min Period	Time	Queue (veh)	Direction	Dissipated by	General Observations:
4-4:15 PM	4:03	WB 5	WB	4:04	
	4:04	3	NBL	4:05	
	4:05	6	WB	4:06	
	4:09	7	EB	4:10	
	4:10	4	NBL	4:11	
4:15-4:30 PM	4:16	12	EB	4:17	
	4:19	4	WBL	4:20	
	4:26	1	NBL	4:27	
	4:27	5	EB	4:28	
4:30-4:45 PM	4:33	2	NBL	4:34	
	4:34	3	WB	4:35	
	4:42	10	EB	4:43	
4:45-5 PM	4:47	6	EB	4:48	
	4:48	2	NB	4:49	
	4:54	4	WB	4:55	
5-5:15 PM	5:05	2	NB	5:06	
	5:07	5	NB	5:08	
	5:10	3	NB	5:11	
	5:11	2	WB	5:11	queued < 30 seconds
5:15-5:30 PM	5:19	8	EB	5:20	
	5:21	4	NBL	5:22	
	5:21	4	NBL	5:22	
	5:23	5	NBL	5:24	
	5:24	9	EB	5:25	
5:30-5:45 PM	5:31	10	EB	5:32	
	5:35	6	EB	5:36	
	5:35	6 4	NBL	5:37	
5:45-6 PM	5:49	2	NBL	5:50	
	5:50	5	EB	5:51	
	5:52	10	EB	5:53	
Other Observations:	multiple vehicles using parking of lots to avoid signal				



**US 190 (LA 433 to US 11) Interim Capacity/Widening Improvements
Stage 0 Feasibility Study
ST Tammany Parish**



SUBMITTED BY:



***June 30, 2014
FINAL REPORT***

IN ASSOCIATION WITH:

Burk-Kleinpeter, Inc.

C&S Consultants, Inc.

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Stage 0 Feasibility Study

US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements –
ST Tammany Parish

Project Summary

SUMMARY

INTRODUCTION:

This project includes a safety and capacity evaluation of the US 190 corridor within St. Tammany Parish extending from LA 433 to US 11. Proceeding from the west terminus of the project at the US 190 intersection with LA 433, US 190 crosses Bayou Liberty as a 2-lane rural route and then transitions to a 3-lane roadway with open ditch drainage. It remains as a 3-lane roadway for approximately 2.5 miles until Bayou Bonfouca at which point it transitions back to a 2-lane roadway as it crosses the Bayou. The roadway returns to a 3-lane section east of Bayou Bonfouca to the eastern project terminus at US 11. The US 190 intersection with US 11 also includes a crossing of the main line of Norfolk Southern Railroad. The corridor under study includes the following signalized intersection as well as the Dixie Ranch Road intersection, the Camp Villere Road intersection and the Carnation Street intersections:

- *US 190 @ LA 433*
- *US 190 @ Northshore Boulevard*
- *US 190 @ Grand 16 Theatre Entrance*
- *US 190 @ Westminster Drive*
- *US 190 @ Carroll Road / Sunset Drive*
- *US 190 @ Maris Stella Street*
- *US 190 @ Plaza Shopping Center*
- *US 190 @ US 11*

The existing 3-lane facility as constructed does not provide for pedestrian or bicycle facilities. However, the developed portion of the Tammany Trace Trail parallels US 190 from LA 433 to Nelso Road approximately 200' to the south of the US 190 ROW. The undeveloped portion of the Trace extends east from Nelso Road to its intersection with US 190. The Tammany Trace intersects the US 190 ROW approximately 150' east of Cherry Street.

The project limits and Average Daily Traffic are shown in Exhibit S-1

A review draft of the Stage 0 report was prepared and distributed to stakeholders. A project meeting was conducted at LADOTD District 62 offices on May 21, 2014 to review the Draft Stage 0 Report and a copy of the meeting minutes is enclosed as Attachment 1 to this Summary. The following changes were made to the final report reflecting meeting comments:

- ***Driveway Access at Northshore Boulevard.*** *Plate 2 was modified to show the two driveways on the Chevron site (one facing Northshore Boulevard, one facing US 190) as right-in, right-out and the driveway fronting US 190 on the McDonalds site as right-in, right-out.*
- ***Access at Cherry Street, Plate 2*** – *A note was added to the Plate 2 indicating that the follow-up environmental document should consider a roundabout intersection at Cherry Street and US 190, or possible J-turn locations for motorists accessing/egressing Cherry Street.*

- **N. Harrison Road** – Consensus was to remove the u-turn movement from the turn lane onto N. Harrison Road from US 190 and this was accomplished. A note was added to the drawing suggesting that the u-turn be eliminated in lieu of providing a pair of u-turns at St. Tammany Avenue.
- **Establishment of an Additional Analysis Link** – The review draft Stage 0 Report included the widening of the bridge over Bayou Bonfouca in Link 5. The projected Link 5 cost was estimated to be over \$14 million. It was suggested that an additional corridor link be established. The link would extend on the west side of the Bayou approximately from the approach to the left turn at North Harrison Street, across the Bayou and to St. Tammany Avenue. The new link would include the bridge widening to accommodate pedestrian movements, and potential U-turn locations. The new Link was developed for this final report and it is shown as Link 5-A. Notes were added to Plate 6 showing locations where U-turns will be studied in the follow-up environmental document. The cost of u-turns was included in the cost estimate for new link 5-A and the cost of the bridge widening is shown on the project cost estimate summary.

In addition to the changes to the draft Stage 0 document as noted above, the following concerns associated with the Carnation Street to US 11 Link are noted for consideration in follow-up engineering studies and environmental documents.

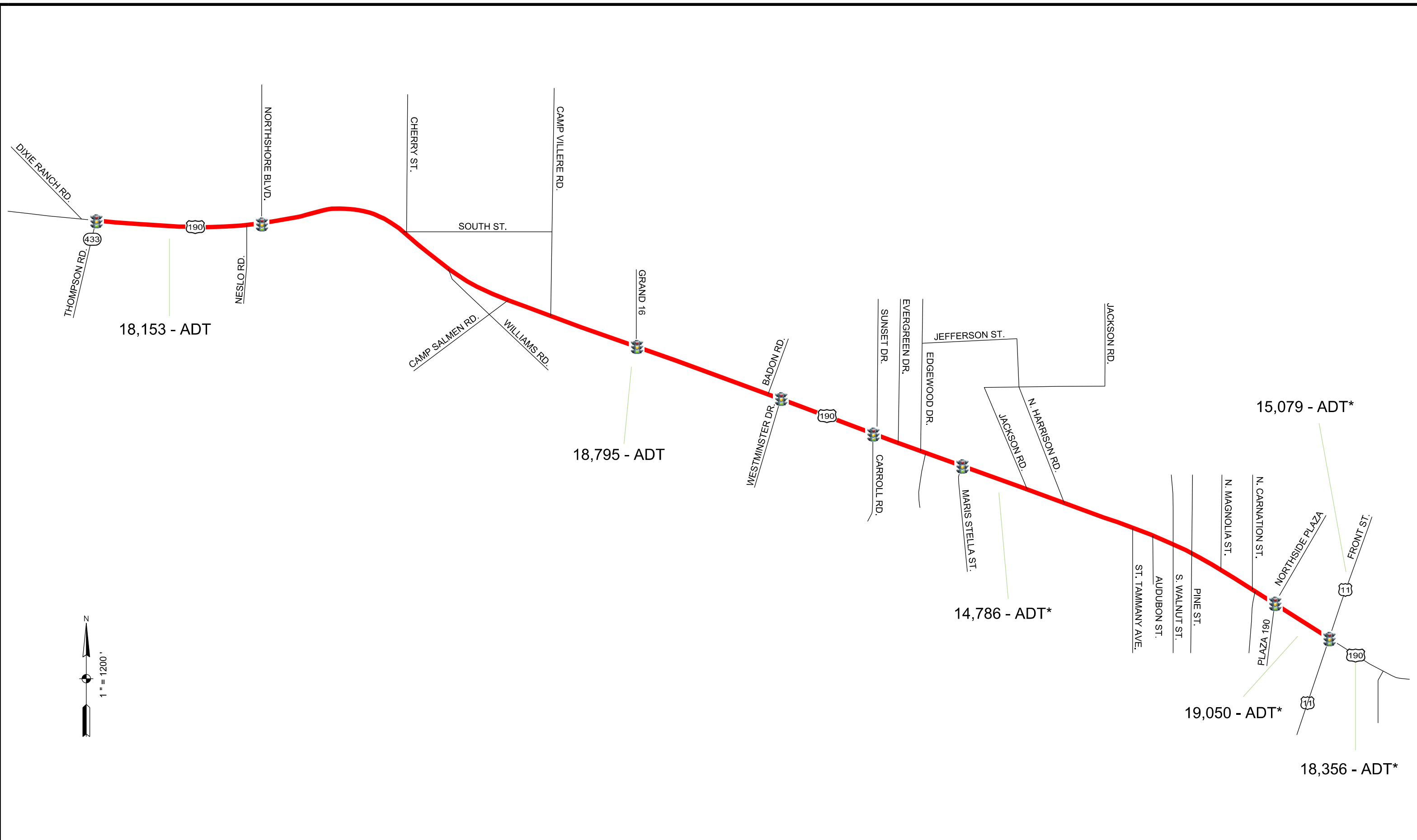
- LADOTD has an environmental assessment in progress studying US 11 from US 190 to Interstate -12. This study may affect traffic patterns extending along US 190 from Carnation Street to US 11. The future environmental document for US 190 should consider the findings of the US 11 EA.
- A traffic signal is located just to the east of the Carnation Street roundabout. LADOTD expressed concern that his signal would not meet the requirements for a signal warrant at that location. There was also concern from the City of Slidell with the placement of the sidewalk adjacent to the travel lanes with no separation.
- Overall, the access to / from shopping centers abutting US 190 was a concern. The follow-up environmental document should study more thoroughly how access can be provided from / to the shopping center parking areas; and how traffic circulation within the shopping center parking areas could be improved to accommodate appropriate access to US 190.

PURPOSE AND NEED

The Purpose of the Study is to develop an Interim Capacity Improvement Program which can be funded incrementally with projects in the range \$3 million to \$6 million. The program would address capacity issues throughout the corridor and support complete streets improvements.

Table S-1 shows the year 2013 Level of Service analysis for intersections within the corridor under study for AM and PM peak hours for all movements through the intersection. Also presented is the Delay (in seconds). The PM Analyses for the Grand Theatre access was undertaken at the peak operating time of the theaters, not the PM peak hour of the corridor.

Most of the intersections experience deficient level of service (E or F) through at least one intersection movement.



LEGEND



 PROJECT LIMITS
 SIGNALIZED INTERSECTIONS
 (XX - ADT) OBTAINED FROM 2013 PROJECT COUNTS
 (XX - ADT*) OBTAINED FROM 2012 DOTD COUNT STATIONS

EXHIBIT S-1
US 190 STAGE 0
AVERAGE DAILY TRAFFIC

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Table S-1 Intersection Level of Service, Year 2013					
Intersecting Street	Movement	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Dixie Ranch Road	NB	---	---	---	---
	SB	186.4	F	115.1	F
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A
Thompson Road (LA 433)	NB	56.1	E	26.1	C
	SB	---	---	---	---
	WB	15.5	B	16.9	B
	EB	31.9	C	24.9	C
	Intersection	34.3	C	20.8	C
Northshore Boulevard	NB	---	---	---	---
	SB	25.1	C	102.6	F
	WB	21.2	C	20.4	C
	EB	21.8	C	16	B
	Intersection	22.6	C	53.4	D
Camp Villere Road	NB	---	---	---	---
	SB	130.7	F	202.1	F
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A
Grand 16 Theatre Entrance	NB	---	---	---	---
	SB	22.7	C	46.6	D
	WB	14	B	41.3	D
	EB	5.6	A	10.1	B
	Intersection	9.5	A	26.9	C
Westminster Drive	NB	25.1	C	29.4	C
	SB	---	---	---	---
	WB	6.9	A	9.4	A
	EB	14.5	B	14.9	B
	Intersection	13.1	B	13.6	B
Sunset Drive / Carroll Road	NB	83.4	F	104.6	F
	SB	110.8	F	108.5	F
	WB	24.2	C	69.4	E
	EB	32.2	D	27.9	C
	Intersection	37.2	D	46.5	D
Maris Stella Street	NB	34.4	C	26.3	C
	SB	39.7	D	39.7	D
	WB	11.3	B	20.6	C
	EB	25.5	C	13.3	B
	Intersection	21	C	17.9	B
N. Carnation Street	NB	---	---	---	---
	SB	133.3	F	278.8	F
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A
S. Carnation Street	NB	167	F	99.8	F
	SB	---	---	---	---
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A

LOS E or worse

Source: Neel-Schaffer, Inc.

To further document the Need for improvements within the corridor, the study team undertook a Design Life Analysis of intersections along the project corridor. The Design Life Analysis objective is to predict the last year before any of the subject intersection movements exceed a volume-to-capacity ratio (V/C) of 1.0 (i.e., capacity). Annual traffic growth within the corridor is estimated to be 2.25% and the base year for the Design Life Analysis was 2016. Table S-2 presents the No-Build condition Design Life Analysis for each intersection within the corridor starting at the base year 2016. The No-Build represents the future year traffic condition operating within the year 2013 intersection geometry.

Table S-2 No-Build Design Life Analysis Years Beyond 2016 in Which the Intersection Continues to Operate At or Below Capacity		
Intersecting Street	AM Peak Hour	PM Peak Hour
Dixie Ranch Road	20 years	20 years
Thompson Road (LA 433)	0 years	14 years
Northshore Boulevard	1 year	0 years
Camp Villere Road	0 years	0 years
Grand 16 Theatre Entrance	20 years	0 years
Westminster Drive	15 years	7 years
Sunset Drive / Carroll Road	0 years	2 years
Maris Stella Street	3 years	3 years
N. Carnation Street	20 years	0 years
S. Carnation Street	20 years	20 years

Source - Neel-Schaffer, Inc.

The Design Life Analysis indicates that by year 2020, only the Dixie Ranch Road intersection, the Westminster Drive intersection and S. Carnation Street intersection continue to operate within capacity within both AM and PM peaks under the No-Build scenario.

PROPOSED IMPROVEMENTS

The overall scope of the project was to develop concepts for roundabout geometry intersections along the corridor and to incorporate pedestrian and bicycle facilities within the corridor in concert with complete street concepts.

Proceeding from west to east through the corridor, a roundabout intersection is proposed for the US 190 intersection with LA 433. As part of that improvement, Dixie Ranch Road will be relocated so that it ties directly into the roundabout.

A two-lane boulevard will be constructed from a point east of the existing bridge crossing of Bayou Liberty to the existing bridge crossing of Bayou Bonfouca; and from east of Bayou Bonfouca to a new roundabout geometry intersection at Carnation Street. The roadway will include two 12' travel lanes, an 8' median and 8' paved shoulders.

The paved shoulders will be stripped as bicycle lanes. Other complete streets improvements include a 5' sidewalk along the south ROW from Nelso Road to a new roundabout intersection

proposed at Northshore Boulevard; and a new 5' sidewalk extending along the north ROW from the Northshore Boulevard roundabout to a new roundabout geometry intersection at Carnation Street. The existing bridge over Bayou Bonfouca will be widened to accommodate a 5' sidewalk and 8' paved shoulders. A 10' multi-use path is constructed from the Tammany Trace intersection with US 190 along US 190 to Williams Road.

Roundabout geometry intersection will also be provided at Camp Villere Road, the Grand Theatre entrance road, at Westminster Drive, at Carol Road / Sunset Drive and at Maris Stella Street. Except for the LA 433 roundabout, the proposed roundabouts include provision for bike / pedestrian movements through the roundabout.

Other geometric improvements in the two-lane boulevard segment include a west bound direction left turn directly into the US Post Office and an east bound direction J-turn at North Harrison Road.

To the east of the Carnation Street roundabout, US 190 functions as a four-lane boulevard section with 15' median. The existing signal at Northside Plaza is maintained.

SAFETY ANALYSIS

A safety analysis was performed for the study intersections.

A conflict point is a point at which a vehicle crosses, merges, or diverges from a road or driveway and conflicts with another vehicle. These points correspond with potential for crashes. Conflict points were determined at the study intersections along US 190 for the no build and the build alternatives. The results are shown below in Table S-3 and Table S-4 respectively.

Table S-3
 Number of Conflict Points by Type for No Build Condition

Intersecting Street	Crossing	Merging	Diverging	Total
Dixie Ranch/ Thompson Rd (LA 433).	8	8	7	23
Northshore Blvd.	4	4	3	11
Camp Villere Rd.	5	4	3	12
Grand 16 Theater Dwy.	6	3	3	12
Westminster Dr.	6	4	3	13
Carroll Rd/ Sunset Dr.	17	8	7	32
Maris Stella St./ Clinic Dwy.	12	5	8	25
Carnation St./ S. Carnation St.	6	7	7	20
Northside Plaza	16	8	8	32
US 11 (Front St.)	40	9	9	58
Total	120	60	58	238

Table S-4
Number of Conflict Points by Type for Build Condition

<i>Intersecting Street</i>	<i>Crossing</i>	<i>Merging</i>	<i>Diverging</i>	<i>Total</i>
<i>Dixie Ranch/ Thompson Rd. (LA 433)</i>	<i>0</i>	<i>7</i>	<i>7</i>	<i>14</i>
<i>Northshore Blvd.</i>	<i>2</i>	<i>5</i>	<i>5</i>	<i>12</i>
<i>Camp Villere Rd.</i>	<i>0</i>	<i>3</i>	<i>3</i>	<i>6</i>
<i>Grand 16 Theater Dwy.</i>	<i>0</i>	<i>4</i>	<i>4</i>	<i>8</i>
<i>Westminster Dr.</i>	<i>0</i>	<i>3</i>	<i>3</i>	<i>6</i>
<i>Carroll Rd/ Sunset Dr.</i>	<i>0</i>	<i>4</i>	<i>4</i>	<i>8</i>
<i>Maris Stella St./ Clinic Dwy.</i>	<i>0</i>	<i>4</i>	<i>4</i>	<i>8</i>
<i>Carnation St./ S. Carnation St.</i>	<i>4</i>	<i>8</i>	<i>9</i>	<i>21</i>
<i>Northside Plaza</i>	<i>24</i>	<i>8</i>	<i>8</i>	<i>40</i>
<i>US 11 (Front St.)</i>	<i>40</i>	<i>9</i>	<i>9</i>	<i>58</i>
<i>Total</i>	<i>70</i>	<i>55</i>	<i>56</i>	<i>181</i>

In accordance with FHWA guidance, crossing conflicts result in left turn and angle crashes that account for generally more severe crashes than other types. The build alternative will decrease the number of crossing conflicts within the study corridor intersections by 42%.

The number of conflict points on US 190 were not determined along segments between the study intersections. However, it should be noted that no build conditions have numerous driveways along the corridor that are full access. Driveways that are lined up with another driveway across the street will have approximately thirty-two (32) conflict points (16 crossing, 8 merging, and 8 diverging). Driveways that are not lined up with another driveway will have approximately nine (9) conflict points (3 crossing, 3 merging, and 3 diverging). The build alternative has a median that will turn all of the full access driveways into right-in, right-out driveways. This will cut down the number of conflict points to approximately two (2) (1 merge and 1 diverge) in two-lane segments, and three (3) (2 merge and 1 diverge) in four-lane segments. The build alternative will cut down the number of conflict points dramatically along the segments of US 190. It can also be expected that the severity of crashes along the segments of US 190 will decline with build conditions since crossing conflict points will be eliminated.

In accordance with the FHWA Crash Modification Factors Clearinghouse, “A crash modification factor (CMF) is a multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure at a specific site. For example, an intersection is experiencing 100 angle crashes and 500 rear-end crashes per year. If you apply a countermeasure that has a CMF of 0.80 for angle crashes, then you can expect to see 80 angle crashes per year following the implementation of the countermeasure (100 x 0.80 = 80).” Table S-5 below lists the crash modification factors associated with each intersection improvement in the build condition.

Table S-5
Crash Modification Factors for Build Condition

<i>Intersecting Street</i>	<i>From Existing Intersection Control to Build Improvement</i>	<i>Crash Type</i>	<i>Crash Severity</i>	<i>CMF</i>
<i>Dixie Ranch Rd/ Thompson Rd</i>	<i>Signalized to 2 Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.81</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.29</i>
<i>Northshore Blvd</i>	<i>Signalized to 2 Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.81</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.29</i>
<i>Camp Villere</i>	<i>Unsignalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.28</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.12</i>
<i>Grand 16 Theater</i>	<i>Signalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.74</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.45</i>
<i>Westminster Dr</i>	<i>Signalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.74</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.45</i>
<i>Sunset Dr/ Carroll Rd</i>	<i>Signalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.74</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.45</i>
<i>Maris Stella/ Clinic Dwy</i>	<i>Signalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.74</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.45</i>
<i>Carnation St</i>	<i>Unsignalized to 2 Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.751</i>
		<i>All</i>	<i>Fatal, Serious injury, Minor injury</i>	<i>0.65</i>

Note: The lower the CMF, the more crash reductions can be expected. A CMF score lower than 1 predicts a reduction in the number of crashes with the suggested roadway improvement. A CMF score higher than 1 would predict an increase in crashes. A CMF of 1 would predict no change in the number of crashes.

All of the crash modification factors listed in Table S-5 for the roundabout countermeasures are less than one (1). Therefore, it can reasonably be expected that the build alternative will decrease the number of accidents that are currently occurring at these locations. The build alternative for the intersection of US 190 and US 11 (Front Street) is the same layout as the no build alternative. As explained above, crash modification factors are typically used for intersection conversions, therefore US 190 at US 11 (Front Street) was excluded from Table 1-6. The build alternative for the intersection of US 190 and Northside Plaza includes widening US 190 from a two-lane section to a four-lane section. There are no crash modification factors available for this type of roadway improvement, therefore this intersection was also excluded from Table S-5.

FINDINGS OF THE TRAFFIC STUDY

The typical methodology for development of the traffic analysis supporting a project is to compare the future no-build at 20 years past the base year with the future build at 20 years past the base year.

However, since the focus of the project is to develop interim improvements, an Interim Design Year (2016) was established as the base year for the analysis. To establish the design life for each improvement, and the design life of the No-Build, the study team undertook a Design Life Analysis of intersections along the project corridor. Table S-6 compares the No-Build condition Design Life Analysis with the build geometry Design Life Analysis for each intersection within the corridor starting at the base year 2016.

Table S-6 No-Build vs Build Design Life Analysis Years Beyond 2016 in Which the Intersection Continues to Operate At or Below Capacity				
Intersecting Street	No Build Design Life		Build Design Life	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Dixie Ranch Road	20 years	20 years	NA*	NA*
Thompson Road (LA 433)	0 years	14 years	7 years	10 years
Northshore Boulevard	1 year	0 years	20 year	16 years
Camp Villere Road	0 years	0 years	20 years	20 years
Grand 16 Theatre Entrance	20 years	0 years	20 years	8 years
Westminster Drive	15 years	7 years	20 years	18 years
Sunset Drive / Carroll Road	0 years	2 years	17 years	10 years
Maris Stella Street	3 years	3 years	14 years	13 years
N. Carnation Street	20 years	0 years	20 years	20 years
S. Carnation Street	20 years	20 years	NA**	NA**

NA* - Will be part of the Thompson Road Roundabout

Source - Neel-Schaffer, Inc.

NA** - Will be part of the Carnation Street Roundabout

The build alternative extends the design life for all of the intersections.

The intersections of US 190 and US 11 (Front St.) and US 190 and Northside Plaza are signalized intersections for the no build alternative. Build condition improvements for these intersections are associated with widening the roadway and not a change in the type of traffic control. The results of the intersection analyses are summarized in Tables S-7 through S-9. Table S-7 below shows the results of the existing 2013 conditions.

Table S-7
2013 AM and PM Peak Hour Existing Conditions Intersections
Delay (sec) / LOS

Intersecting Street	Approach	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
US 11 (Front St.)	NB	34	C	40.1	D
	SB	36.5	D	52.7	D
	WB	29.5	C	49.3	D
	EB	30.1	C	30.3	C
	Intersection	32.6	C	42.7	D
Northside Plaza	NB	41.9	D	50.2	D
	SB	45.5	D	62.5	E

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	WB	2.6	A	3.9	A
	EB	5.9	A	3.2	A
	Intersection	5.5	A	7.6	A

2016 year conditions were analyzed for the two (2) signalized intersections in the build alternative. The results of these no build versus build analyses during the AM peak hour are shown below in Table S-8.

Table S-8
 2016 Year AM Peak Hour – No Build vs. Build
 Delay (sec) / LOS

Intersecting Street	Approach	2016 No Build		2016 Build	
		Delay	LOS	Delay	LOS
US 11 (Front St.)	NB	35.7	D	27.9	C
	SB	38.9	D	30.8	C
	WB	31.7	C	27.6	C
	EB	32.6	C	25	C
	Intersection	34.8	C	27.7	C
Northside Plaza	NB	41.8	D	32	C
	SB	45.7	D	34.2	C
	WB	2.6	A	1.7	A
	EB	6.5	A	3.9	A
	Intersection	5.8	A	3.7	A

2016 year conditions were analyzed for the two (2) signalized intersections in the build alternative. The results of these no build versus build analyses during the PM peak hour are shown below in Table S-9.

Table S-9
 2016 Year PM Peak Hour – No Build vs. Build
 Delay (sec) / LOS

Intersecting Street	Approach	2016 No Build		2016 Build	
		Delay	LOS	Delay	LOS
US 11 (Front St.)	NB	41.5	D	32.7	C
	SB	59.6	E	30.3	C
	WB	69.5	E	35.9	D
	EB	31.1	C	25.6	C
	Intersection	50.2	D	31.2	C
Northside Plaza	NB	50.3	D	31.2	C
	SB	67.2	E	33.3	C
	WB	4.3	A	4.8	A
	EB	4	A	5.1	A
	Intersection	8.3	A	7.0	A

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US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

The immediate geometry at the intersection of US 190 and US 11 (Front Street) does not change from no build to build conditions. However, US 190 between Northside Plaza and US 11 does change from a three-lane section in no build conditions to a four-lane section in build conditions. This allows for better timing between the signalized intersections of Northside Plaza and US 11 (Front Street), which is responsible for the decrease in delays at US 11 (Front Street) during the AM and PM peak hours under build conditions.

A VISSIM model was developed to provide a simulation of corridor operations. The VISSIM simulation was developed for the existing year 2013 condition, and for the base year 2016 for both the no-build and the proposed improvements. In keeping with the concept of providing interim improvements, A VISSIM simulation was also developed for year 2026 for both the no-build and build conditions. A file showing the VISSIM simulation is provide on the CD rnclosed within the rear folder of this report.

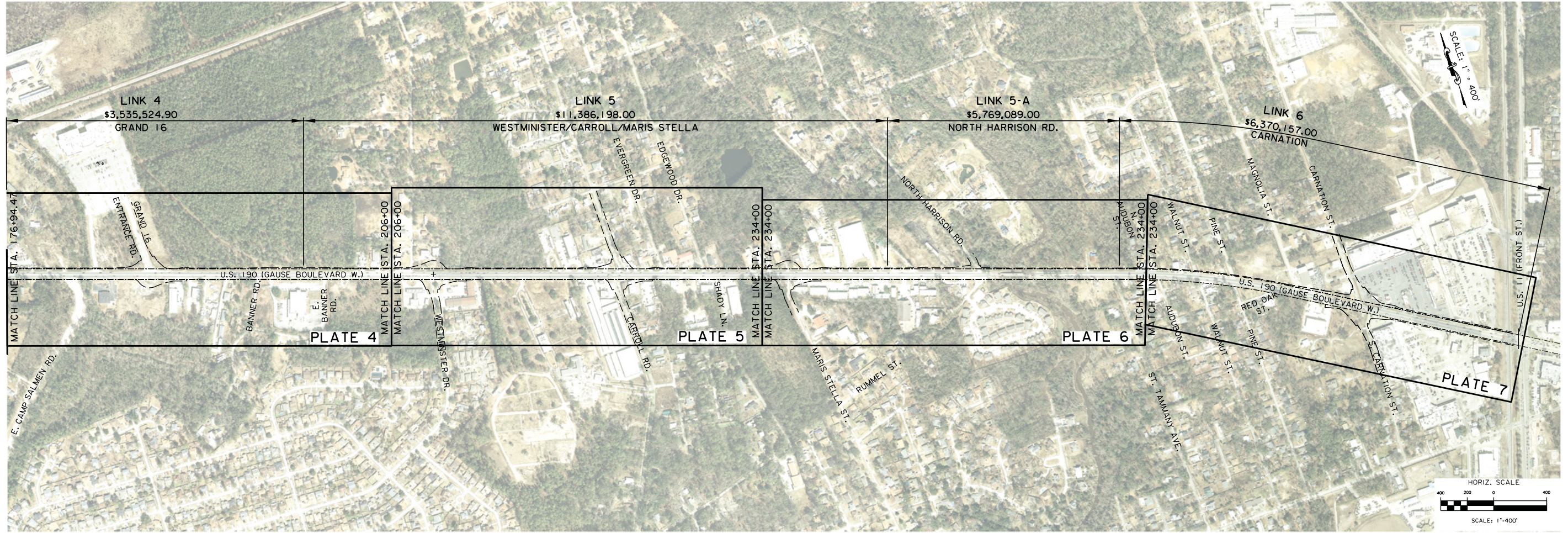
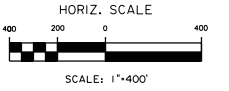
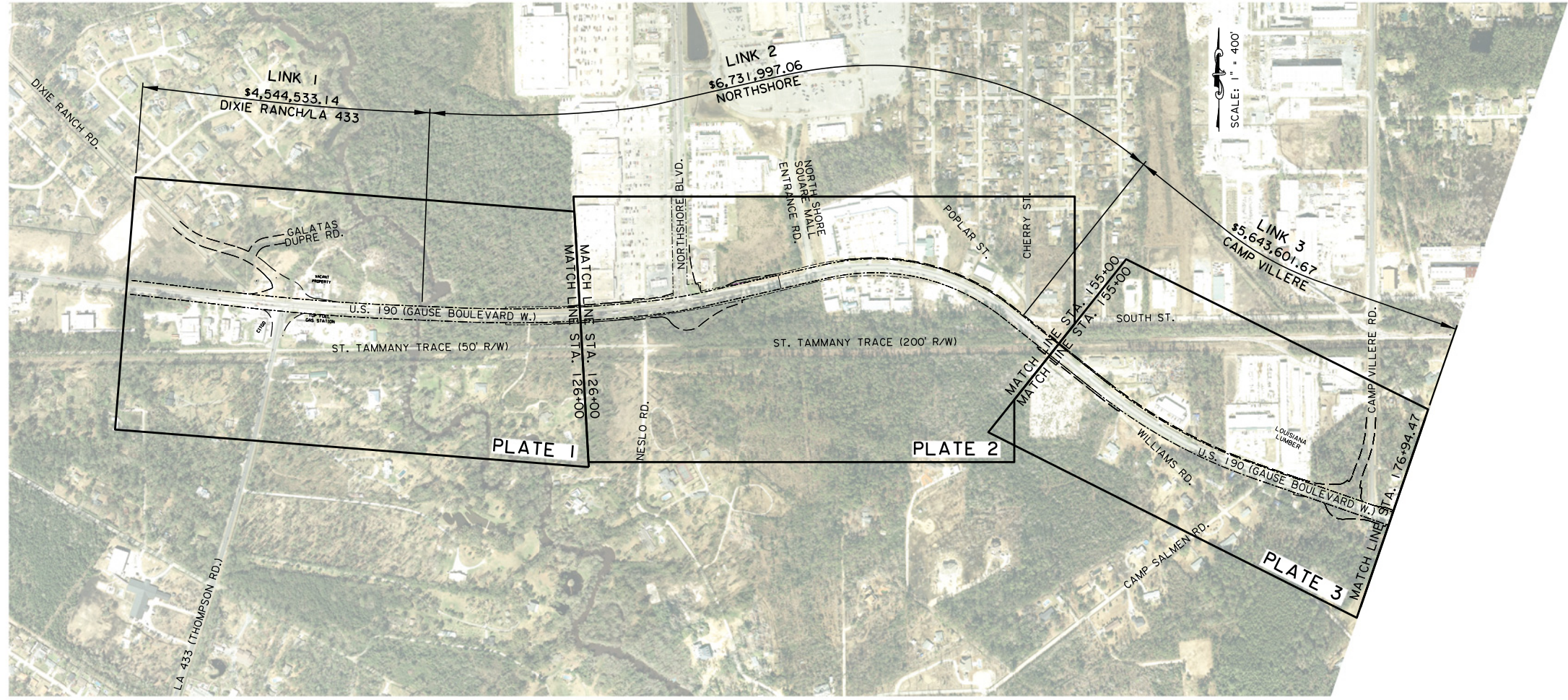
COST SUMMARY AND PROJECT PHASING
Corridor Build-out Concept

Exhibit S-2 serves as a map index for the conceptual engineering plates and it shows how the project can be developed in constructible links extending from west to east along the project corridor. Table S-10 presents the cost summary for each link. Table S-11 established a construction priority for the corridor within the identified links. The construction prioritization conforms to the design life analysis previously shown in Table S-6 in that the intersections which fail the earliest are phased for improvement roughly in the order of failure.

TABLE S-10 COST SUMMARY					
Stage 0 Report US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements - ST Tammany Parish	Corridor	Corridor	Corridor	Anticipated Funding Source	
	Link 1	Link 2	Link 3		
	Dixie Ranch/ LA 433	Northshore Roundabout	Camp Villere Roundabout		
Environmental (Document and Mitigation)	\$30,809	\$80,389	\$58,706		
Engineering Design	\$123,235	\$321,555	\$234,822		
Right-of-way (Acquisition and Services)	\$2,606,010	\$1,421,173	\$1,738,770		
Utility Relocations	\$90,000	\$487,500	\$382,500		
Construction	\$1,540,436	\$4,019,437	\$2,935,276		
Construction Engineering & Inspection	<u>\$154,044</u>	<u>\$401,944</u>	<u>\$293,528</u>		
TOTAL COST	\$4,544,533	\$6,731,997	\$5,643,602		
Stage 0 Report US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements - ST Tammany Parish	Corridor	Corridor	Corridor	Corridor	Anticipated Funding Source
	Link 4	Link 5	Link 5A	Link 6	
	Grand 16 Theatre	Westminster/ Carroll/ Maris Stella	North Harrison to St. Tammany Ave.	St. Tammany Ave. to US 11	
Environmental (Document and Mitigation)	\$43,266	\$117,397	\$46,883	\$70,137	
Engineering Design	\$173,063	\$469,588	\$267,533	\$280,546	
Right-of-way (Acquisition and Services)	\$689,583	\$3,462,382	\$1,476,087	\$1,441,967	
Utility Relocations	\$250,000	\$880,000	\$400,000	\$720,000	
Construction	\$2,163,285	\$5,869,847	\$3,344,168	\$3,506,825	
Construction Engineering & Inspection	<u>\$216,329</u>	<u>\$586,985</u>	<u>\$234,417</u>	<u>\$350,683</u>	
TOTAL COST	\$3,535,525	\$11,386,198	\$5,769,089	\$6,370,157	

Prepared by: Neel-Schaffer, Inc.

Note: Bridge widening construction portion of Link 5-A is estimated to be \$775,000.



SHEET NUMBER		IND-1	
DESIGNED DTT		ST. TAMMANY	
CHECKED N/F	FEDERAL PROJECT	PARISH	STATE PROJECT
DATE	APRIL 29, 2014	NO.	DATE
CHECKED DTT	SHEET	BY	REVISION DESCRIPTION
US 190 (LA 433 TO US 11) INTERIM CAPACITY/WIDENING IMPROVEMENTS STAGE 0 FEASIBILITY STUDY			
EXHIBIT S-2			

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Table S-11
 Prioritization of Construction Based on Design Life Analysis
 Years Beyond 2016 in Which the Intersection Continues to Operate At or Below Capacity

Intersecting Street	Link	Link Cost in millions \$	Construction Priority	No Build Design Life		Build Design Life	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Dixie Ranch Road	1	\$4.5	Priority 5 (1 phase)	20 years	20 years	NA*	NA*
Thompson Road (LA 433)				0 years	14 years	7 years	10 years
Northshore Boulevard	2	\$6.7	Priority 1 (2 phases)	1 year	0 years	20 year	16 years
Camp Villere Road	3	\$5.6	Priority 3 (1 phase)	0 years	0 years	20 years	20 years
Grand 16 Theatre Entrance	4	\$3.5	Priority 7 (1 phase)	20 years	0 years	20 years	8 years
Westminster Drive	5	\$11.4	Priority 2 (3 Phases)	15 years	7 years	20 years	18 years
Sunset Drive / Carroll Road				0 years	2 years	17 years	10 years
Maris Stella Street				3 years	3 years	14 years	13 years
North Harrison Turn Lane to St. Tammany Avenue	5-A	\$4.9	Priority 4 (1 phase)	Design Life Analysis was not performed on this link because no intersections within the link were studied. The link was added to balance costs and provide for a u-turn between the Maris Stella roundabout and the Carnation Street roundabout.			
N. Carnation Street	6	\$7.9	Priority 6 (2 phases)	20 years	0 years	20 years	20 years
S. Carnation Street				20 years	20 years	NA**	NA**

NA* - Will be part of the Thompson Road Roundabout

Source - Neel-Schaffer, Inc.

NA** - Will be part of the Carnation Street Roundabout

Priority 1, Northshore Boulevard Link – This link includes the improvements extending from the start of construction to the east of Bayou Liberty to the construction of roadway and roundabout geometry intersection improvements extending approximately to the US 190 intersection with the Tammany Trace Trail. Its estimated \$6.7 million cost to completion is slightly higher than the \$6 million maximum suggested by the RPC for annual funding. However, the project could be progressed in two phases with the environmental, design and right-of way acquisition at approximately \$1.8 million as the initial phase, and the remainder (approximately \$5 million) in the construction phase.

Priority 2, Westminster Drive / Sunset Drive / Maris Stella Link – This link combines three roundabout intersections that are very closely spaced. The estimated cost to completion is \$11.4 million, which is much greater than the RPC \$6 million suggested maximum for an annual spending obligation. The project could be developed in three phases. The initial phase would consist of design, environmental and right-of way acquisition for the entire link (approximately \$4.1 million). The second phase would consist of the construction of the two higher priority roundabout intersections (Sunset Drive and Maris Stella) with connecting roadway (\$4.1 million). The Westminster roundabout with connecting roadway would be the final construction phase (\$3.2 million).

Priority 3, Camp Villere Road Link – This link consist of the Camp Villere Road roundabout intersection and roadway improvements extending to the then already complete Northshore Boulevard link. The \$5.6 million cost to completion is within the \$6 million RPC programming maximum.

Priority 4, North Harrison Turn Lane to St. Tammany Avenue - This link consist of a short segment which provides for widening of the bridge over Bayou Bonfouca, as well as additional u-turn capacity between the Maris Stella and Carnation Street roundabouts. The \$5.8 million cost to completion is within the \$6 million RPC programming maximum.

Priority 5, Dixie Ranch Road / LA433 Link - This link includes the relocation of Dixie Ranch Road and all proposed intersection improvements west of Bayou Liberty. The \$4.5 million cost to completion is within the \$6 million RPC programming maximum.

Priority 6, Carnation Link – This link includes the 2-lane boulevard roadway section extending from just east of the Bayou Bonfouca Bridge to Carnation Street, a new roundabout geometry intersection at Carnation Street, and the new 4-lane boulevard roadway section extending from Carnation Street to US 11. The estimated cost to completion is approximately 8 million, which exceeds the RPC programming maximum. However, the project could be progressed in two phases with the environmental, design and right-of way acquisition at approximately \$2.2 million as the initial phase, and the remainder (approximately \$5.8 million) in the construction phase.

Priority 7, Grand 16 Theatre Entrance – This link completes the project phasing as it includes the final roadway improvements and the roundabout geometry intersection at the Grand 16 theatre entrance. The \$3.5 million cost to completion is within the \$6 million RPC programming maximum.

Environmental Documents – The above priorities include consideration of environmental documents and survey within the individual priority links. A likely scenario would be that the environmental phase of the project would be completed first for the entire corridor. To tie down existing ROW and costs for utility relocation, the environmental phase should include the development of existing ROW maps and the location of utilities. Table S-12 summarizes the annual phasing of the project. It is anticipated that the environmental documents preparation would be in the range of \$450,000 (including a Conceptual Stage Relocation Plan) and that the survey would be \$250,000. So, the Environmental Phase of the project is budgeted at \$0.7 million (\$700,000).

Table S-12																						
Phasing Plan																						
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements																						
	Link (ft)	Link Cost in millions \$	Construction Priority	Phase	Cost in mil \$	Services	Year															
							1	2	3	4	5	6	7	8	9	10	11	12				
Environmental, ROW Survey & Utility Location for Entire			Planning in Advance of	1	0.7	A	✓															
Northshore Boulevard	2 (3,464)	6.7	Priority 1 (2 phases)	1	\$1.8	B,C		✓														
				2	\$4.9	D			✓													
Westminster Drive Sunset Drive / Carroll Road Maris Stella Street	5 (4,450)	\$11.4	Priority 2 (3 Phases)	1	\$4.1	B,C				✓												
				2	\$4.1	D				✓												
				3	\$3.2	D						✓										
Camp Villere Road	3 (2,452)	\$5.6	Priority 3	1	\$5.6	B,C,D								✓								
North Harrison Turn Lane to St. Tammany Avenue	5-A (1,700)	\$5.8	Priority 4	1	\$4.9	B,C,D									✓							
Dixie Ranch Road / Thompson Road (LA 433)	1 (1,710)	\$4.5	Priority 5	1	\$4.5	B,C,D										✓						
St. Tammany St. to US 11	6 (3,200)	\$6.4	Priority 6 (2 phases)	1	\$2.2	B,C														✓		
				2	\$5.7	D																✓
Grand 16 Theatre Entrance	4 (2,244)	\$3.5	Priority 7	1	\$3.5	B,C,D															✓	

Services	A Environmental, ROW Survey and Utility Location	(ft) Approximate distance of
B	Right of Way Acquisition	link in feet
C	Design	
D	Construction	

Source: Neel-Schaffer, Inc.

Roundabout Build-out Concept

Construction of the full roadway and roundabout intersection improvements in sequencing as suggested above is the desired approach to improving the corridor because it provides the maximum safety benefit in association with the interim capacity benefits and a roadway in conformance with complete streets concepts.

An alternative approach would be to build out the roundabout geometry intersections in priority sequence without providing the roadway and complete streets improvements between the intersections. The median roadway improvements and complete streets improvements would not be constructed until after all of the roundabouts were constructed. This approach would provide the interim capacity improvements, and the safety benefits associated with the roundabout intersection operations. It would leave the continuous turn lane in place between the improved intersections, so the safety benefits associated with the median roadway would not occur, and there would not be any complete streets benefits. It is anticipated that all of the individual roundabouts could be designed, ROW acquired and each constructed for less than the RPC \$6 million program maximum. But this approach would be less efficient and more costly as it would extend the time of the overall project corridor development, as individual design and construction packages for the roadway improvements would take place after the construction of the roundabouts.

ENVIRONMENTAL SCREENING:

Chapter 2 presents the Stage 0 Environmental Checklist associated with the proposed US 190 (LA 433 to US 11) Interim Capacity / Widening Improvements.

The primary issue of concern is the right-of-way affects which occur as property is acquired, primarily at roundabout locations. There is also an issue of concern associated with the roadway segment extending from Carnation Street to US 11. There is a single signalized intersection within this segment which provides access to commercial shopping areas both north and south of US 190. The use of the single intersection may create hazards as drivers cross through parking areas to reach the signalized intersection.

With respect to potential natural environment affects, no impacts to wetlands are anticipated. One of the species of concern within St. Tammany Parish is the Gulf Sturgeon. The existing bridge over Bayou Bonfouca will be widened as part of the project, and consultation with USF&WS service may be required in association with the bridge widening. This project is located within a developed corridor and no other affects to T&E species are anticipated as a result of the project.

The Tammany Trace Trail parallel the US 190 right-of-way for a portion of the project corridor. A new roundabout intersection is proposed at Northshore Boulevard. A very small area of the Tammany Trace ROW is impacted by the construction of the roundabout intersection. The impact does not affect trail facilities or the trail usage. But this may be considered as a 4(f) affect.

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

There are 13 water wells located within 250 feet of the project area, which have a range of users including domestic, industrial, commercial public supply, environmental recovery, and monitoring

With respect to potential environmental hazards, there are three dry cleaners adjacent to the project segment:

- Corporate Cleaners- 106 Gause Blvd W. Located within “The Crossing” Shopping Center near the junction of US 11.
- Sunshine Cleaners- 2165 Gause Blvd W. Located within a strip mall on the southside of US 190 near intersection with Northshore Blvd.
- Laundry Mat- Westminster St @ US 190. Located within a strip shopping center on the southside of US 190 at Westminster St.

According to the latest Louisiana Dept of Environmental Quality maintained list of USTs, there are four USTs adjacent to the project segment.

Facility Name	Address	Master ID Number
Speedy G's #1	1703 Gause Blvd W	70929
Circle K #1689	1706 Hwy 190 W	75145
Check In & Out Deli	1797 Hwy 190 W	75963
Value Zone	1801 Gause Blvd W	91845

A search of the US Environmental Protection maintained Enforcement and Compliance History Online revealed that there are several recently reported environmental incidents within properties abutting the US 190 corridor under study as shown on the following table.

Business Name	Address	Type	Adjacent to corridor
Slidell Seafood West, LLC	1001 Gause Blvd W	Minor Active	Yes
Coco's Auto & Truck Repair	1613 Gause Blvd W	Minor Active	Yes
Jolly Investments, LLC	59388 Gause Blvd W	Minor Active	Yes
Hanna Brother Extreme Motion Picture Catering	435 South St	Minor Active	Yes
Hanna Brother Extreme Motion Picture Catering	435 South St	Minor Active	Yes
Tymeless Flooring, Inc	1345 Gause Blvd W	NC-RNC Violations Only	Yes

Sources checked: June 2013. <http://www.epa-echo.gov/echo/#>

Attachment 1
Meeting Minutes
May 28, 2014 Project Meeting

Minutes
May 28 Meeting regarding Review of Deliverables
US 190
LA 433 to US 11
Interim Capacity/Widening Improvements
Stage 0 Feasibility
RPC Project LA 433

Attending:

Jeffrey Roesel	RPC	(504) 483-8528	jroesel@norpc.org
Jason Sappington	RPC	(504) 483-8507	jsappington@norpc.org
Barry Brupbacher	Neel-Schaffer, Inc.	(985) 674-9820	barry.brupbacher@neel-schaffer.com
Daniel Thornhill	Neel-Schaffer, Inc.	(225) 924-0235	daniel.thornhill@neel-schaffer.com
Nick Ferlito	Neel-Schaffer, Inc.	(225) 924-0235	nick.ferlito@neel-schaffer.com
Ellen Burke	Neel-Schaffer, Inc.	(225) 924-0235	ellen.burke@neel-schaffer.com
David Othling	Neel-Schaffer, Inc.	(225) 924-0235	david.othling@neel-schaffer.com
Cristine Gowland	LDOTD	(985)-375-0225	Cristine.Gowland@LA.GOV
Jessie McClendon	LDOTD	(985) 375-0103	jessie.mcclendon@LA.GOV
Jennifer Branton	LDOTD	(986) 375-0165	' Jennifer.Branton@la.gov '
Ryan Hoyt	LDOTD	(225) 379-1370	' ryan.hoyt@la.gov '
Tim Mathison	City of Slidell	(985) 646-4330	tmathison@cityofslidell.org
Donna O'Dell, P.E.	City of Slidell	(985) 646.4270	dodell@cityofslidell.org
Eric Lunden	City of Slidell	(985) 646-4321	elunden@cityofslidell.org
Steve Stefancik	St. Tammany	(985) 788-9911	steves@stpgov.org
Erin Stair	St. Tammany	(985) 276-6411	estair@stpgov.org
Eddie Williams	St. Tammany	(985) 898-2552	eddie@stpgov.org

Prior to the meeting, a complete pdf copy of the Stage 0 Report was transmitted to all meeting invitees via a share file link. At the meeting, a Stage 0 Summary, typical sections and engineering plates were distributed to all meeting attendees. Also, a VISSIM simulation presenting the future 2026 operations of the corridor under the build condition was shown, and the simulation will be distributed to attendees.

Issues reviewed at the meeting as follows:

- **Driveway Access at Northshore Boulevard.** Plate 2 will be modified to show the two driveways on the Chevron site (one facing Northshore Boulevard, one facing US 190) as right-in, right-out and the driveway fronting US 190 on the McDonalds site as right-in, right-out.

Page Two
Meeting Minutes
May 28, 2014 Project Meeting

- **Access at Cherry Street, Plate 2** – A note will be added to the Plate 2 indicating that the follow-up environmental document should consider a roundabout intersection at Cherry Street and US 190 or possible J-turn locations for motorists accessing/egressing Cherry Street.
- **N. Harrison Road** – Consensus was to remove the u-turn movement from the turn lane onto N. Harrison Road from US 190.
- **Establishment of an Additional Analysis Link** – Currently the bridge to be widened at Bayou Bonfouca is included in Link 5. The projected Link 5 cost is estimated to be over \$14 million. It was suggested that an additional corridor link be established. The link would extend on the west side of the Bayou approximately from the approach to the left turn at North Harrison Street, across the Bayou and to St. Tammany Avenue. The new link would include the bridge widening to accommodate pedestrian movements, and potential U-turn locations. Notes will be added to Plate 6 showing locations where U-turns will be studied in the follow-up environmental document. The costs of u-turns will be included in the cost estimate for the new link as well as a line item for the cost of the bridge work.
- **Carnation Street to US 11** - There were a number of concerns voiced.
 - LADOTD has an environmental assessment in progress studying US 11 from US 190 to Interstate -12. This study may affect traffic patterns extending along US 190 from Carnation Street to US 11. The future environmental document for US 190 should consider the findings of the US 11 EA.
 - A traffic signal is located just to the east of the Carnation Street roundabout. LADOTD expressed concern that his signal would not meet the requirements for a signal warrant at that location. There was also concern from the City of Slidell with the placement of the sidewalk adjacent to the travel lanes with no separation.
 - Overall, the access to / from shopping centers abutting US 190 was a concern. The follow-up environmental document should study more thoroughly how access can be provided from / to the shopping center parking areas; and how traffic circulation within the shopping center parking areas could be improved to accommodate appropriate access to US 190.
- **Implementation Priorities** – Except for the addition of an analysis link, there was general consensus that the priorities as shown in the report were appropriate. The final determination on how the project would proceed through the environmental process would be subject to consultations between RPC and LADOTD.

ATTACHMENTS Meeting Sign in
 PDF file of Report Summary, Typical Sections and Engineering Plates
 Animation File of VISSIM Model to be distributed via a sharefile link

Sign-in
Meeting with District 62
Interim Capacity/Widening Improvements, LA 433 to US 11, RPC Project LA 433
28-May-14

	Name	Representing	Phone	Email
	Walter Brooks	RPC	(504) 483-8525	wbrooks@norpc.org
<i>JK</i>	Jeffrey Roesel	RPC	(504) 483-8528	jroesel@norpc.org
<i>JB</i>	Jason Sappington	RPC	(504) 483-8507	jsappington@norpc.org
<i>BB</i>	Barry Brupbacher	Neel-Schaffer, Inc.	(985) 674-9820	barry.brupbacher@neel-schaffer.com
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<i>JB</i>	Tim Mathison	City of Slidell	(985) 646-4330	tmathison@cityofslidell.org
<i>DO</i>	Donna O'Dell, P.E.	City of Slidell	(985) 646.4270	dodell@cityofslidell.org
	Michael Noto	City of Slidell		'mnoto@cityofslidell.org'
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<i>ES</i>	Erin Stair	St. Tammany	(985) 276-6411	estair@stpgov.org
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	<i>Eddie Williams</i>	<i>STP</i>	<i>898-2552</i>	<i>eddie@stpgov.org</i>
	<i>Eric Lundin</i>	<i>City of Slidell</i>	<i>(985) 646-4321</i>	<i>elundin@cityofslidell.org</i>



Stage 0 Feasibility Study

US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements –
ST Tammany Parish

Chapter 1, Stage 0 Scope and Budget Checklist

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

MPO Area: Regional Planning Commission for Jefferson, Orleans, Plaquemines
St. Bernard, St. Tammany and Tangipahoa Parishes (RPC)

A. Project Background

PROJECT NAME US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements

DISTRICT District 62 **PARISH** St. Tammany

CITY/TOWN Slidell **LOCAL ROAD NAME** Gause Boulevard, West

IF PROJECT IS ON A STATE ROUTE: ROUTE:

Route: US 190 **Control Section:** 013-12

Begin Log Mile: 14.63 **End Log Mile:** 21.22

PROJECT CATEGORY (SAFETY, CAPACITY, ETC.): Capacity Enhancement

DATE STUDY COMPLETED: May, 2014

List study team members:

- Traffic Engineering, Neel-Schaffer, Inc.(NSI) - Nick Ferlito, P.E., P.T.O.E, David Othling, P.T.O.E and Ellen Burke, PE.
- Roadway Design - Daniel Thornhill, P.E (NSI)., Rene' Chopin, P.E. Burk Kleinpeter, Inc.(BKI) and Kevin Derbigny, P.E. C&S Consultants, Inc. (C&S)
- Stage 0 Documents - Barry Brupbacher (NSI), Paul Waidhas (BKI), and Carl Seifert (BKI).

Who is the sponsor of the study? RPC

Has someone on the sponsor's staff attended the LPA Certification class?

Jeffrey W. Roesel, AICP as well as most of the RPC technical staff have the LPA certification.

Sponsor DUNS#: _____ **Date Study Completed:** May 2014

Describe the Existing Facility:

This project includes a safety and capacity evaluation of the US 190 corridor within St. Tammany Parish extending from LA 433 to US 11. Proceeding from the west terminus of the project at the US 190 intersection with LA 433, US 190 crosses Bayou Liberty as a 2-lane rural route and then transitions to a 3-lane roadway with open ditch drainage. It remains as a 3-lane roadway for approximately 2.5 miles until Bayou Bonfouca at which point it transitions back to a 2-lane roadway as it crosses the Bayou. The roadway returns to a 3-lane section east of Bayou Bonfouca to the eastern project terminus at US 11. The US 190 intersection with US 11 also includes a crossing of the main line of Norfolk Southern Railroad. The corridor under study includes the following signalized intersection as well as the Dixie Ranch Road intersection, the Camp Villere Road intersection and the Carnation Street intersections:

- *US 190 @ LA 433*
- *US 190 @ Northshore Boulevard*
- *US 190 @ Grand 16 Theatre Entrance*
- *US 190 @ Westminster Drive*
- *US 190 @ Carroll Road / Sunset Drive*
- *US 190 @ Maris Stella Street*
- *US 190 @ Plaza Shopping Center*
- *US 190 @ US 11*

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Functional classification: UA-2 Number and width of lanes: 3 lanes (2 – 10' travel lanes and a 14' continuous turn lane) Shoulder width and type: 3' Mode: Auto
 Access control: Continuous ADT: Exhibit 1-1 shows ADT counts. Exhibits 1-2 and 1-3 show peak period turning movement counts for year 2013, and as projected for year 2016 Posted Speed: 45 mph

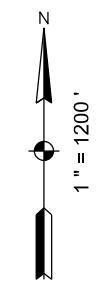
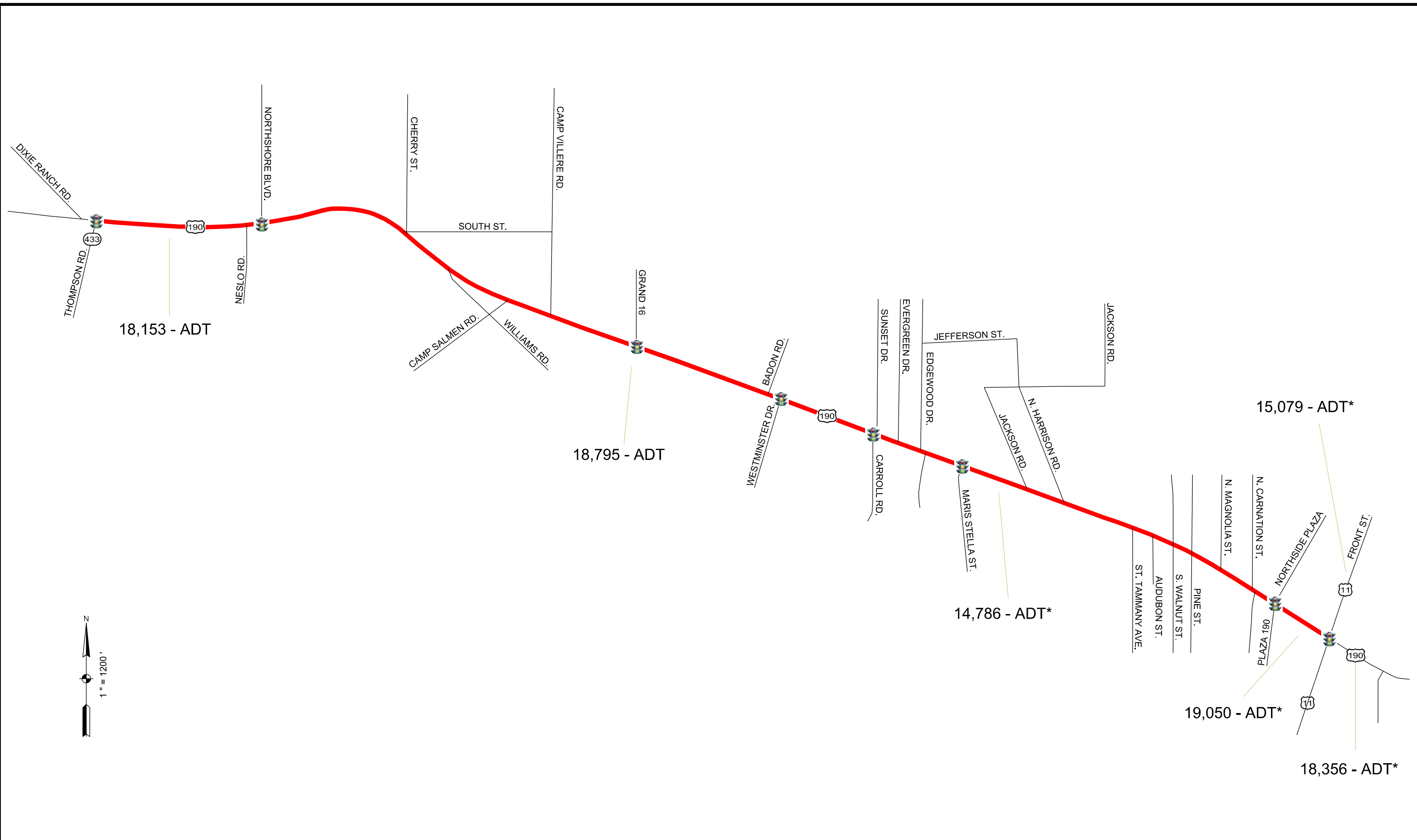
Describe any existing pedestrian facilities (ADA compliance should be considered for all improvements that include pedestrian facilities): *The existing 3-lane facility as constructed does not provide for pedestrian or bicycle facilities. However, the developed portion of the Tammany Trace Trail parallels US 190 from LA 433 to Nelso Road approximately 200' to the south of the US 190 ROW. The undeveloped portion of the Trace extends east from Nelso Road to its intersection with US 190. The Tammany Trace intersects the US 190 ROW approximately 150' east of Cherry Street.*

Describe the adjacent land use: *Land use along the corridor under study is primarily commercial and light industrial interspersed with a few multi-family residential developments. There are commercial shopping centers at two locations. The Northshore Square Center (a regional mall) and other commercial centers abuts the US 190 corridor to the north in proximity of Northshore Boulevard. There are neighborhood shopping centers north and south of the US 190 corridor between Carnation Street and the Norfolk Southern Railroad. The Grand Theatre complex, which is a major traffic generator, accesses US 190 approximately 1,200' east of Camp Villere Road, and a number of large residential subdivisions use US 190 as their primary access to the Slidell community.*

Will this project be adding miles to the state highway system (new alignment, new facility)? If yes, has a transfer of ownership been initiated with the appropriate entity? *No, the project will provide interim capacity improvements within the existing US 190 corridor.*

Are there recent, current or near future planning studies or projects in the vicinity? *Yes, State Project No. 700-52-0191, Stage 0 Feasibility Study, LA 1089 – US 11, was completed in August 2010. Two alternatives were proposed for the segment between LA 433 and US 11. Alternative 1 provided a four lane roadway with a varied 6 to 22 foot raised median and 8 foot shoulders with curb and gutter. It utilized dual-lane roundabouts at un-signalized intersections and it provided channelized median openings with roundabouts (Magnolia St. to US 11). Additional right-of-way was required throughout the entire route. Attachment 1 includes a sheet showing the proposed geometric improvements for Alternative 1. Table 1-1 presents the cost for Alternative 1 as presented in the 2010 report.*

Table 1-1 2010 Stage 0 Study Estimated Costs LA 433 to US 11 Segment Alternative 1	
Construction	\$ 22,380,000
Relocation & Impact	\$ 2,900,000
Utility Relocations	\$ 895,000
Engineering	\$ 2,238,000
Geotechnical	\$ 448,000
Environmental	\$ 671,000
TOTAL	\$ 29,532,000



LEGEND



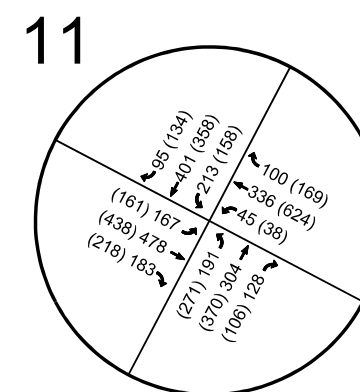
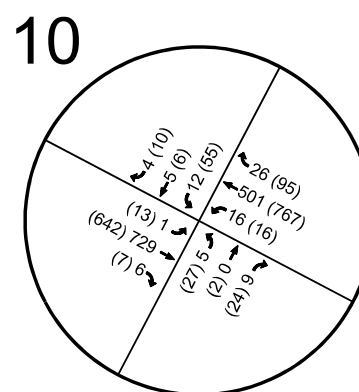
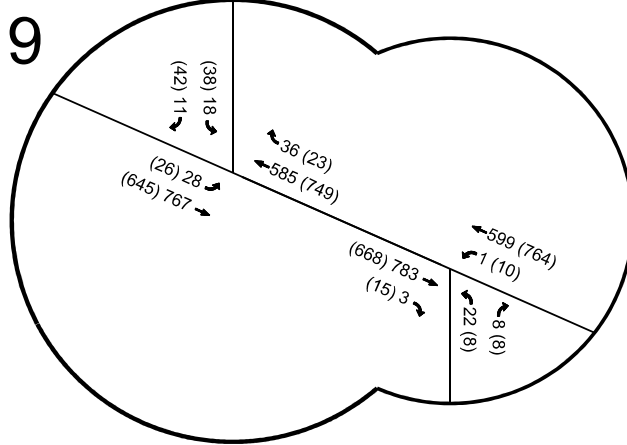
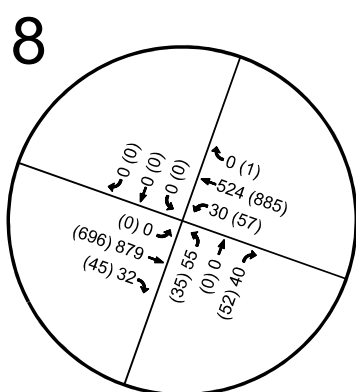
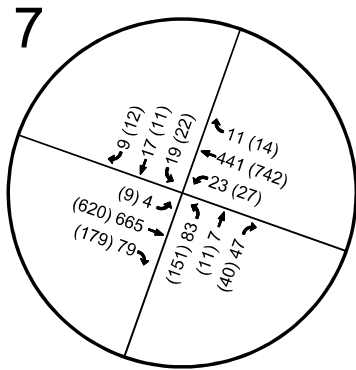
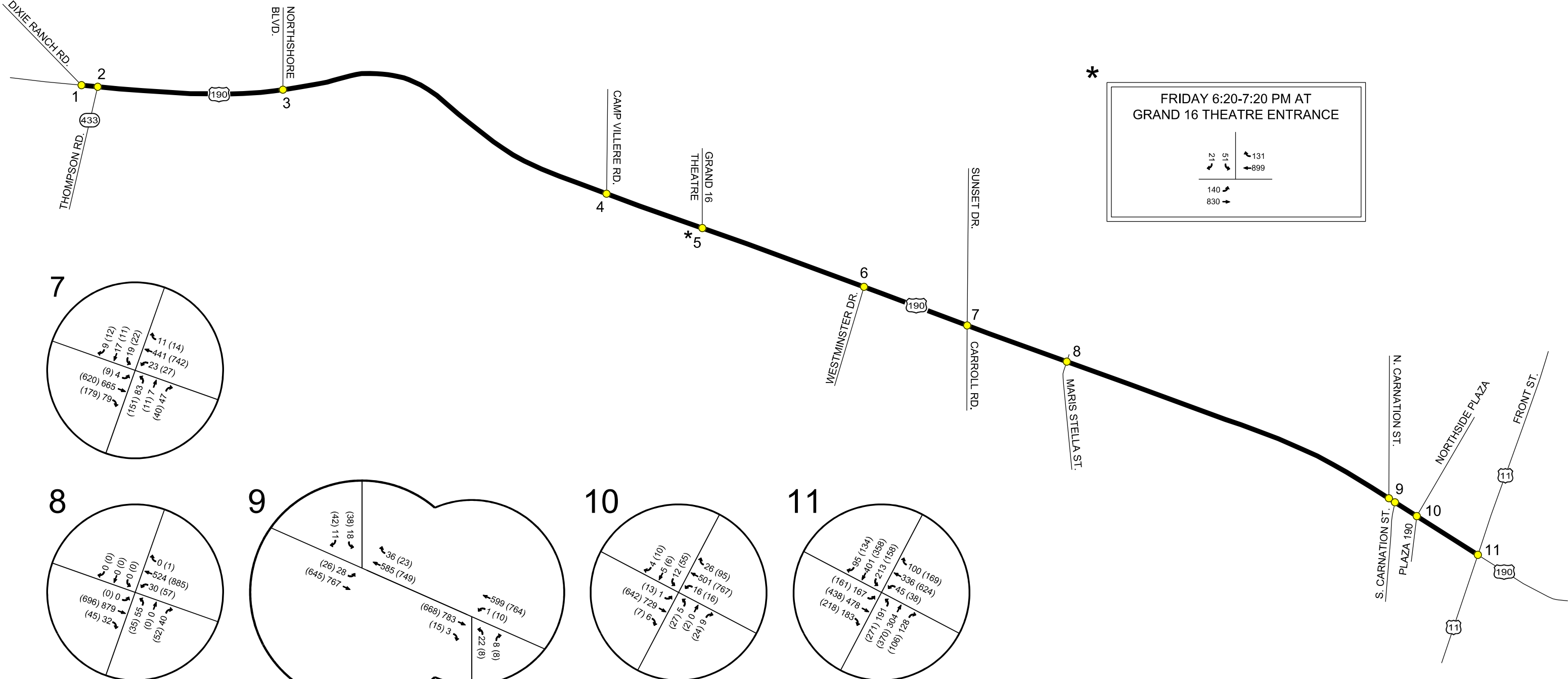
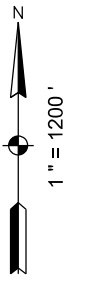
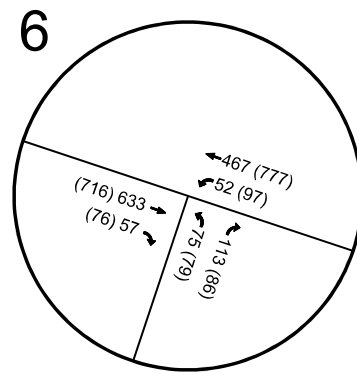
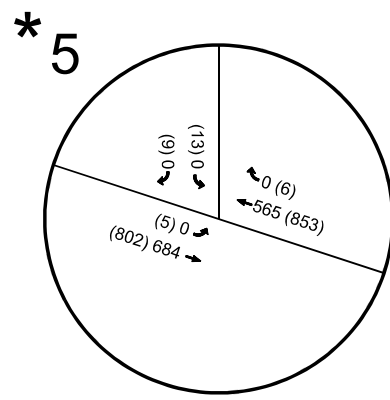
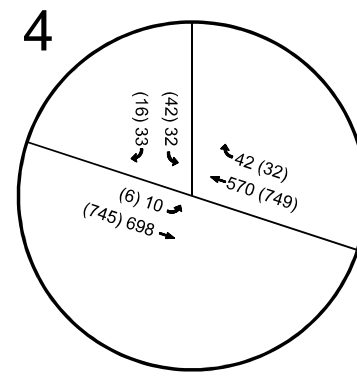
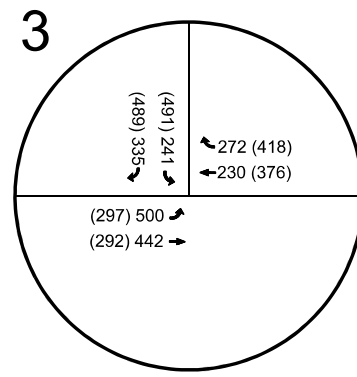
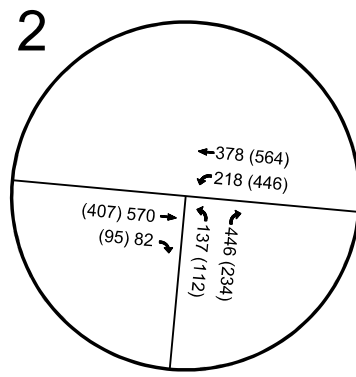
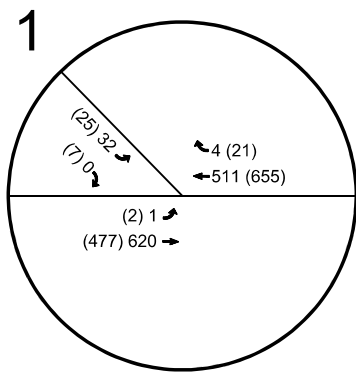
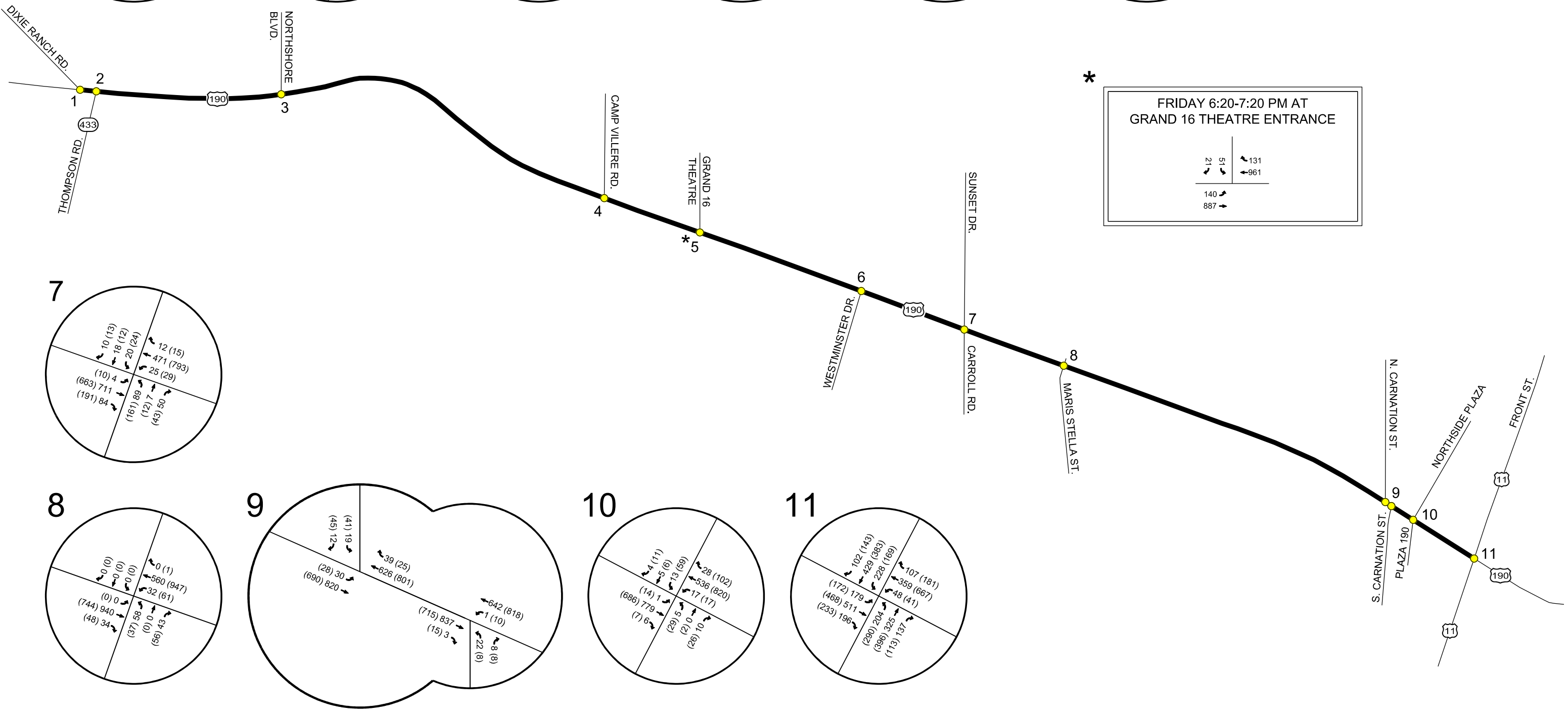
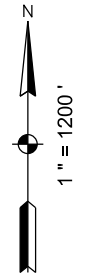
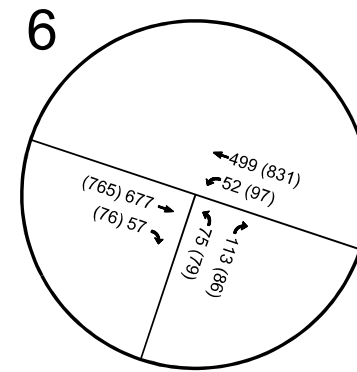
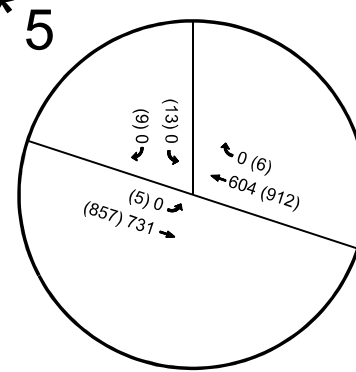
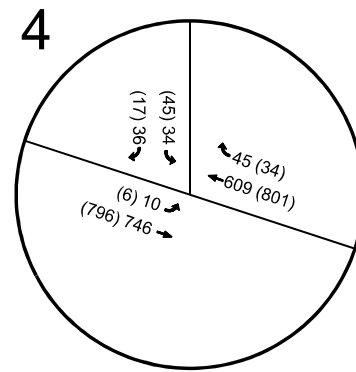
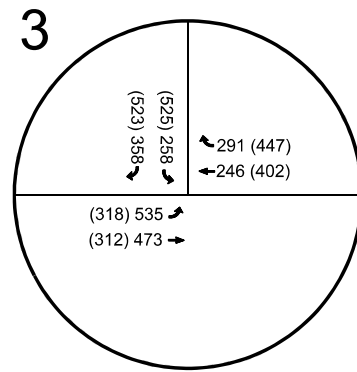
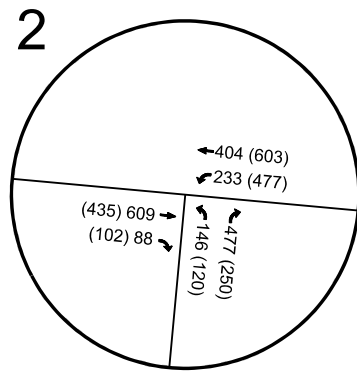
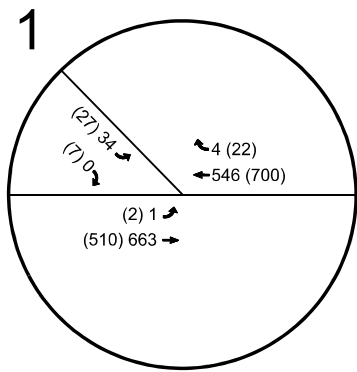
 PROJECT LIMITS
 SIGNALIZED INTERSECTIONS
 (XX - ADT) OBTAINED FROM 2013 PROJECT COUNTS
 (XX - ADT*) OBTAINED FROM 2012 DOTD COUNT STATIONS

EXHIBIT 1-1
US 190 STAGE 0
AVERAGE DAILY TRAFFIC



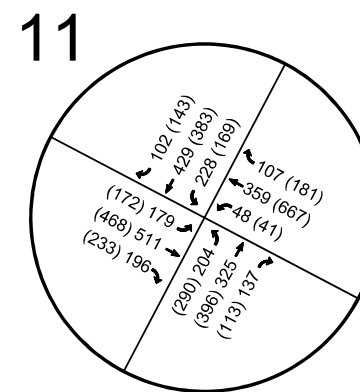
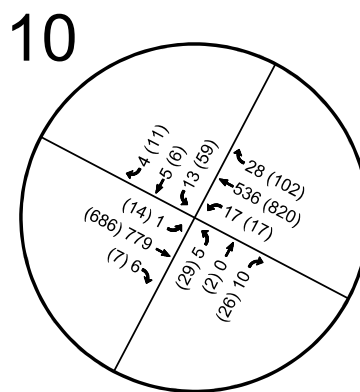
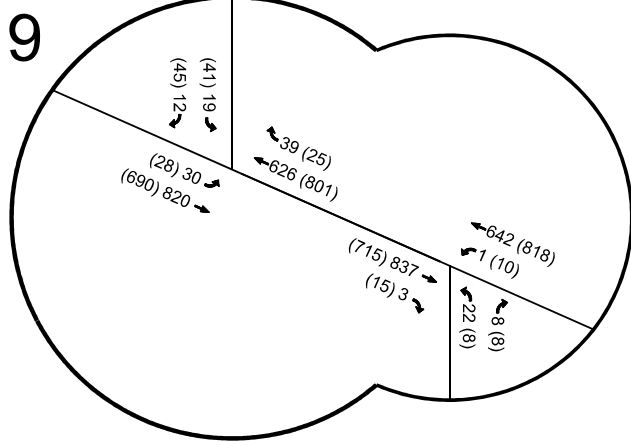
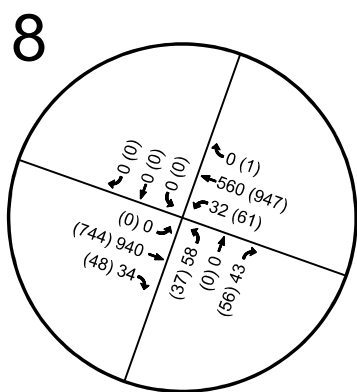
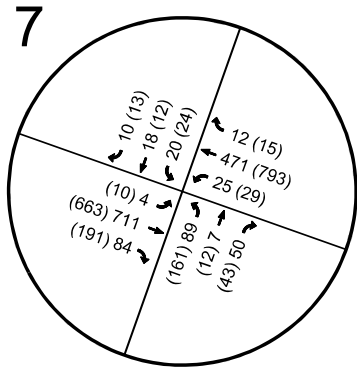
LEGEND
 — STUDY CORRIDOR
 ● STUDY INTERSECTION
 32 (6) (25) AM {NOON} (PM) PEAK HOUR VOLUMES

EXHIBIT 1-2
U.S. 190 STAGE 0
YEAR 2013 TURNING MOVEMENT COUNTS



FRIDAY 6:20-7:20 PM AT GRAND 16 THEATRE ENTRANCE

131	51	21
← 961	←	←
140	887	
←	←	←



LEGEND
 STUDY CORRIDOR
 STUDY INTERSECTION
 32 {6} (25) AM {NOON} (PM) PEAK HOUR VOLUMES

EXHIBIT 1-3
U.S. 190 STAGE 0
PROJECTED YEAR 2016 TURNING MOVEMENT COUNTS

Alternative 2 additionally included a rerouting of US 190 to the south in proximity to Northshore Boulevard. Total costs for Alternative 2 were \$31,399,000.

The Regional Planning Commission (RPC) was concerned about both the cost of the proposed improvements, including right of way, and complexity of implementing the project from a NEPA perspective as it was documented in the 2010 Stage 0 Report. This Interim Capacity / Widening Study was proposed by the RPC to address the need for short term improvements to the corridor, which could be funded in a phased implementation program with projects in the range of \$3 million to \$6 million.

Other related Projects

State Project No. H.000688.2; F.A.P. No. H000688; US 11 Norfolk Southern Rail Road; Route: US Highway 11; St. Tammany Parish - The scope of services for this project consists of the preparation an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA), as amended, and the Federal Highway Administration's (FHWA) regulations and guidelines. LADOTD is proposing to replace the US 11 Bridge over the Norfolk Southern Railroad in St. Tammany Parish. The proposed project includes the widening of US 11 from two lanes to four lanes from US 190 north to I-12. Because the environmental document will provide recommendations for the US 11 intersection with US 190, this Interim Capacity Project will not address the improvements within the US 190 intersection with US 11.

St. Tammany Parish has a project in progress to provide the design for capacity improvements to the existing signalized intersect at Northshore Boulevard. LDOTD District 62 was concerned that the signalized intersection upgrade project may not be consistent with the planning for roundabout intersections undertaken as part of this study. After consultation with all parties, LDOTD determined that the preferable strategy was for the Parish to proceed with the design for a roundabout geometry intersection at Northshore Square.

The City of Slidell and St. Tammany Parish have agreed to a plan for extending the Tammany Trace Trail from its current terminus at Nelso Road into Old Town Slidell. This plan improves the multi-use trail within the existing right-of-way to its intersection with US 190. The trail would be extended paralleling US 190 to Williams Road. It would then be extended along Williams Road to Camp Salmen Road and on into Old Town Slidell. This Interim Capacity project will provide for the Trace improvements extending from the Trace intersection with US 190 to Williams Road.

B. Purpose and Need

State the Purpose (reason for proposing the project) and Need (problem or issue)/Corridor Vision and a brief scope of the project. Also, identify any additional goals and objectives for the project.

The Purpose of the Study is to develop an Interim Capacity Improvement Program which can be funded incrementally with projects in the range \$3 million to \$6 million. The program would address capacity issues throughout the corridor and support complete streets improvements.

Table 1-2 shows the year 2013 Level of Service analysis for intersections within the corridor under study for AM and PM peak hours for all movements through the intersection. Also presented is the Delay (in seconds). The PM Analyses for the Grand Theatre access was undertaken at the peak operating time of the theaters, not the PM peak hour of the corridor.

Stage 0 Feasibility Study

US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Most of the intersections experience deficient level of service (E or F) through at least one intersection movement.

Table 1-2 Intersection Level of Service, Year 2013					
Intersecting Street	Movement	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Dixie Ranch Road	NB	---	---	---	---
	SB	186.4	F	115.1	F
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A
Thompson Road (LA 433)	NB	56.1	E	26.1	C
	SB	---	---	---	---
	WB	15.5	B	16.9	B
	EB	31.9	C	24.9	C
	Intersection	34.3	C	20.8	C
Northshore Boulevard	NB	---	---	---	---
	SB	25.1	C	102.6	F
	WB	21.2	C	20.4	C
	EB	21.8	C	16	B
	Intersection	22.6	C	53.4	D
Camp Villere Road	NB	---	---	---	---
	SB	130.7	F	202.1	F
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A
Grand 16 Theatre Entrance	NB	---	---	---	---
	SB	22.7	C	46.6	D
	WB	14	B	41.3	D
	EB	5.6	A	10.1	B
	Intersection	9.5	A	26.9	C
Westminster Drive	NB	25.1	C	29.4	C
	SB	---	---	---	---
	WB	6.9	A	9.4	A
	EB	14.5	B	14.9	B
	Intersection	13.1	B	13.6	B
Sunset Drive / Carroll Road	NB	83.4	F	104.6	F
	SB	110.8	F	108.5	F
	WB	24.2	C	69.4	E
	EB	32.2	D	27.9	C
	Intersection	37.2	D	46.5	D
Maris Stella Street	NB	34.4	C	26.3	C
	SB	39.7	D	39.7	D
	WB	11.3	B	20.6	C
	EB	25.5	C	13.3	B
	Intersection	21	C	17.9	B
N. Carnation Street	NB	---	---	---	---
	SB	133.3	F	278.8	F
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A
S. Carnation Street	NB	167	F	99.8	F
	SB	---	---	---	---
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A

LOS E or worse

Source: Neel-Schaffer, Inc.

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

To further document the Need for improvements within the corridor, the study team undertook a Design Life Analysis of intersections along the project corridor. The Design Life Analysis objective is to predict the last year before any of the subject intersection movements exceed a volume-to-capacity ratio (V/C) of 1.0 (i.e., capacity). Annual traffic growth within the corridor is estimated to be 2.25% and the base year for the Design Life Analysis was 2016. Table 1-3 presents the No-Build condition Design Life Analysis for each intersection within the corridor starting at the base year 2016. The No-Build represents the future year traffic condition operating within the year 2013 intersection geometry.

Table 1-3 No-Build Design Life Analysis Years Beyond 2016 in Which the Intersection Continues to Operate At or Below Capacity		
Intersecting Street	AM Peak Hour	PM Peak Hour
Dixie Ranch Road	20 years	20 years
Thompson Road (LA 433)	0 years	14 years
Northshore Boulevard	1 year	0 years
Camp Villere Road	0 years	0 years
Grand 16 Theatre Entrance	20 years	0 years
Westminster Drive	15 years	7 years
Sunset Drive / Carroll Road	0 years	2 years
Maris Stella Street	3 years	3 years
N. Carnation Street	20 years	0 years
S. Carnation Street	20 years	20 years

Source - Neel-Schaffer, Inc.

The Design Life Analysis indicates that by year 2020, only the Dixie Ranch Road intersection, the Westminster Drive intersection and S. Carnation Street intersection continue to operate within capacity within both AM and PM peaks under the No-Build scenario.

C. Agency Coordination

Provide a brief synopsis of coordination with federal, tribal, state and local environmental, regulatory and resource agencies. To date, there has not been coordination with federal, tribal, state and local environmental, regulatory and resource agencies.

What transportation agencies were included in the agency coordination effort?

The Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes is the study sponsor.

Describe the level of participation of other agencies and how the coordination effort was implemented.

The project has included meetings with LDOTD District 62 staff, City of Slidell staff, St. Tammany Parish staff and elected officials representing the study area. See Attachment 1 to the Summary for final coordination.

What steps will need to be taken with each agency during NEPA scoping?

The LDOTD Environmental Section in consultation with Federal Highway Administration (FHWA) will determine the appropriate NEPA course of action for advancing the recommended project improvements to construction.

D. Public Coordination

Provide a synopsis of the coordination effort with the public and stakeholders; include specific timelines, meeting details, agendas, sign-in sheets, etc. (if applicable).

To date, there has not been coordination efforts undertaken with the public or stakeholders other than those previously noted.

E. Range of Alternatives – Evaluation and Screening

Provide a project scope and give a description of the project concept for each alternative studied.

The overall scope of the project was to develop concepts for roundabout geometry intersections along the corridor and to incorporate pedestrian and bicycle facilities within the corridor in concert with complete street concepts.

Proceeding from west to east through the corridor, a roundabout intersection is proposed for the US 190 intersection with LA 433. As part of that improvement, Dixie Ranch Road will be relocated so that it ties directly into the roundabout.

A two-lane boulevard will be constructed from a point east of the existing bridge crossing of Bayou Liberty to the existing bridge crossing of Bayou Bonfouca; and from east of Bayou Bonfouca to a new roundabout geometry intersection at Carnation Street. The roadway will include two 12' travel lanes, an 8' median and 8' paved shoulders.

The paved shoulders will be stripped as bicycle lanes. Other complete streets improvements include a 5' sidewalk along the south ROW from Nelso Road to a new roundabout intersection proposed at Northshore Boulevard; and a new 5' sidewalk extending along the north ROW from the Northshore Boulevard roundabout to a new roundabout geometry intersection at Carnation Street. The existing bridge over Bayou Bonfouca will be widened to accommodate a 5' sidewalk and 8' paved shoulders. A 10' multi-use path is constructed from the Tammany Trace intersection with US 190 along US 190 to Williams Road.

Roundabout geometry intersection will also be provided at Camp Villere Road, the Grand Theatre entrance road, at Westminster Drive, at Carol Road / Sunset Drive and at Maris Stella Street. Except for the LA 433 roundabout, the proposed roundabouts include provision for bike / pedestrian movements through the roundabout.

Other geometric improvements in the two-lane boulevard segment include a west bound direction left turn directly into the US Post Office and an east bound direction J-turn at North Harrison Road.

To the east of the Carnation Street roundabout, US 190 functions as a four-lane boulevard section with 15' median. The existing signal at Northside Plaza is maintained.

What are the major design features of the proposed facility? Attach a vicinity map showing project limits. If applicable also attach an aerial photo with concept layout.

Attachment 2 to Chapter 1 provides typical sections and 1"=200' plan view drawings of the proposed roadway improvements. To the west of Carnation Street, the typical sections provide for a 2-lane Urban Arterial (UA-2) roadway with 8' median and 5' sidewalk. Additional ROW is required at the roundabouts and preliminarily at other locations along the corridor as shown on the concept drawings. A four-lane UA-2 boulevard section with 15' median and 6' sidewalks is extended east from the Carnation Street roundabout to US 11.

Will design exceptions be required? *No*

Follow this link to view LADOTD Minimum Design Guidelines:

http://www.dotd.louisiana.gov/highways/project_devel/design/road_design/Memoranda/English_Design_Guidelines.pdf

What impact would this project have on freight movements?

US 190 parallels I-12 through St. Tammany Parish, so most of the freight movements would use the interstate.

Regarding specific truck movements within the corridor, during the AM peak hour, the heavy vehicles usage within the corridor seems to be slightly higher than average for a similar road. It ranges from 2% (the average and default assumptions for any roadway) to 8.7% which is above average. Most of the truck volumes in the AM peak range between 5% and 6%. During the PM peak hour, the truck percentages average 2%. The imbalance in truck usage between the AM and PM peaks may be attributable to local businesses receiving morning deliveries.

The primary benefit of the project relating to freight movements would be to provide an alternate route to an incident on I-12.

Does this project cross or is it near a railroad crossing?

Yes, US 190 crosses the Norfolk Southern main line as it intersects US 11. The US 190 geometry is modified slightly at the intersection as the approach to US 11 is four lanes, instead of the existing three lane configuration.

Was the DOTD’s “Complete Streets” policy taken into consideration? DOTD’s “Complete Streets” policy should be taken into consideration. Per the policy, any exception for not accommodating bicyclists, pedestrians and transit users will require the approval of the DOTD chief engineer. For exceptions on Federal-aid highway projects, concurrence from FHWA must also be obtained. In addition any exception in an urbanized area, concurrence from the MPO must also be obtained. Follow this link to view the policy:

http://www.dotd.la.gov/programs_grants/completestreets/documents/cs-la-dotpolicy.pdf

Describe how the project will implement the policy or include a brief explanation of why implementing the policy would not be feasible.

The project is in conformance with Complete Streets guidance.

How are Context Sensitive Solutions (CSS) being incorporated into the project? For more information on CSS follow this link:

http://www.dotd.la.gov/administration/policies/DOTD_CSS_Policy_20060526.pdf

Context Sensitive Solutions (CSS) were not incorporated into the project at this time.

Was the DOTD’s “Access Management” policy taken into consideration? If so, describe how. *The roundabout geometry intersections will provide for control of access within the roundabout in conformance with LDOTD EDSM guidance. Also the median section roadway will limit access and conflict points at driveways to abutting properties as most driveways will be right-in-right-out.*

Were any safety analyses performed? If so describe results and attach documentation. For safety analysis guidance follow this link

http://www.dotd.la.gov/planning/highway_safety/home.aspx?key=3

A safety analysis was performed for the study intersections.

A conflict point is a point at which a vehicle crosses, merges, or diverges from a road or driveway and conflicts with another vehicle. These points correspond with potential for crashes. Conflict points were determined at the study intersections along US 190 for the no build and the build alternatives. The results are shown below in Table 1-4 and Table 1-5 respectively.

Table 1-4
 Number of Conflict Points by Type for No Build Condition

<i>Intersecting Street</i>	<i>Crossing</i>	<i>Merging</i>	<i>Diverging</i>	<i>Total</i>
<i>Dixie Ranch/ Thompson Rd (LA 433).</i>	8	8	7	23
<i>Northshore Blvd.</i>	4	4	3	11
<i>Camp Villere Rd.</i>	5	4	3	12
<i>Grand 16 Theater Dwy.</i>	6	3	3	12
<i>Westminster Dr.</i>	6	4	3	13
<i>Carroll Rd/ Sunset Dr.</i>	17	8	7	32
<i>Maris Stella St./ Clinic Dwy.</i>	12	5	8	25
<i>Carnation St./ S. Carnation St.</i>	6	7	7	20

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US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Northside Plaza	16	8	8	32
US 11 (Front St.)	40	9	9	58
Total	120	60	58	238

Table 1-5
 Number of Conflict Points by Type for Build Condition

Intersecting Street	Crossing	Merging	Diverging	Total
Dixie Ranch/ Thompson Rd. (LA 433)	0	7	7	14
Northshore Blvd.	2	5	5	12
Camp Villere Rd.	0	3	3	6
Grand 16 Theater Dwy.	0	4	4	8
Westminster Dr.	0	3	3	6
Carroll Rd/ Sunset Dr.	0	4	4	8
Maris Stella St./ Clinic Dwy.	0	4	4	8
Carnation St./ S. Carnation St.	4	8	9	21
Northside Plaza	24	8	8	40
US 11 (Front St.)	40	9	9	58
Total	70	55	56	181

In accordance with FHWA guidance, crossing conflicts result in left turn and angle crashes that account for generally more severe crashes than other types. The build alternative will decrease the number of crossing conflicts within the study corridor intersections by 42%.

The number of conflict points on US 190 were not determined along segments between the study intersections. However, it should be noted that no build conditions have numerous driveways along the corridor that are full access. Driveways that are lined up with another driveway across the street will have approximately thirty-two (32) conflict points (16 crossing, 8 merging, and 8 diverging). Driveways that are not lined up with another driveway will have approximately nine (9) conflict points (3 crossing, 3 merging, and 3 diverging). The build alternative has a median that will turn all of the full access driveways into right-in, right-out driveways. This will cut down the number of conflict points to approximately two (2) (1 merge and 1 diverge) in two-lane segments, and three (3) (2 merge and 1 diverge) in four-lane segments. The build alternative will cut down the number of conflict points dramatically along the segments of US 190. It can also be expected that the severity of crashes along the segments of US 190 will decline with build conditions since crossing conflict points will be eliminated.

In accordance with the FHWA Crash Modification Factors Clearinghouse, “A crash modification factor (CMF) is a multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure at a specific site. For example, an intersection is experiencing 100 angle crashes and 500 rear-end crashes per year. If you apply a countermeasure that has a CMF of 0.80 for angle crashes, then you can expect to see 80 angle crashes per year following the implementation of the countermeasure (100 x 0.80 = 80).” Table

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

1-6 below lists the crash modification factors associated with each intersection improvement in the build condition.

Table 1-6
 Crash Modification Factors for Build Condition

Intersecting Street	From Existing Intersection Control to Build Improvement	Crash Type	Crash Severity	CMF
Dixie Ranch Rd/ Thompson Rd	Signalized to 2 Lane Roundabout	All	All	0.81
		All	Serious injury, Minor injury	0.29
Northshore Blvd	Signalized to 2 Lane Roundabout	All	All	0.81
		All	Serious injury, Minor injury	0.29
Camp Villere	Unsignalized to One Lane Roundabout	All	All	0.28
		All	Serious injury, Minor injury	0.12
Grand 16 Theater	Signalized to One Lane Roundabout	All	All	0.74
		All	Serious injury, Minor injury	0.45
Westminster Dr	Signalized to One Lane Roundabout	All	All	0.74
		All	Serious injury, Minor injury	0.45
Sunset Dr/ Carroll Rd	Signalized to One Lane Roundabout	All	All	0.74
		All	Serious injury, Minor injury	0.45
Maris Stella/ Clinic Dwy	Signalized to One Lane Roundabout	All	All	0.74
		All	Serious injury, Minor injury	0.45
Carnation St	Unsignalized to 2 Lane Roundabout	All	All	0.751
		All	Fatal, Serious injury, Minor injury	0.65

Note: The lower the CMF, the more crash reductions can be expected. A CMF score lower than 1 predicts a reduction in the number of crashes with the suggested roadway improvement. A CMF score higher than 1 would predict an increase in crashes. A CMF of 1 would predict no change in the number of crashes.

All of the crash modification factors listed in Table 1-6 for the roundabout countermeasures are less than one (1). Therefore, it can reasonably be expected that the build alternative will decrease the number of accidents that are currently occurring at these locations. The build alternative for the intersection of US 190 and US 11 (Front Street) is the same layout as the no build alternative. As explained above, crash modification factors are typically used for intersection conversions, therefore US 190 at US 11 (Front Street) was excluded from Table 1-6. The build alternative for the intersection of US 190 and Northside Plaza includes widening US 190 from a two-lane section to a four-lane section. There are no crash modification factors available for this type of roadway improvement, therefore this intersection was also excluded from Table 1-6.

Are there any abnormal crash locations or overrepresented crashes within the project limits? The study did not include an analysis of the route to determine abnormal crash locations, or overrepresented crashes.

What future traffic analyses are anticipated? *None*

Will fiber optics be required? If so, are there existing lines to tie into? *Not Applicable*

Are there any future ITS/traffic considerations? *Not Applicable*

What is the required Transportation Management Plan (TMP) level as defined by EDSM No. VI.1.1.8?

A Level 2 TMP will be required for these projects once in construction based on the following.

- *Interstate or Full Control of Access – No*
- *Principal Arterial – Yes (based on DOTD’s Functional Classification Map)*
- *LOS F? During peak periods at certain intersections.*
- *Are there any peak period lane closures? No lane closures are recommended during peak periods.*

Describe screening criteria used to compare alternatives and from what agency the criteria were defined.

The screening process compared the no-build intersection performance to the roundabout geometry intersection performance utilizing Design Life Analysis.

Give an explanation for any alternative that was eliminated based on the screening criteria.

At the Northshore Boulevard intersection, LDOTD compared the proposed roundabout geometry intersection with the signal control intersect concept developed by St. Tammany Parish, and the roundabout geometry intersection was preferred by the Department.

Which alternatives should be brought forward into NEPA and why? *The interim geometric improvements as shown in Attachment 2 should be carried forward into NEPA.*

Most of the affects from the project are at the roundabout intersections. Slight shifts in the placement of the roundabouts may reduce affects to abutting properties. Topographic surveys at each roundabout may be required in order to provide sufficient detail to develop additional geometric alternatives at selective intersections during the NEPA process.

Did the public, stakeholders and agencies have an opportunity to comment during the alternative screening process?

The public has not had the opportunity to comment on the proposed concepts. Representatives of St. Tammany Parish and the City of Slidell have participated in the project development.

Describe any unresolved issues with the public, stakeholders and/or agencies.

The primary unresolved issues are the affects to abutting properties at selected roundabouts.

F. Planning Assumptions and Analytical Methods

What is the forecast year used in the study?

Attachment 3 to Chapter 1 provides the traffic and safety analysis supporting the project development. The typical methodology for development of the traffic analysis supporting a project is to compare the future no-build at 20 years past the base year with the future build at 20 years past the base year.

However, since the focus of the project is to develop interim improvements, an Interim Design Year (2016) was established as the base year for the analysis. To establish the design life for each improvement, and the design life of the No-Build, the study team undertook a Design Life Analysis of intersections along the project corridor. Table 1-7 compares the No-Build condition Design Life Analysis with the build geometry Design Life Analysis for each intersection within the corridor starting at the base year 2016.

Table 1-7 No-Build vs Build Design Life Analysis Years Beyond 2016 in Which the Intersection Continues to Operate At or Below Capacity				
Intersecting Street	No Build Design Life		Build Design Life	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Dixie Ranch Road	20 years	20 years	NA*	NA*
Thompson Road (LA 433)	0 years	14 years	7 years	10 years
Northshore Boulevard	1 year	0 years	20 year	16 years
Camp Villere Road	0 years	0 years	20 years	20 years
Grand 16 Theatre Entrance	20 years	0 years	20 years	8 years
Westminster Drive	15 years	7 years	20 years	18 years
Sunset Drive / Carroll Road	0 years	2 years	17 years	10 years
Maris Stella Street	3 years	3 years	14 years	13 years
N. Carnation Street	20 years	0 years	20 years	20 years
S. Carnation Street	20 years	20 years	NA**	NA**

NA* - Will be part of the Thompson Road Roundabout

Source - Neel-Schaffer, Inc.

NA** - Will be part of the Carnation Street Roundabout

The build alternative extends the design life for all of the intersections.

The intersections of US 190 and US 11 (Front St.) and US 190 and Northside Plaza are signalized intersections for the no build alternative. Build condition improvements for these intersections are associated with widening the roadway and not a change in the type of traffic control. The results of the intersection analyses are summarized in Tables 1-8 through 1-10. Table 1-8 below shows the results of the existing 2013 conditions.

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Table 1-8
 2013 AM and PM Peak Hour Existing Conditions Intersections
 Delay (sec) / LOS

Intersecting Street	Approach	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
US 11 (Front St.)	NB	34	C	40.1	D
	SB	36.5	D	52.7	D
	WB	29.5	C	49.3	D
	EB	30.1	C	30.3	C
	Intersection	32.6	C	42.7	D
Northside Plaza	NB	41.9	D	50.2	D
	SB	45.5	D	62.5	E
	WB	2.6	A	3.9	A
	EB	5.9	A	3.2	A
	Intersection	5.5	A	7.6	A

2016 year conditions were analyzed for the two (2) signalized intersections in the build alternative. The results of these no build versus build analyses during the AM peak hour are shown below in Table 1- 9.

Table 1-9
 2016 Year AM Peak Hour – No Build vs. Build
 Delay (sec) / LOS

Intersecting Street	Approach	2016 No Build		2016 Build	
		Delay	LOS	Delay	LOS
US 11 (Front St.)	NB	35.7	D	27.9	C
	SB	38.9	D	30.8	C
	WB	31.7	C	27.6	C
	EB	32.6	C	25	C
	Intersection	34.8	C	27.7	C
Northside Plaza	NB	41.8	D	32	C
	SB	45.7	D	34.2	C
	WB	2.6	A	1.7	A
	EB	6.5	A	3.9	A
	Intersection	5.8	A	3.7	A

2016 year conditions were analyzed for the two (2) signalized intersections in the build alternative. The results of these no build versus build analyses during the PM peak hour are shown below in Table 1-10.

Table 1-10
 2016 Year PM Peak Hour – No Build vs. Build
 Delay (sec) / LOS

Intersecting Street	Approach	2016 No Build		2016 Build	
		Delay	LOS	Delay	LOS
US 11 (Front St.)	NB	41.5	D	32.7	C
	SB	59.6	E	30.3	C
	WB	69.5	E	35.9	D
	EB	31.1	C	25.6	C
	Intersection	50.2	D	31.2	C
Northside Plaza	NB	50.3	D	31.2	C
	SB	67.2	E	33.3	C
	WB	4.3	A	4.8	A
	EB	4	A	5.1	A
	Intersection	8.3	A	7.0	A

The immediate geometry at the intersection of US 190 and US 11 (Front Street) does not change from no build to build conditions. However, US 190 between Northside Plaza and US 11 does change from a three-lane section in no build conditions to a four-lane section in build conditions. This allows for better timing between the signalized intersections of Northside Plaza and US 11 (Front Street), which is responsible for the decrease in delays at US 11 (Front Street) during the AM and PM peak hours under build conditions.

A VISSIM model was developed to provide a simulation of corridor operations. The VISSIM simulation was developed for the existing year 2013 condition, and for the base year 2016 for both the no-build and the proposed improvements. In keeping with the concept of providing interim improvements, A VISSIM simulation was also developed for year 2026 for both the no-build and build conditions.

What method was used for forecasting traffic volumes?

The existing peak hour counts for 2013 were grown at a 2.25% growth rate compounded annually to obtain the peak hour counts for 2016. The 2.25% was chosen for the growth rate per the New Orleans Regional Planning Commission (NORPC) Travel Demand Model.

Are the planning assumptions and the corridor vision/purpose and need statement consistent with the long range transportation plan? Yes

What future year policy and/or data assumptions were used in the transportation planning process as they are related to land use, economic development, transportation costs and network expansion?

The RPC provided the growth rate factor used to forecast traffic growth within the corridor. The 2.25% growth factor is consistent with the MPO modeled growth in the study area.

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

G. Potential Environmental Impacts

See the attached Stage 0 Environmental Checklist

H. Cost Estimate and Project Phasing

Corridor Build-out Concept

Exhibit 1-4 serves as a map index for the conceptual engineering plates and it shows how the project can be developed in constructible links extending from west to east along the project corridor. Table 1-11 presents the cost summary for each link. Table 1-12 established a construction priority for the corridor within the identified links. The construction prioritization conforms to the design life analysis previously shown in Table 1-7 in that the intersections which fail the earliest are phased for improvement roughly in the order of failure.

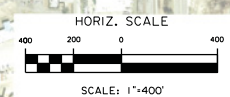
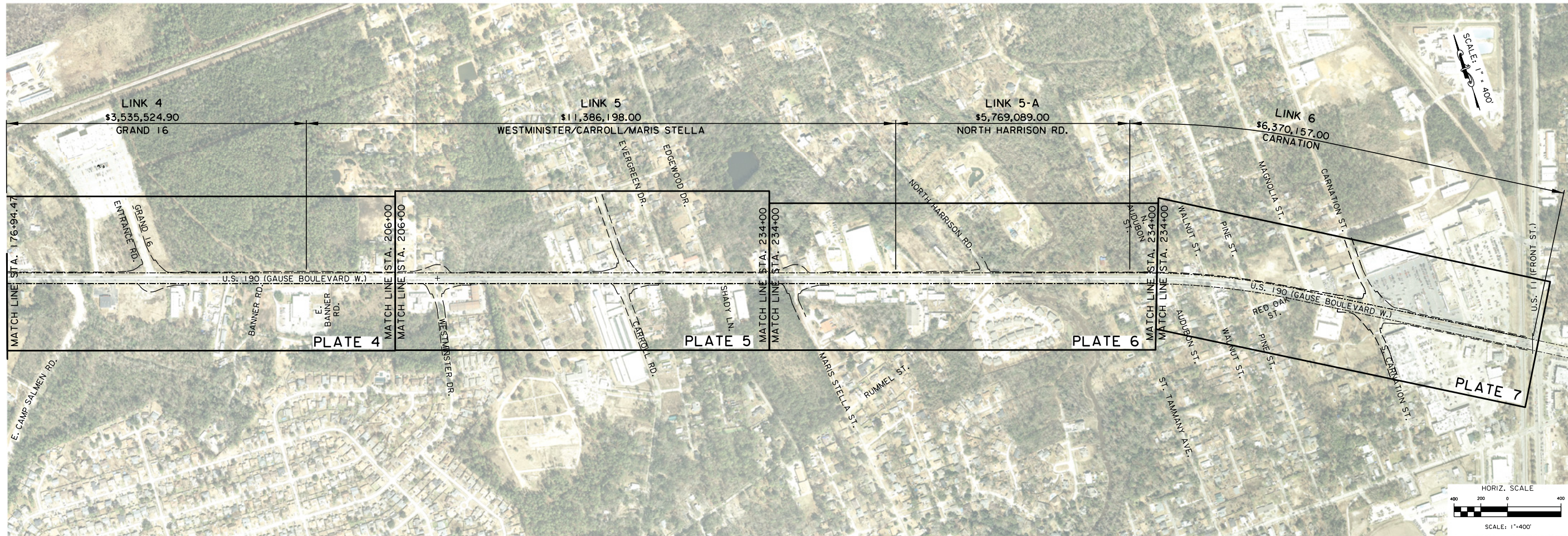
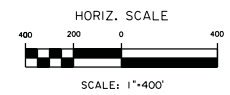
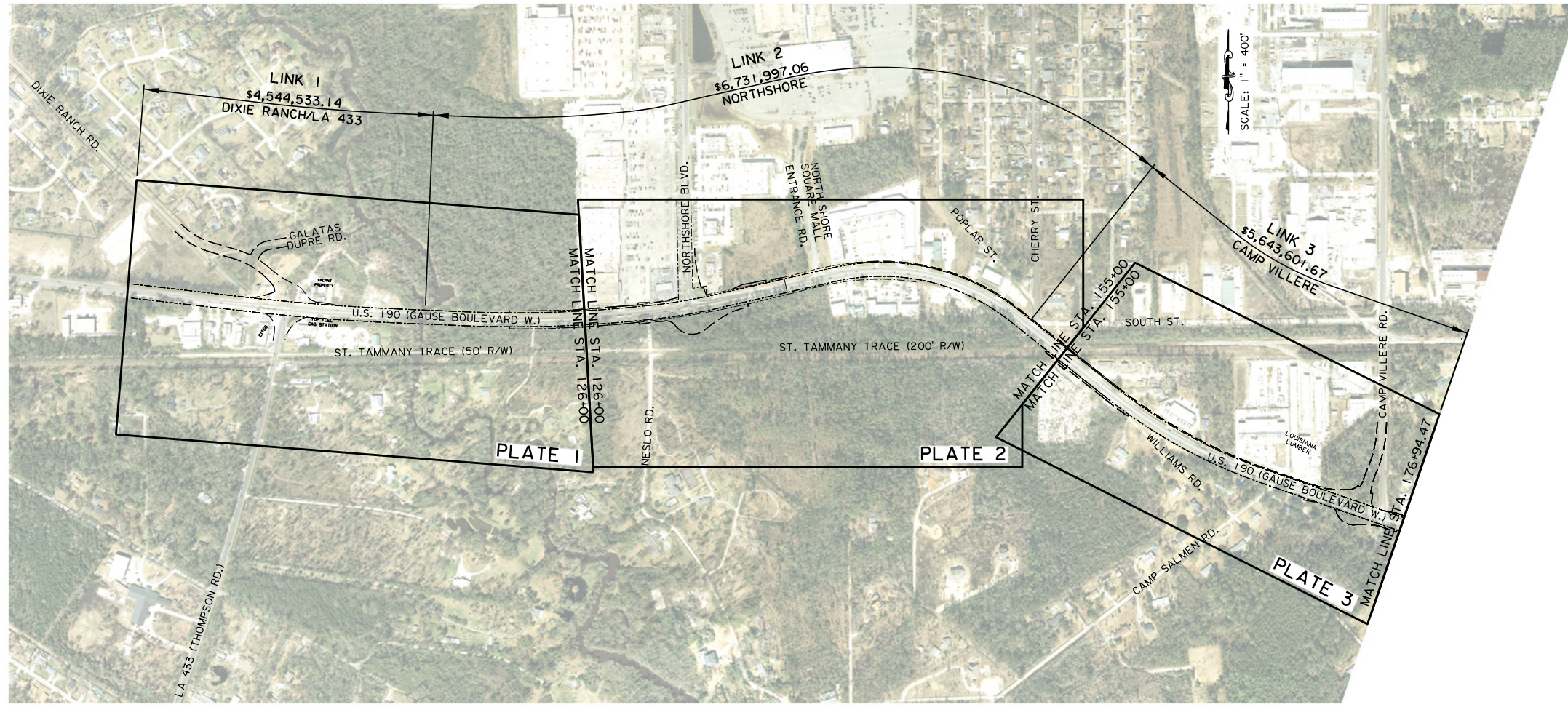
TABLE 1-11 COST SUMMARY					
Stage 0 Report US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements - ST Tammany Parish	Corridor Link 1	Corridor Link 2	Corridor Link 3	Anticipated Funding Source	
	Dixie Ranch/ LA 433	Northshore Roundabout	Camp Villere Roundabout		
Environmental (Document and Mitigation)	\$30,809	\$80,389	\$58,706		
Engineering Design	\$123,235	\$321,555	\$234,822		
Right-of-way (Acquisition and Services)	\$2,606,010	\$1,421,173	\$1,738,770		
Utility Relocations	\$90,000	\$487,500	\$382,500		
Construction	\$1,540,436	\$4,019,437	\$2,935,276		
Construction Engineering & Inspection	<u>\$154,044</u>	<u>\$401,944</u>	<u>\$293,528</u>		
TOTAL COST	\$4,544,533	\$6,731,997	\$5,643,602		
Stage 0 Report US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements - ST Tammany Parish	Corridor Link 4	Corridor Link 5	Corridor Link 5A	Corridor Link 6	Anticipated Funding Source
	Grand 16 Theatre	Westminster/ Carroll/ Maris Stella	North Harrison to St. Tammany Ave.	St. Tammany Ave. to US 11	
Environmental (Document and Mitigation)	\$43,266	\$117,397	\$46,883	\$70,137	
Engineering Design	\$173,063	\$469,588	\$267,533	\$280,546	
Right-of-way (Acquisition and Services)	\$689,583	\$3,462,382	\$1,476,087	\$1,441,967	
Utility Relocations	\$250,000	\$880,000	\$400,000	\$720,000	
Construction	\$2,163,285	\$5,869,847	\$3,344,168	\$3,506,825	
Construction Engineering & Inspection	<u>\$216,329</u>	<u>\$586,985</u>	<u>\$234,417</u>	<u>\$350,683</u>	
TOTAL COST	\$3,535,525	\$11,386,198	\$5,769,089	\$6,370,157	

Source: Neel-Schaffer, Inc.

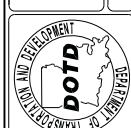
Prepared By: Daniel Thornhill, P.E.
 Neel-Schaffer, Inc.

Date 30-Jun-14

Note: Bridge widening construction portion of Link 5-A is estimated to be \$775,000.



SHEET NUMBER		IND-1	
DESIGNED DTT		ST. TAMMANY	
CHECKED N/F	FEDERAL PROJECT	PARISH	STATE PROJECT
RETAILED D/F	CHECKED DTT	DATE	APRIL 29, 2014
BY	NO.	DATE	BY
REVISION DESCRIPTION			
US 190 (LA 433 TO US 11) INTERIM CAPACITY/WIDENING IMPROVEMENTS STAGE 0 FEASIBILITY STUDY			
EXHIBIT 1-4			



Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Table S-11
 Prioritization of Intersection Construction Based on Design Life Analysis
 Years Beyond 2016 in Which the Intersection Continues to Operate At or Below Capacity

Intersecting Street	Link	Link Cost in millions \$	Construction Priority	No Build Design Life		Build Design Life	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Dixie Ranch Road	1	\$4.5	Priority 5 (1 phase)	20 years	20 years	NA*	NA*
Thompson Road (LA 433)				0 years	14 years	7 years	10 years
Northshore Boulevard	2	\$6.7	Priority 1 (2 phases)	1 year	0 years	20 year	16 years
Camp Villere Road	3	\$5.6	Priority 3 (1 phase)	0 years	0 years	20 years	20 years
Grand 16 Theatre Entrance	4	\$3.5	Priority 7 (1 phase)	20 years	0 years	20 years	8 years
Westminster Drive				15 years	7 years	20 years	18 years
Sunset Drive / Carroll Road				0 years	2 years	17 years	10 years
Maris Stella Street	5	\$11.4	Priority 2 (3 Phases)	3 years	3 years	14 years	13 years
North Harrison Turn Lane to St. Tammany Avenue				Design Life Analysis was not performed on this link because no intersections within the link were studied. The link was added to balance costs and provide for a u-turn between the Maris Stella roundabout and the Carnation Street roundabout.			
N. Carnation Street	6	\$7.9	Priority 6 (2 phases)	20 years	0 years	20 years	20 years
S. Carnation Street				20 years	20 years	NA**	NA**

NA* - Will be part of the Thompson Road Roundabout

Source - Neel-Schaffer, Inc.

NA** - Will be part of the Carnation Street Roundabout

Priority 1, Northshore Boulevard Link – This link includes the improvements extending from the start of construction to the east of Bayou Liberty to the construction of roadway and roundabout geometry intersection improvements extending approximately to the US 190 intersection with the Tammany Trace Trail. Its estimated \$6.7 million cost to completion is slightly higher than the \$6 million maximum suggested by the RPC for annual funding. However, the project could be progressed in two phases with the environmental, design and right-of way acquisition at approximately \$1.8 million as the initial phase, and the remainder (approximately \$5 million) in the construction phase.

Priority 2, Westminster Drive / Sunset Drive / Maris Stella Link – This link combines three roundabout intersections that are very closely spaced. The estimated cost to completion is \$11.4 million, which is much greater than the RPC \$6 million suggested maximum for an annual spending obligation. The project could be developed in three phases. The initial phase would consist of design, environmental and right-of way acquisition for the entire link (approximately \$4.1 million). The second phase would consist of the construction of the two higher priority roundabout intersections (Sunset Drive and Maris Stella) with connecting roadway (\$4.1 million). The Westminster roundabout with connecting roadway would be the final construction phase (\$3.2 million).

Priority 3, Camp Villere Road Link – This link consist of the Camp Villere Road roundabout intersection and roadway improvements extending to the then already complete Northshore Boulevard link. The \$5.6 million cost to completion is within the \$6 million RPC programming maximum.

Priority 4, North Harrison Turn Lane to St. Tammany Avenue - This link consist of a short segment which provides for widening of the bridge over Bayou Bonfouca, as well as additional u-turn capacity between the Maris Stella and Carnation Street roundabouts. The \$5.8 million cost to completion is within the \$6 million RPC programming maximum.

Priority 5, Dixie Ranch Road / LA433 Link - This link includes the relocation of Dixie Ranch Road and all proposed intersection improvements west of Bayou Liberty. The \$4.5 million cost to completion is within the \$6 million RPC programming maximum.

Priority 6, Carnation Link – This link includes the 2-lane boulevard roadway section extending from just east of the Bayou Bonfouca Bridge to Carnation Street, a new roundabout geometry intersection at Carnation Street, and the new 4-lane boulevard roadway section extending from Carnation Street to US 11. The estimated cost to completion is approximately 8 million, which exceeds the RPC programming maximum. However, the project could be progressed in two phases with the environmental, design and right-of way acquisition at approximately \$2.2 million as the initial phase, and the remainder (approximately \$5.8 million) in the construction phase.

Priority 7, Grand 16 Theatre Entrance – This link completes the project phasing as it includes the final roadway improvements and the roundabout geometry intersection at the Grand 16 theatre entrance. The \$3.5 million cost to completion is within the \$6 million RPC programming maximum.

Environmental Documents – The above priorities include consideration of environmental documents and survey within the individual priority links. A likely scenario would be that the environmental phase of the project would be completed first for the entire corridor. To tie down existing ROW and costs for utility relocation, the environmental phase should include the development of existing ROW maps and the location of utilities. Table 1-13 summarizes the annual phasing of the project. It is anticipated that the environmental documents preparation would be in the range of \$450,000 (including a Conceptual Stage Relocation Plan) and that the survey would be \$250,000. So, the Environmental Phase of the project is budgeted at \$0.7 million (\$700,000).

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Table S-12																							
Phasing Plan																							
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements																							
	Link (ft)	Link Cost in millions \$	Construction Priority	Phase	Cost in mil \$	Services	Year																
							1	2	3	4	5	6	7	8	9	10	11	12					
Environmental, ROW Survey & Utility Location for Entire			Planning in Advance of	1	0.7	A	✓																
Northshore Boulevard	2 (3,464)	6.7	Priority 1 (2 phases)	1	\$1.8	B,C		✓															
				2	\$4.9	D			✓														
Westminster Drive Sunset Drive / Carroll Road Maris Stella Street	5 (4,450)	\$11.4	Priority 2 (3 Phases)	1	\$4.1	B,C				✓													
				2	\$4.1	D				✓													
				3	\$3.2	D					✓												
Camp Villere Road	3 (2,452)	\$5.6	Priority 3	1	\$5.6	B,C,D								✓									
North Harrison Turn Lane to St. Tammany Avenue	5-A (1,700)	\$5.8	Priority 4	1	\$4.9	B,C,D									✓								
Dixie Ranch Road / Thompson Road (LA 433)	1 (1,710)	\$4.5	Priority 5	1	\$4.5	B,C,D										✓							
St. Tammany St. to US 11	6 (3,200)	\$6.4	Priority 6 (2 phases)	1	\$2.2	B,C												✓					
				2	\$5.7	D																✓	
Grand 16 Theatre Entrance	4 (2,244)	\$3.5	Priority 7	1	\$3.5	B,C,D																✓	

Services	A	Environmental, ROW Survey and Utility Location	(ft) Approximate distance of
	B	Right of Way Acquisition	link in feet
	C	Design	
	D	Construction	

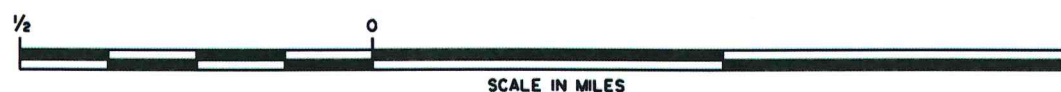
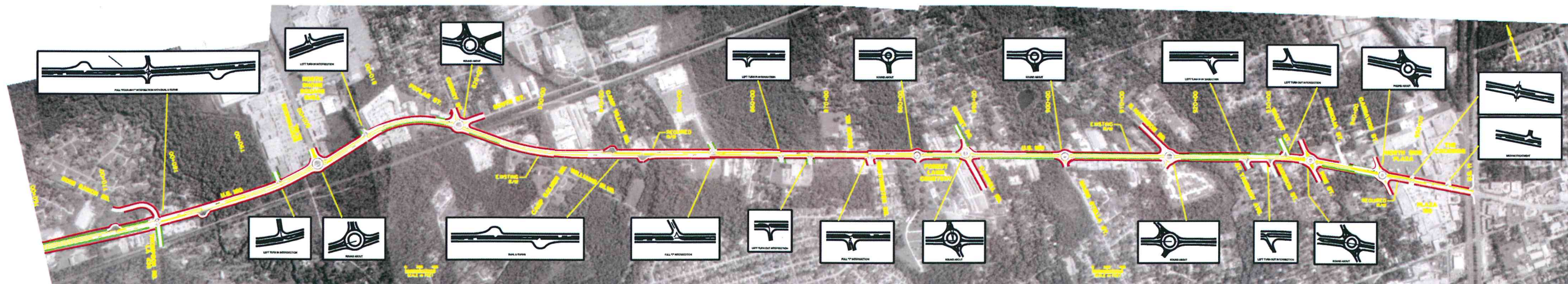
Source: Neel-Schaffer, Inc.

Roundabout Build-out Concept

Construction of the full roadway and roundabout intersection improvements in sequencing as suggested above is the desired approach to improving the corridor because it provides the maximum safety benefit in association with the interim capacity benefits and a roadway in conformance with complete streets concepts.

An alternative approach would be to build out the roundabout geometry intersections in priority sequence without providing the roadway and complete streets improvements between the intersections. The median roadway improvements and complete streets improvements would not be constructed until after all of the roundabouts were constructed. This approach would provide the interim capacity improvements, and the safety benefits associated with the roundabout intersection operations. It would leave the continuous turn lane in place between the improved intersections, so the safety benefits associated with the median roadway would not occur, and there would not be any complete streets benefits. It is anticipated that all of the individual roundabouts could be designed, ROW acquired and each constructed for less than the RPC \$6 million program maximum. But this approach would be less efficient and more costly as it would extend the time of the overall project corridor development, as individual design and construction packages for the roadway improvements would take place after the construction of the roundabouts.

Attachment 1
2010 Stage 0 Study, US 190
Concept Geometry
LA 433 to US 11



Chapter 1, Attachment 1
 State Project No. 700-52-0191
 Stage 0 Study, Widen US 190
 from LA 1089 to US 11
 Geometric Recommendations, LA 433 to US 11

S.P. NO. 700-52-0191

SEGMENT 4:
 SLIDELL LA 433 TO US 11
 ALTERNATE 1

STAGE 0 FEASIBILITY STUDY
 U.S. 190 WIDENING
 MANDEVILLE TO SLIDELL, LA.

R SHREAD - KUYRKENDALL & ASSOC.
 ENGINEERS - SURVEYORS - PLANNERS
 BATON ROUGE, LOUISIANA

DESIGNED	DRAWN	CHECKED	APPROVED
F.R.S.	J.E.P.	R.W.M.	

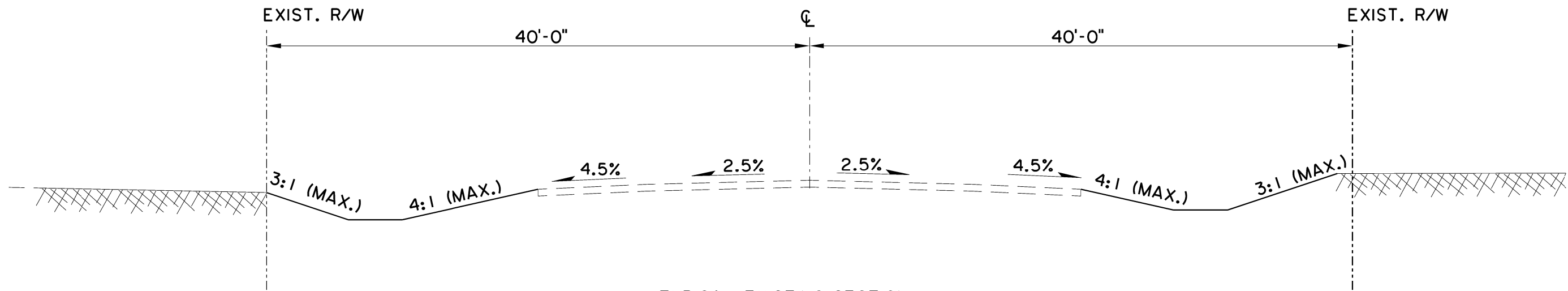


Attachment 2

Typical Sections and Concept Geometry Plates

Attachment 2-A

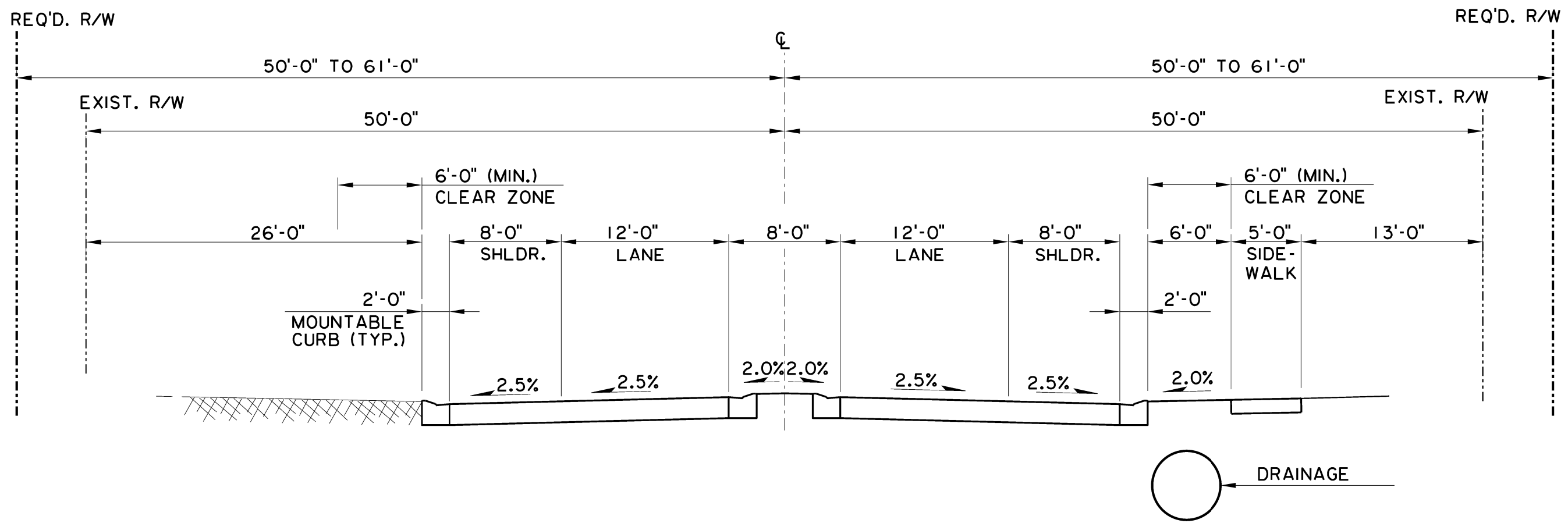
Typical Sections



TYPICAL EXISTING SECTION 1
 US190 (LA 433 TO NESLO RD.)
 STA. 111+39.57 TO STA. 123+27.57

NOTE:
 US190 (LA433 TO NESLO RD.) INCLUDES 24' CLEAR
 ROADWAY BRIDGE WITH NO SHOULDERS.

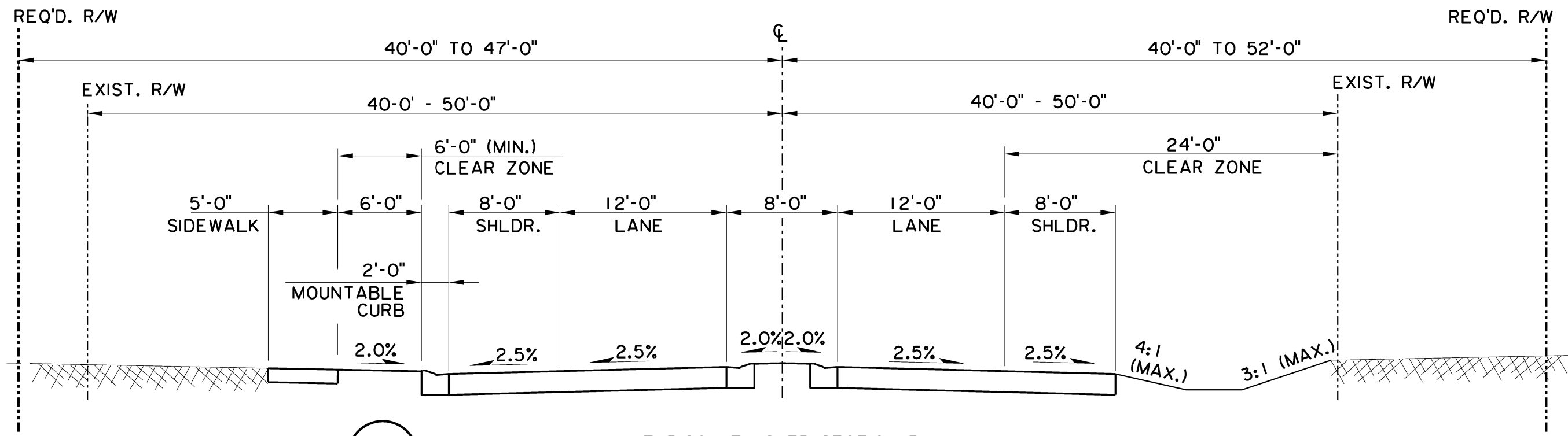
STAGE 0



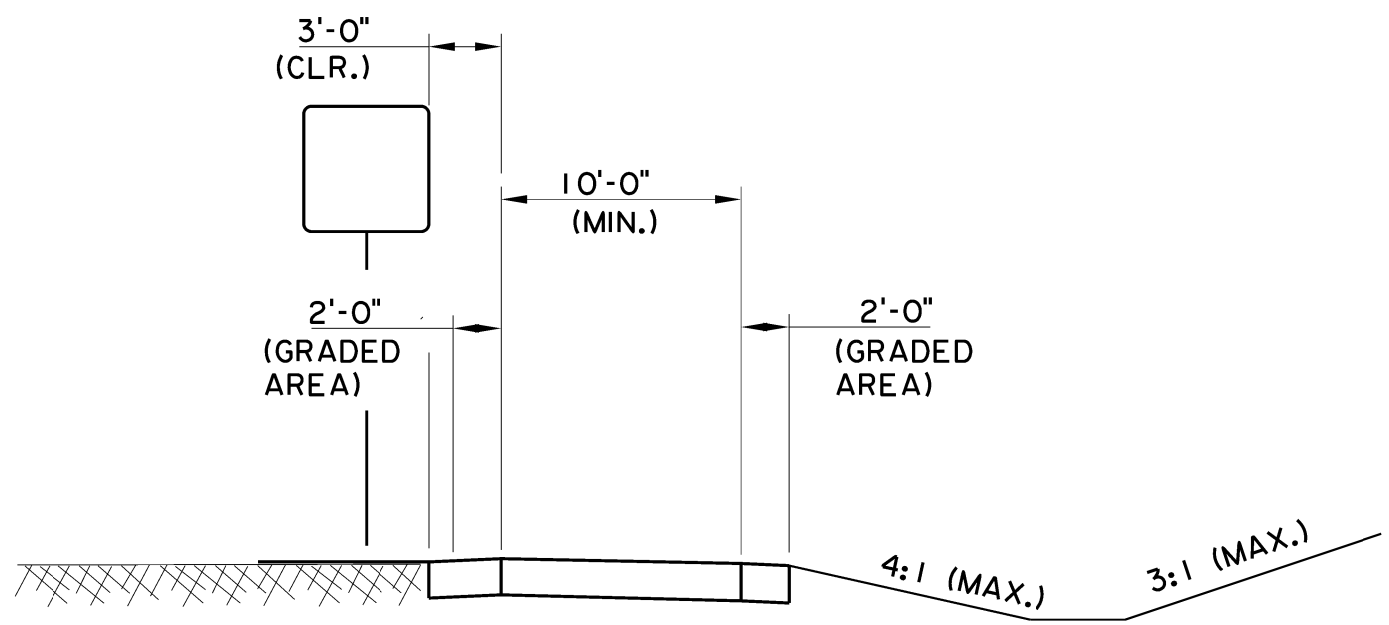
TYPICAL FINISHED SECTION 2
 US190 (NESLO RD. TO NORTHSORE BLVD.)
 STA. 123+27.57 TO STA. 135+30.44
 (UA-2)

SHEET NUMBER	TS-1
DESIGNED	KH
CHECKED	RC
DATE	4/20/14
REVISION DESCRIPTION	
NO.	NO.
DATE	DATE
BY	BY
PARISH	ST. TAMMANY
FEDERAL PROJECT	
STATE PROJECT	
SHEET	1 OF 4

US190 (LA433 TO US11)
 INTERIM CAPACITY/WIDENING
 IMPROVEMENTS STAGE 0
 FEASIBILITY STUDY
 TYPICAL SECTIONS



TYPICAL FINISHED SECTION 3
 US190 (NORTHSHORE BLVD. TO INTERSECTION
 W/TAMMANY TRACE)
 STA. 135+30.44 TO STA. 154+40.60
 US 190 (CAMP VILLERE TO CARNATION)
 STA. 176+94.47 TO STA. 273+56.91
 (UA-2)

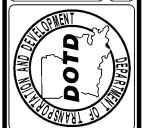


TYPICAL FINISHED SECTION 4
 TWO LANE BIKE PATH
 TAMMANY TRACE (US 190 TO WILLIAM RD.)
 (UA-2)

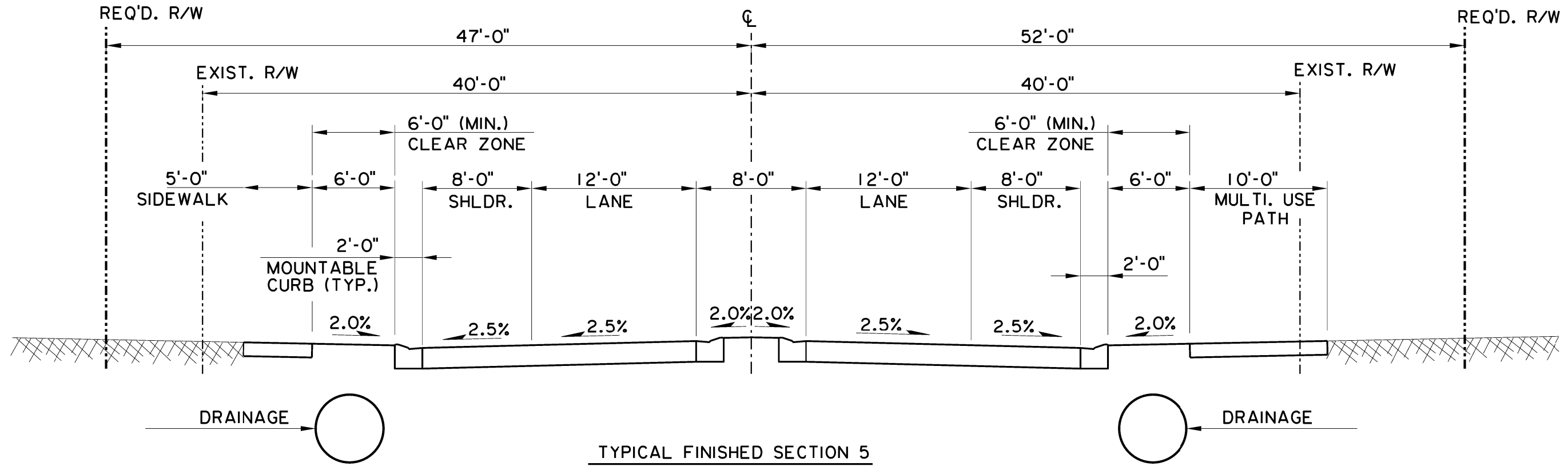
STAGE 0



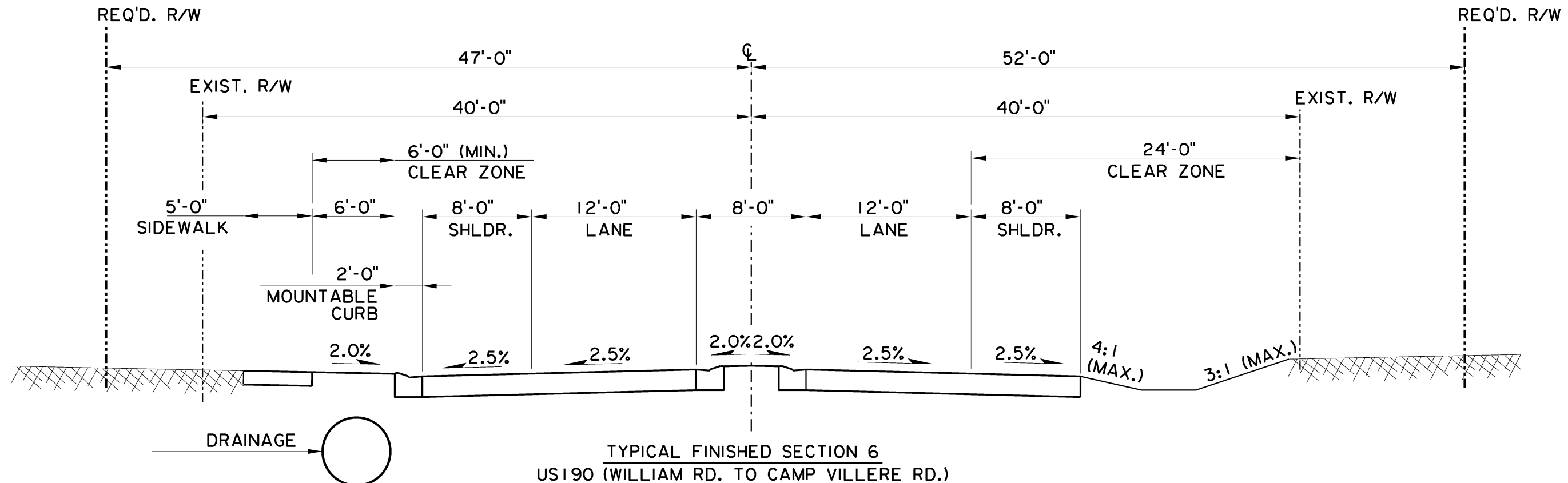
US190 (LA433 TO US11)
 INTERIM CAPACITY/WIDENING
 IMPROVEMENTS STAGE 0
 FEASIBILITY STUDY
 TYPICAL SECTIONS



STAGE 0

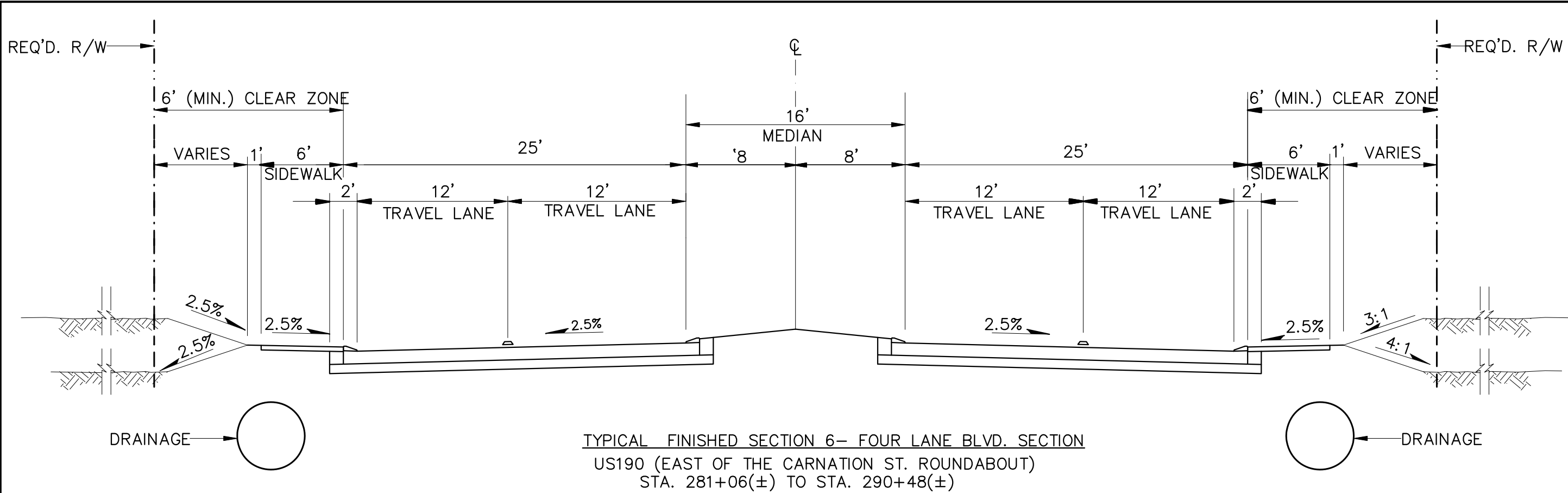


TYPICAL FINISHED SECTION 5
 US190 (INTERSECTION W/TAMMANY TRACE
 TO WILLIAM RD.)
 STA. 154+40.60 TO STA. 160+00.00
 (UA-2)



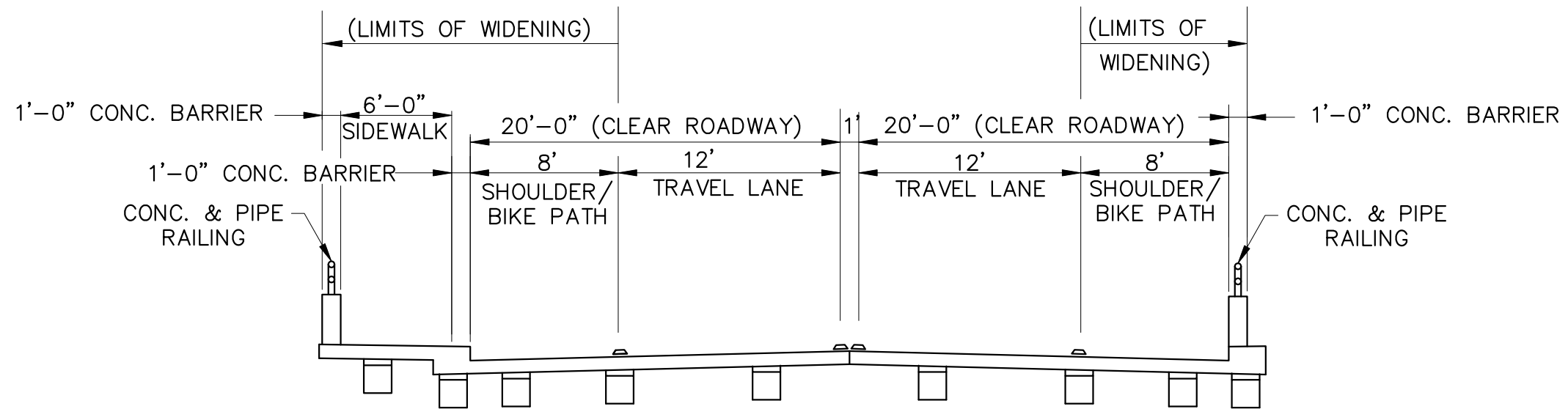
TYPICAL FINISHED SECTION 6
 US190 (WILLIAM RD. TO CAMP VILLERE RD.)
 STA. 160+00.00 TO STA. 176+94.47
 (UA-2)

SHEET NUMBER	TS-3
DESIGNED	KH
CHECKED	RC
DATE	4/20/14
PROJECT	ST. TAMMANY
STATE	LA
PROJECT	US190
SHEET	3 OF 4
REVISION DESCRIPTION	
NO.	
DATE	
US190 (LA433 TO US11) INTERIM CAPACITY/WIDENING IMPROVEMENTS STAGE 0 FEASIBILITY STUDY TYPICAL SECTIONS	



TYPICAL FINISHED SECTION 6- FOUR LANE BLVD. SECTION
 US190 (EAST OF THE CARNATION ST. ROUNDABOUT)
 STA. 281+06(±) TO STA. 290+48(±)

NOTE:
 BRIDGE ASSUMED TO BE 30' SPANS RESTING ON TEE BEAMS. BEAMS SHOWN
 ARE FOR INFORMATIONAL PURPOSES ONLY. NUMBER AND SPACING OF BEAMS
 TO BE DETERMINED IN FUTURE DESIGN PHASES OF PROJECT.



TYPICAL BRIDGE FINISHED SECTION 7 AT BAYOU BONFOUCA
 US 190 (LA 433 TO US 11)
 TEE BEAM BRIDGE SPANS - 30' SPANS
 STA. 252+67(±) TO STA. 253+06(±)

STAGE 0

SHEET NUMBER	TS-4
ST. TAMMANY	
PARISH PROJECT	
STATE PROJECT	
DESIGNED	
CHECKED	
REVIEWED	
CHECKED	
DATE	
SHEET	
BY	
REVISION DESCRIPTION	
NO.	
DATE	
US190 (LA433 TO US11) INTERIM CAPACITY/WIDENING IMPROVEMENTS STAGE 0 FEASIBILITY STUDY	
TYPICAL SECTIONS	
C&S CONSULTANTS INC.	

Attachment 2-B

Concept Geometry Plates

Source (Citation) for 2010 six inch pixel imagery Geotiffs

This imagery was provided by the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) as the sole source owner, and is shared with Louisiana state government agencies in the interest of good government practices.

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GOHSEP and the RPC are not responsible for any errors arising from any use of alterations made to the data. Under no circumstances is resale or distribution of the data permitted.

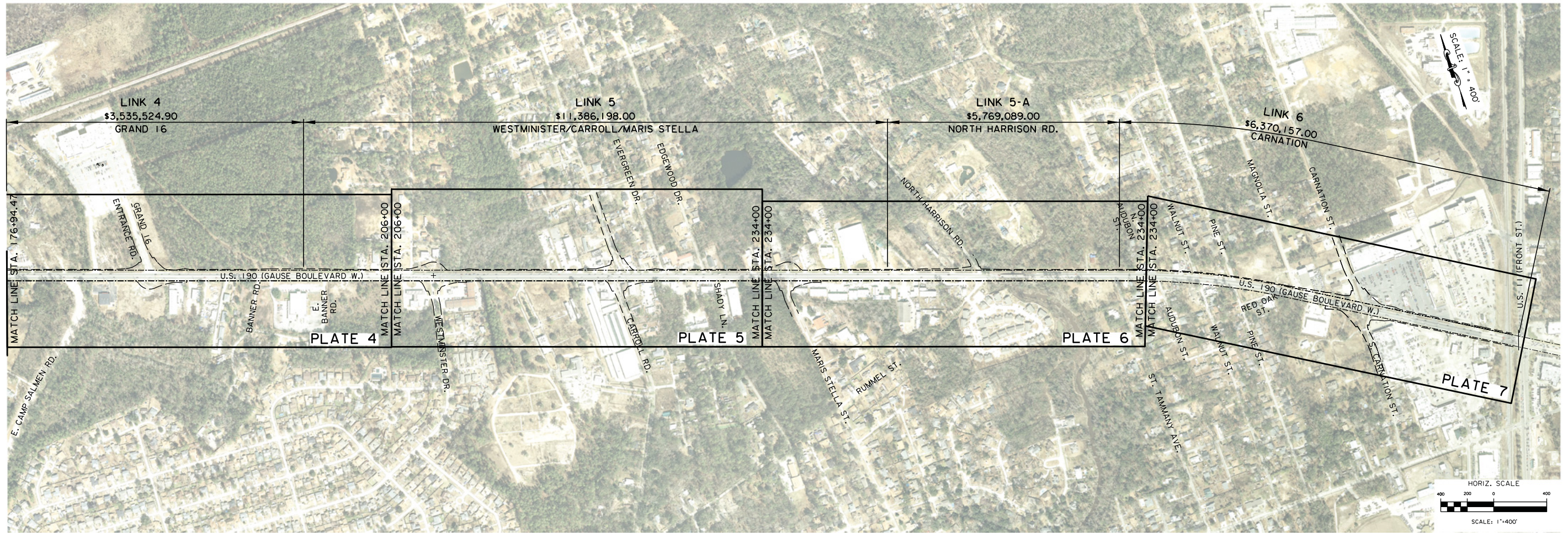
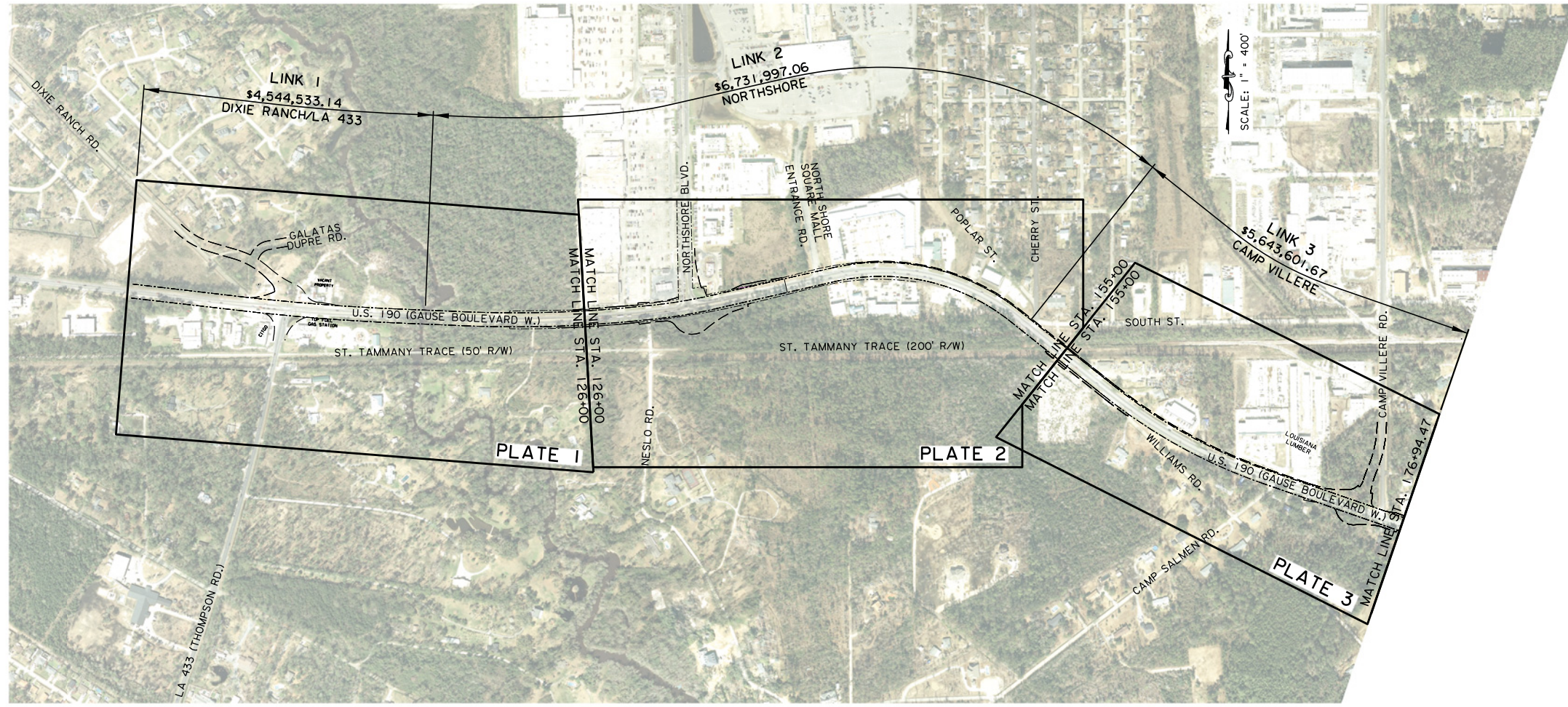
Imagery Information: The red, green, blue (true color) and near infrared four-band aerial imagery was captured between February 10th and April 1st of 2010 (re-flights for any corrections flown until April 28th, 2010) by Sanborn Map Company, Inc.


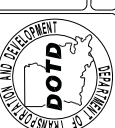
The imagery is projected to UTM 15 NAD 83; unit of measure is meters.

The spatial resolution is approximately a six inch pixel.

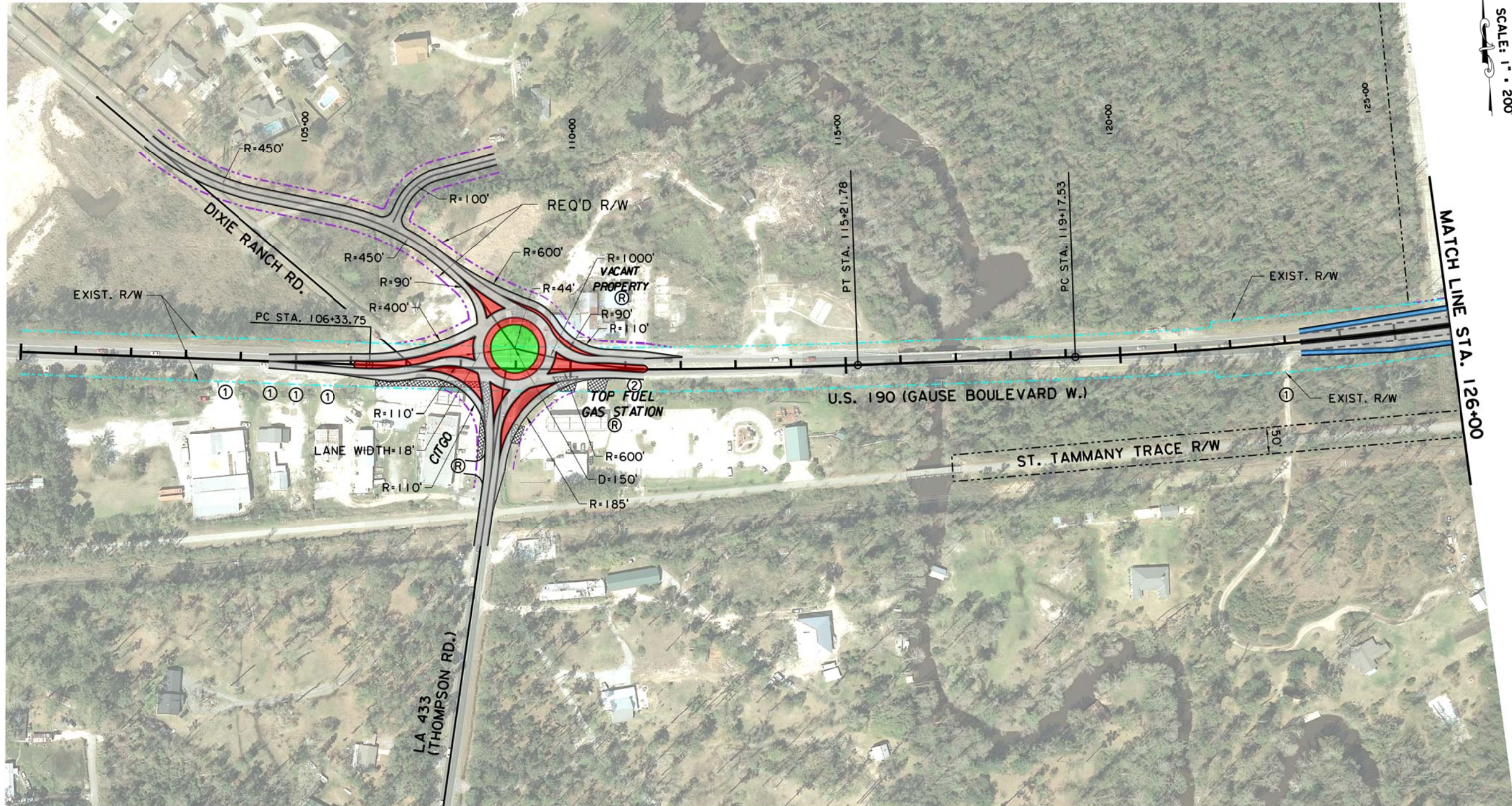
Any use of the data must be accompanied with this citation and accompanying seals and logos embedded within.





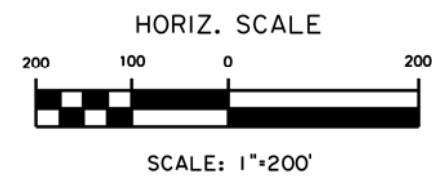
SHEET NUMBER		IND-1	
DESIGNED DTT		ST. TAMMANY	
CHECKED N/F	FEDERAL PROJECT	PARISH	STATE PROJECT
RETAILED D/F	CHECKED DTT	DATE	APRIL 29, 2014
BY	REVISION DESCRIPTION	NO.	DATE
 US 190 (LA 433 TO US 11) INTERIM CAPACITY/WIDENING IMPROVEMENTS STAGE 0 FEASIBILITY STUDY  EXHIBIT 1-4			

STAGE 0



NOTES:

1. ① DRIVEWAY WILL REMAIN OPEN AS A FULL ACCESS DRIVEWAY
2. ② DRIVEWAY WILL REMAIN OPEN AS ONLY A RIGHT-IN AND RIGHT-OUT DRIVEWAY
3. XXX DRIVEWAY WILL BE CLOSED
4. Ⓜ POTENTIAL RELOCATION

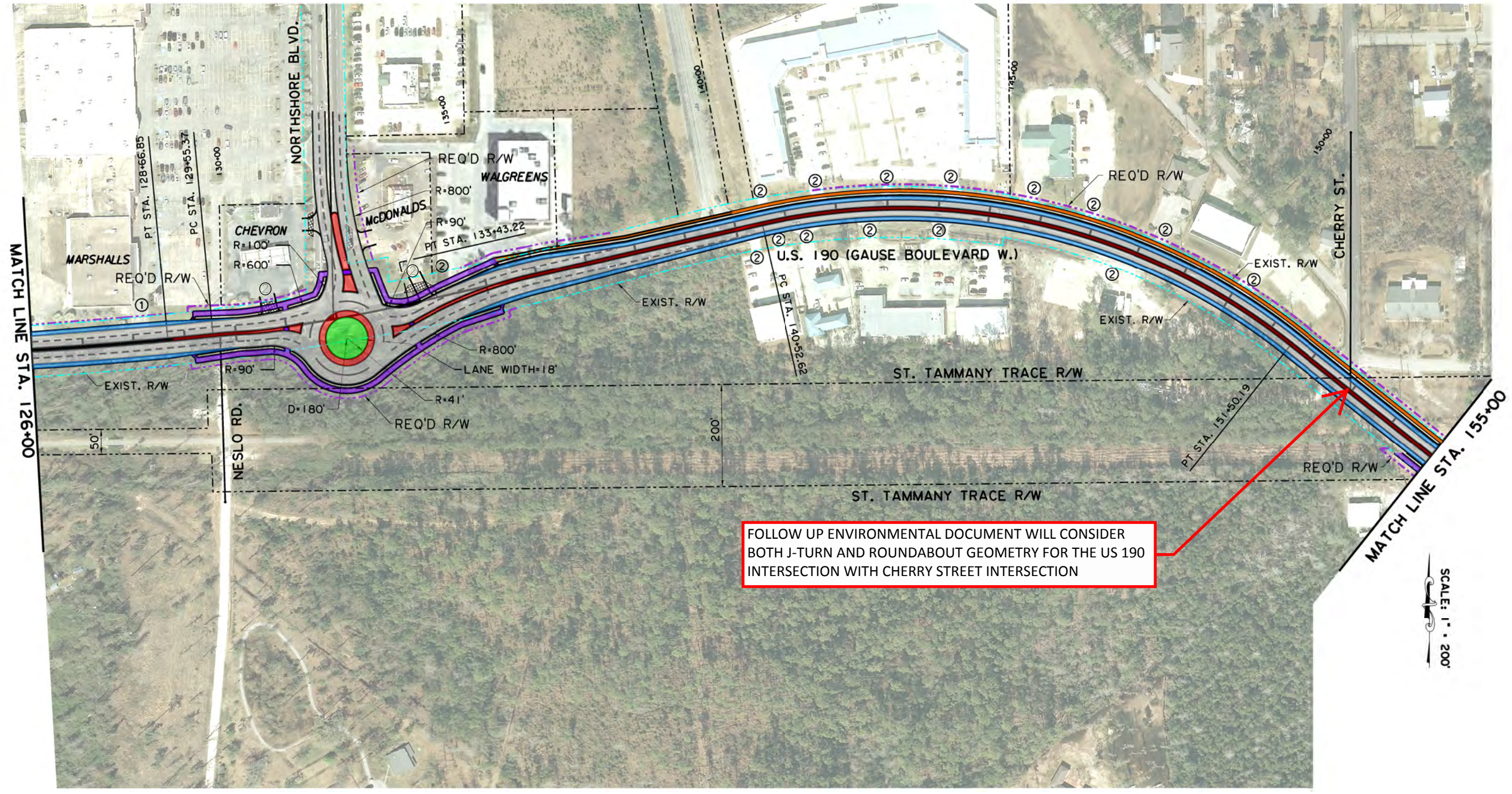


LEGEND

- NEW PAVEMENT
- SIDEWALKS
- MULTI-USE PATH
- ROUNDABOUT CENTER
- SHOULDER/BIKE LANE
- TRUCK APRON/MEDIAN
- EXISTING R/W
- REQ. R/W
- TO BE REMOVED

SCALE: 1" = 200'

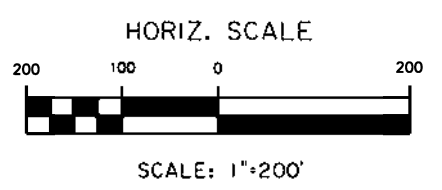
SHEET NUMBER	PL-1	DESIGNED KH	CHECKED RC	DATE	BY
PARISH	ST. TAMMANY	DESIGNED KH	CHECKED RC	4/20/14	
FEDERAL PROJECT		DATE	4/20/14	SHEET	1 OF 7
STATE PROJECT		REVISION DESCRIPTION			
US190 (LA433 TO US11) INTERIM CAPACITY/WIDENING IMPROVEMENTS STAGE 0 FEASIBILITY STUDY CONCEPTUAL PLAN					



STAGE 0

NOTES:

1. ① DRIVEWAY WILL REMAIN OPEN AS A FULL ACCESS DRIVEWAY
2. ② DRIVEWAY WILL REMAIN OPEN AS ONLY A RIGHT-IN AND RIGHT-OUT DRIVEWAY
3. XXX INITIALLY SHOWN AS DRIVEWAY CLOSURES. FOLLOW-UP ENVIRONMENTAL DOCUMENT TO CONSIDER AS RIGHT-IN AND RIGHT-OUT
4. Ⓜ POTENTIAL RELOCATION



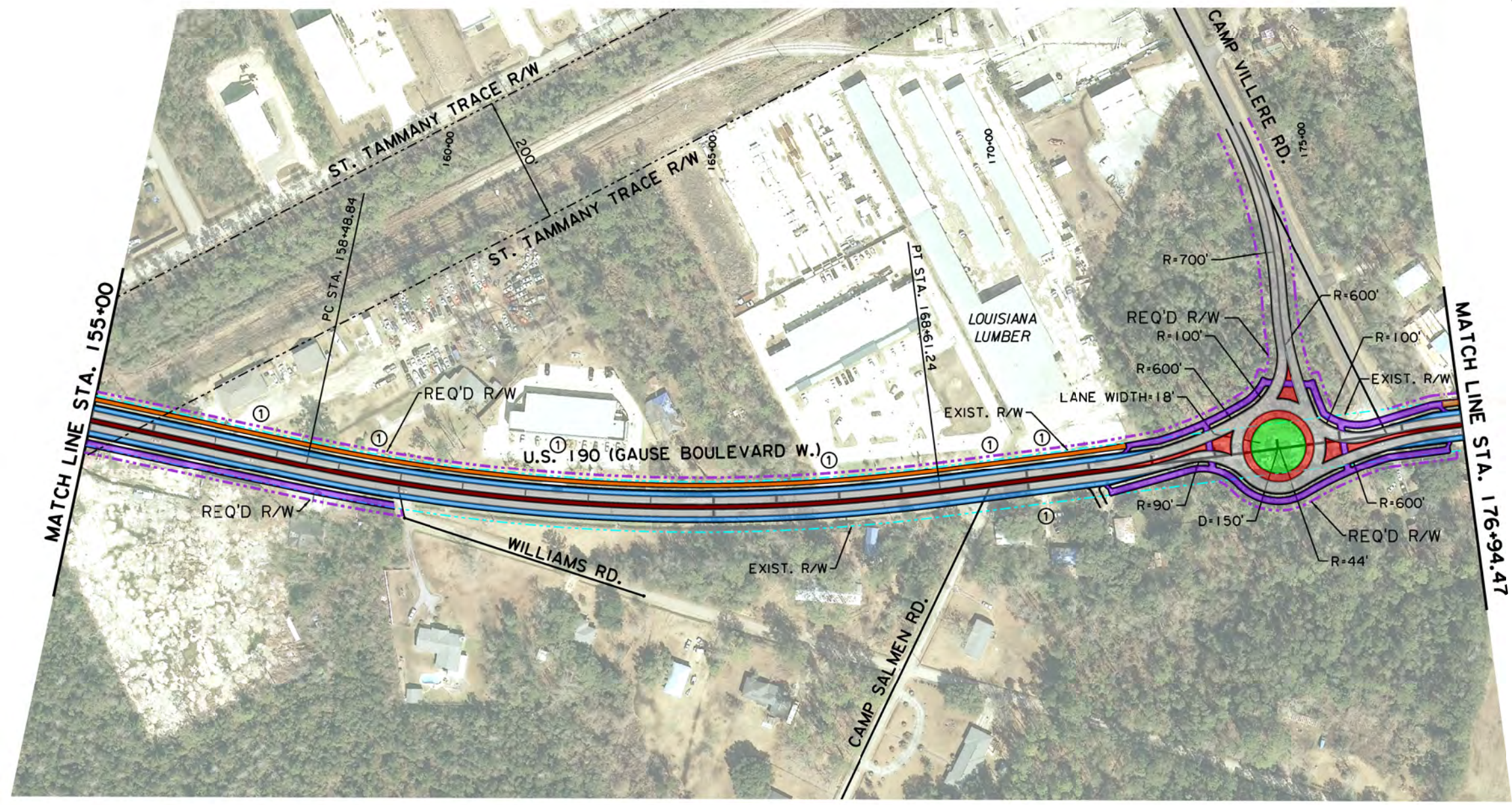
LEGEND

[Light Blue Box]	NEW PAVEMENT
[Orange Box]	SIDEWALKS
[Purple Box]	MULTI-USE PATH
[Green Box]	ROUNDABOUT CENTER
[Blue Box]	SHOULDER/BIKE LANE
[Red Box]	TRUCK APRON/MEDIAN
[Dashed Line]	EXISTING R/W
[Dotted Line]	REQ. R/W
[Hatched Box]	TO BE REMOVED

SCALE: 1" = 200'



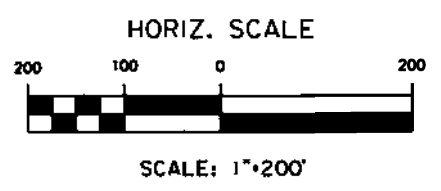
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STAGE 0

NOTES:

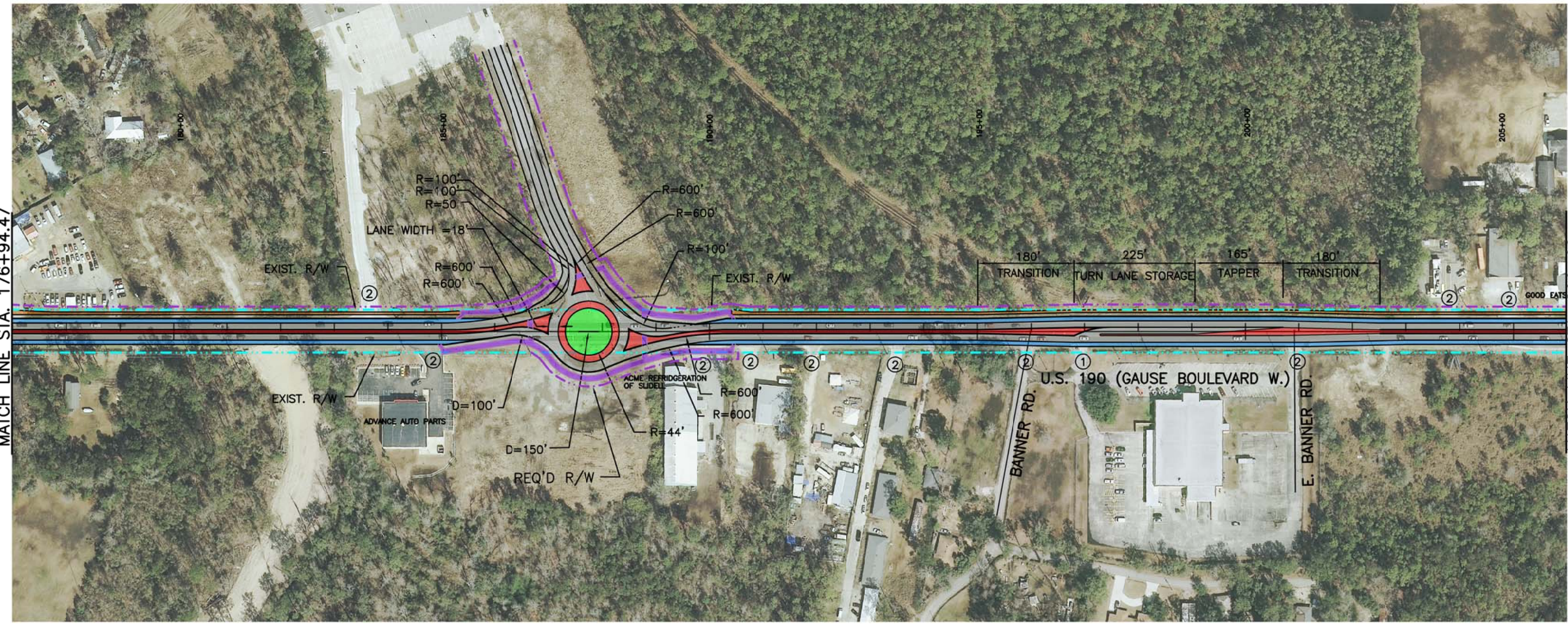
1. ① DRIVEWAY WILL REMAIN OPEN AS A FULL ACCESS DRIVEWAY
2. ② DRIVEWAY WILL REMAIN OPEN AS ONLY A RIGHT-IN AND RIGHT-OUT DRIVEWAY
3. XXX DRIVEWAY WILL BE CLOSED
4. ④ POTENTIAL RELOCATION



LEGEND

- NEW PAVEMENT
- SIDEWALKS
- MULTI-USE PATH
- ROUNDABOT CENTER
- SHOULDER/BIKE LANE
- TRUCK APRON/MEDIAN
- EXISTING R/W
- REQ. R/W
- TO BE REMOVED

SCALE: 1" = 200'



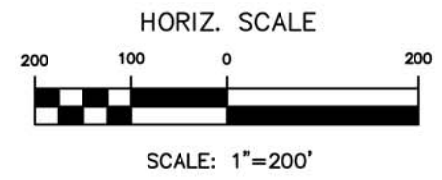
STAGE 0

MATCH LINE STA. 176+94.47

MATCH LINE STA. 206+00

NOTES:

1. ① DRIVEWAY WILL REMAIN OPEN AS A FULL ACCESS DRIVEWAY.
2. ② DRIVEWAY WILL REMAIN OPEN AS ONLY A RIGHT-IN RIGHT-OUT DRIVEWAY.
3. XXX DRIVEWAY WILL BE CLOSED.
4. ④ POTENTIAL RELOCATION



LEGEND

- NEW PAVEMENT
- SIDEWALKS
- MULTI-USE PATH
- ROUNDABOUT CENTER
- SHOULDER/BIKE LANE
- TRUCK APRON/MEDIAN
- EXISTING R/W
- REQ. R/W
- TO BE REMOVED



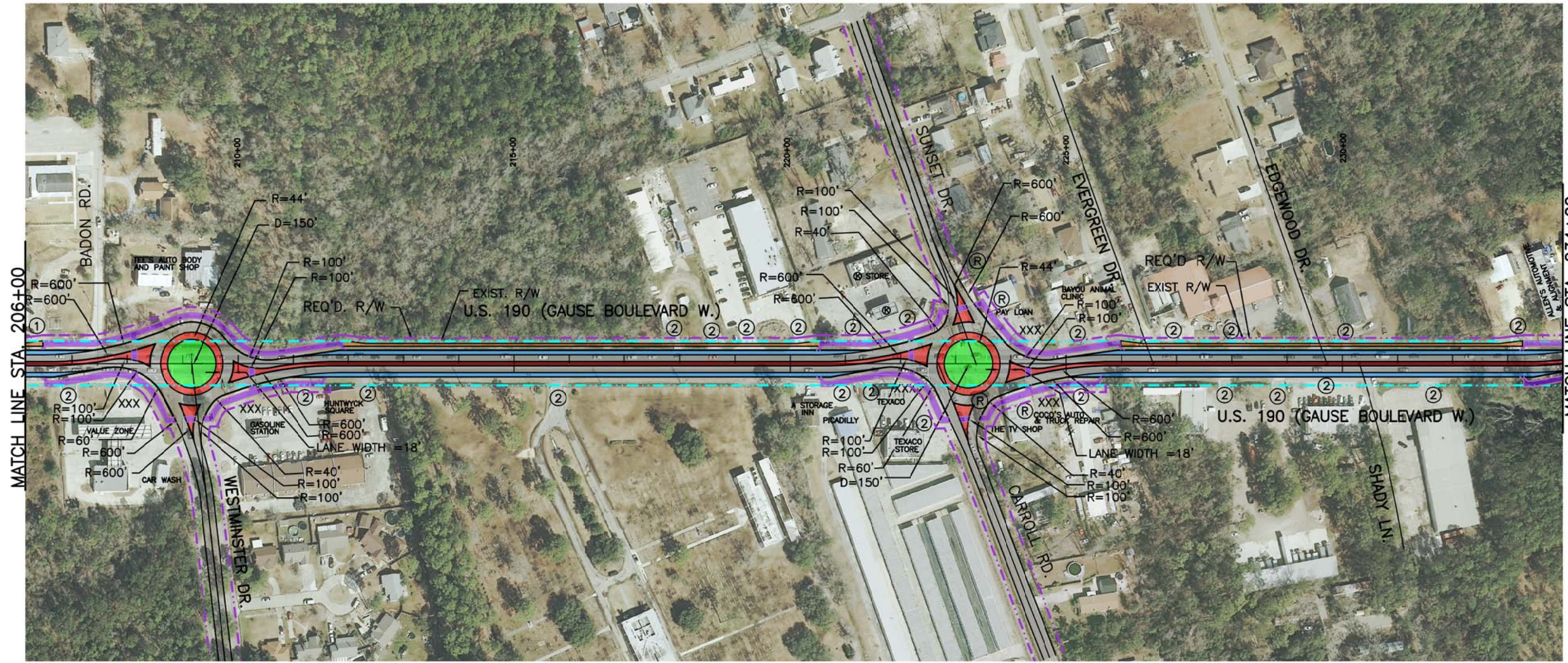
US190 (LA433 TO US11)
INTERIM CAPACITY/WIDENING
IMPROVEMENTS STAGE 0
FEASIBILITY STUDY

CONCEPTUAL PLAN



C&S CONSULTANTS INC.

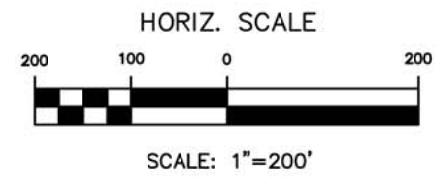
SCALE: 1" = 200'



STAGE 0

NOTES:

1. ① DRIVEWAY WILL REMAIN OPEN AS A FULL ACCESS DRIVEWAY.
2. ② DRIVEWAY WILL REMAIN OPEN AS ONLY A RIGHT-IN RIGHT-OUT DRIVEWAY.
3. XXX DRIVEWAY WILL BE CLOSED.
4. ④ POTENTIAL RELOCATION



LEGEND

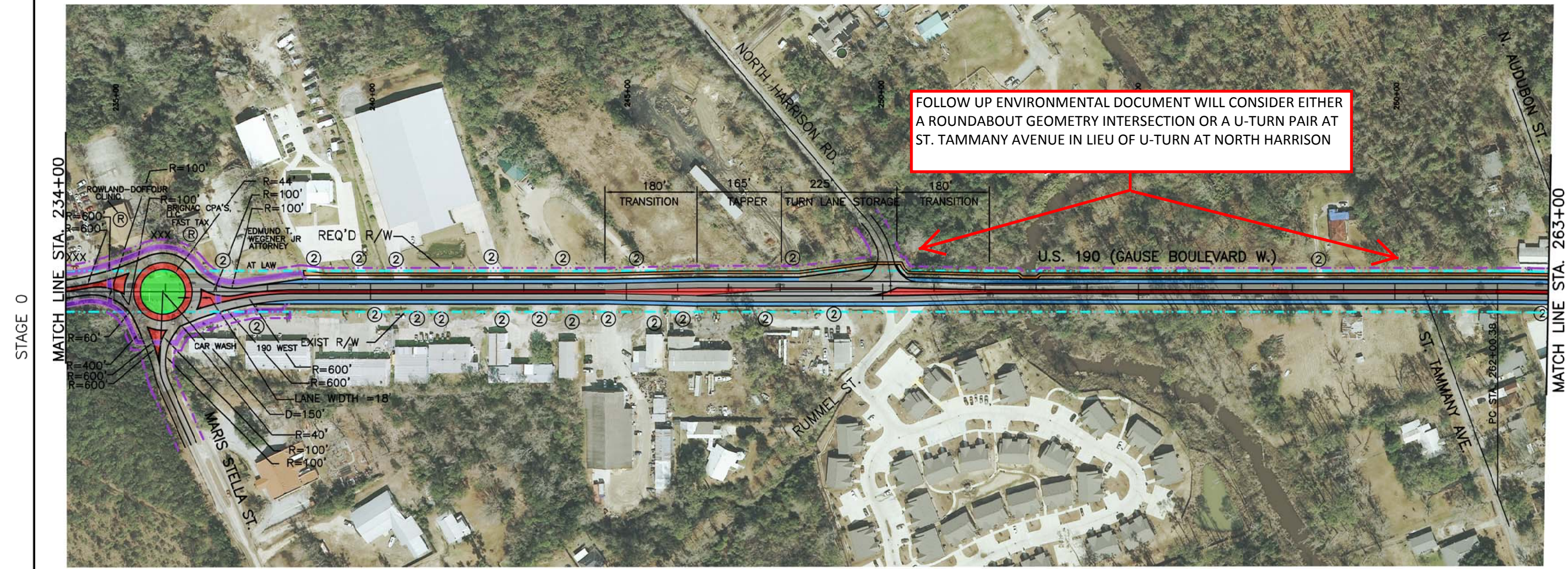
- NEW PAVEMENT
- SIDEWALKS
- MULTI-USE PATH
- ROUNDABOUT CENTER
- SHOULDER/BIKE LANE
- TRUCK APRON/MEDIAN
- EXISTING R/W
- REQ. R/W
- TO BE REMOVED

MATCH LINE STA. 234+00

MATCH LINE STA. 206+00

SHEET NUMBER	PL-5				
DESIGNED	CHECKED	DATE	SHEET	BY	
RETAINED	CHECKED	DATE	SHEET	BY	
US190 (LA433 TO US11) INTERIM CAPACITY/WIDENING IMPROVEMENTS STAGE 0 FEASIBILITY STUDY CONCEPTUAL PLAN					
C&S CONSULTANTS INC.					

SCALE: 1" = 200'



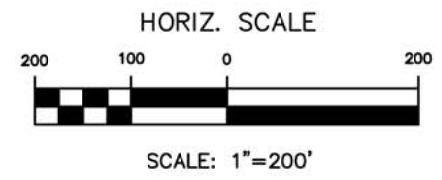
STAGE 0

MATCH LINE STA. 234+00

MATCH LINE STA. 263+00

NOTES:

1. ① DRIVEWAY WILL REMAIN OPEN AS A FULL ACCESS DRIVEWAY.
2. ② DRIVEWAY WILL REMAIN OPEN AS ONLY A RIGHT-IN RIGHT-OUT DRIVEWAY.
3. XXX DRIVEWAY WILL BE CLOSED.
4. Ⓜ POTENTIAL RELOCATION



LEGEND

- NEW PAVEMENT
- SIDEWALKS
- MULTI-USE PATH
- ROUNDABOUT CENTER
- SHOULDER/BIKE LANE
- TRUCK APRON/MEDIAN
- EXISTING R/W
- REQ. R/W
- TO BE REMOVED

SHEET NUMBER	PL-6			
DESIGNED	ST. TAMMANY	CHECKED	DATE	BY
RETAINED	FEDERAL PROJECT	CHECKED	DATE	BY
STATE PROJECT	STATE PROJECT	DATE	DATE	BY

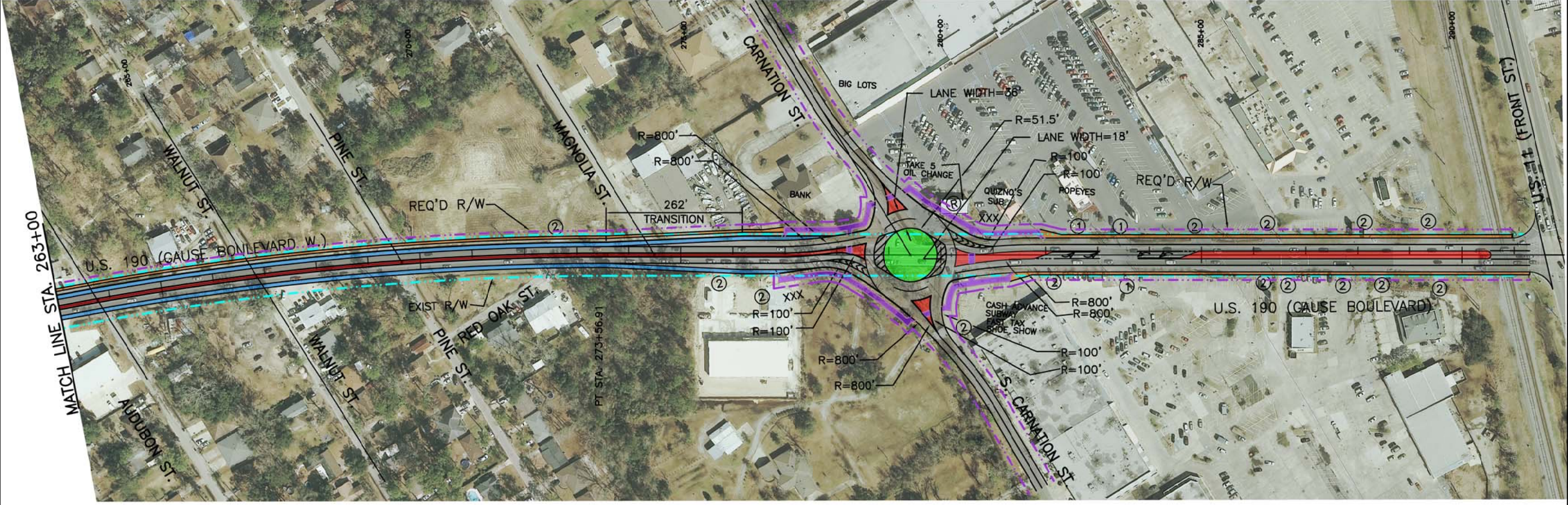
US190 (LA433 TO US11) INTERIM CAPACITY/WIDENING IMPROVEMENTS STAGE 0 FEASIBILITY STUDY

CONCEPTUAL PLAN

C&S CONSULTANTS INC.



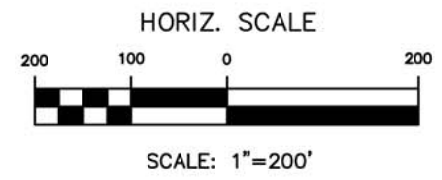
SCALE: 1" = 200'



STAGE 0

NOTES:

1. ① DRIVEWAY WILL REMAIN OPEN AS A FULL ACCESS DRIVEWAY.
2. ② DRIVEWAY WILL REMAIN OPEN AS ONLY A RIGHT-IN RIGHT-OUT DRIVEWAY.
3. XXX DRIVEWAY WILL BE CLOSED.
4. ④ POTENTIAL RELOCATION



LEGEND

- NEW PAVEMENT
- SIDEWALKS
- MULTI-USE PATH
- ROUNDABOUT CENTER
- SHOULDER/BIKE LANE
- TRUCK APRON/MEDIAN
- EXISTING R/W
- REQ. R/W
- TO BE REMOVED

Attachment 3

Traffic and Safety Analysis

**TRAFFIC ANALYSIS
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<i>Traffic Analysis (US 190: LA 433 to US 11)</i>	5
<i>SIDRA Intersection Analyses</i>	6
<i>SYNCHRO Intersection Analyses</i>	14
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Traffic Analysis:

The traffic analysis supporting this study is presented below: The traffic study limits extend along the US 190 (Gause Boulevard) corridor from Thompson Road (LA 433) to US 11 (Front Street). The study limits and average daily traffic volumes are shown in Exhibit 1-1 on the following page.

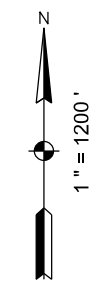
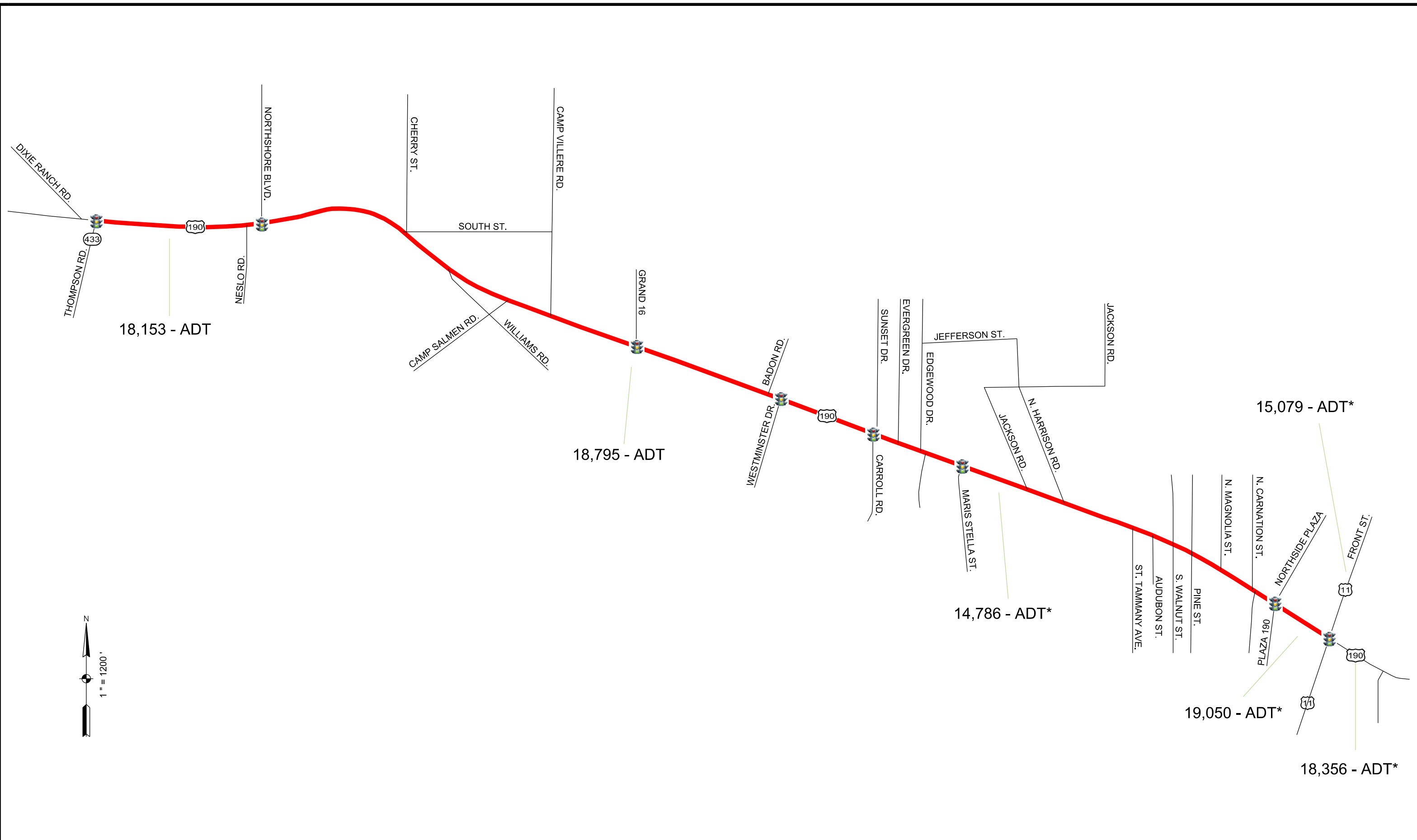
Existing and Forecast Traffic Volumes



Existing seven (7) day, twenty-four (24) hour volume and classification counts were collected February 21 through February 27, 2013 for the following locations:

- *US 190 East and West of US 11*
- *US 11 North and South of US 190*
- *US 190 East and West of Plaza 190*
- *US 190 East and West of Carroll Road*
- *Carroll Road South of US 190*
- *Sunset Drive North of US 190*
- *US 190 East and West of Westminster Drive*
- *Westminster Drive South of US 190*
- *US 190 East and West of Grand 16 Driveway*
- *Grand 16 Driveway North of US 190*
- *US 190 East and West of Northshore Boulevard*
- *US 190 East and West of Thompson Road*
- *Thompson Road (LA 433) South of US 190*

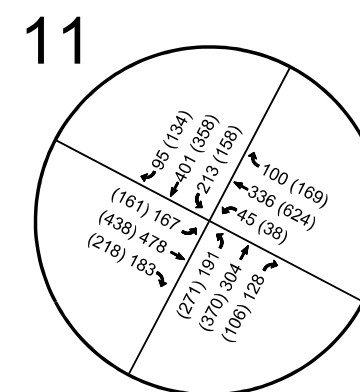
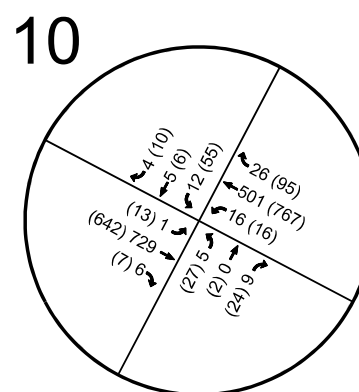
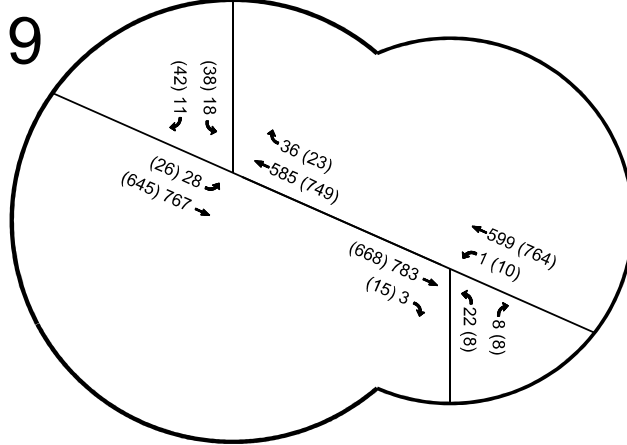
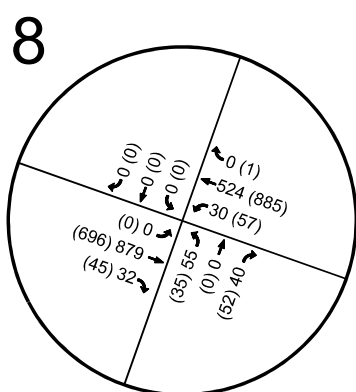
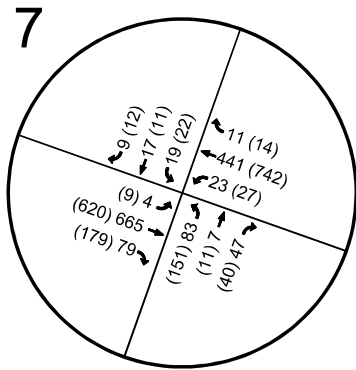
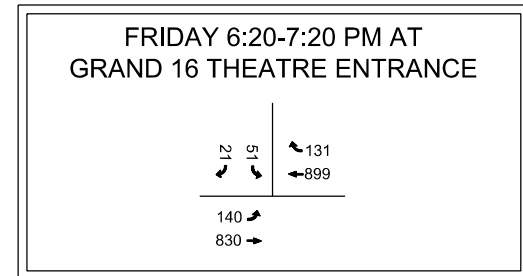
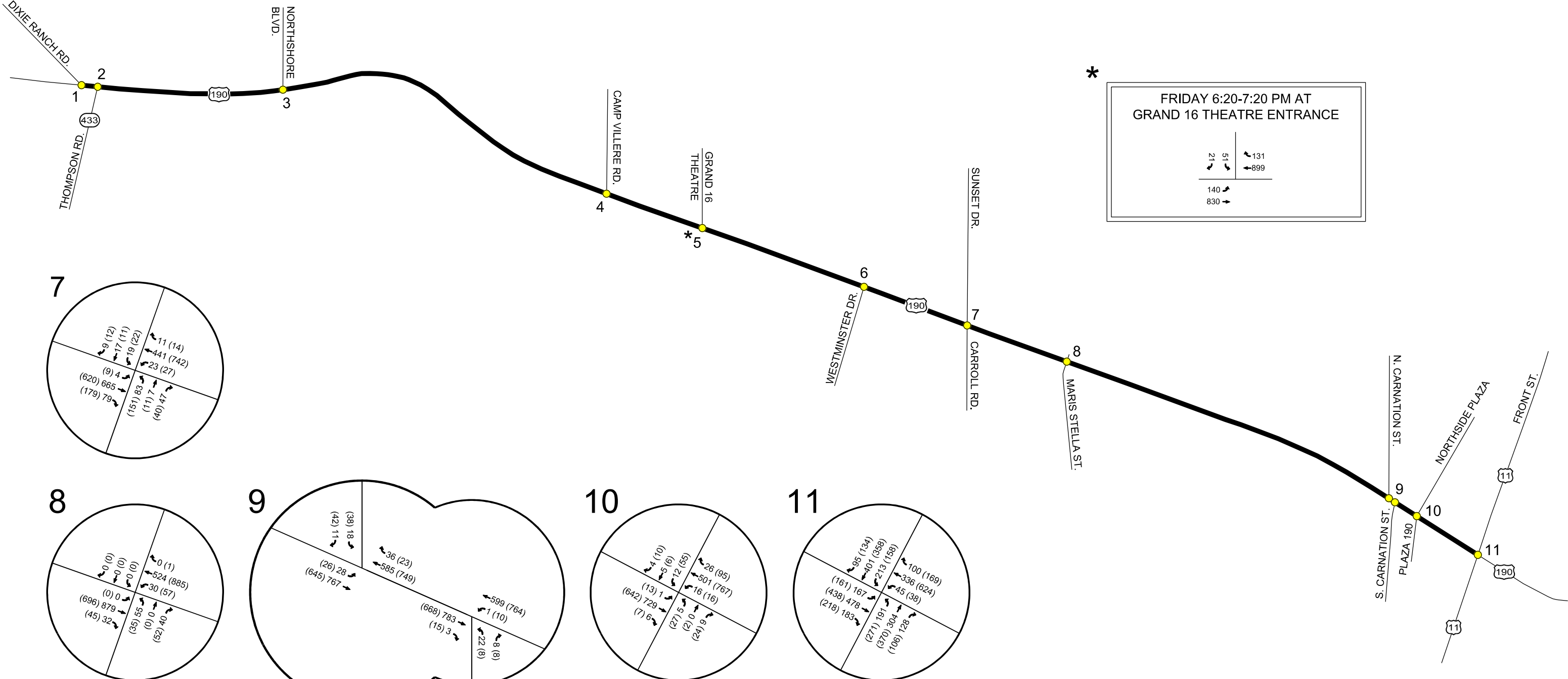
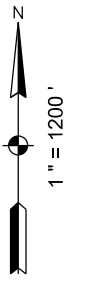
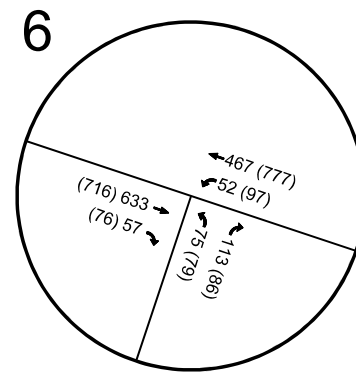
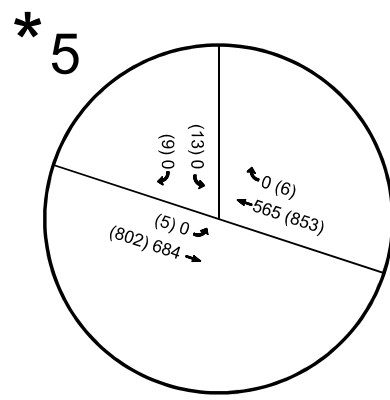
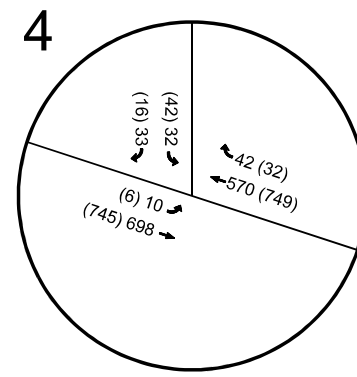
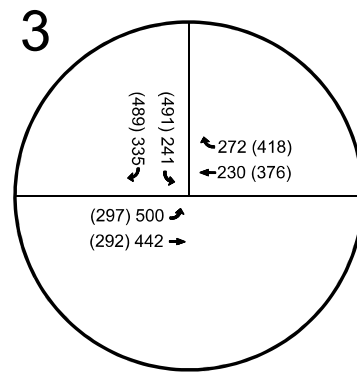
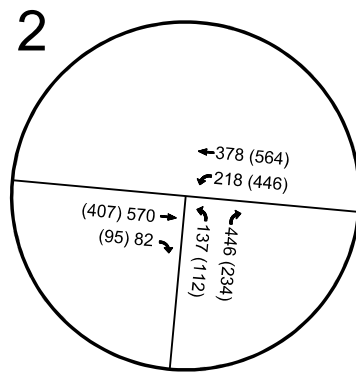
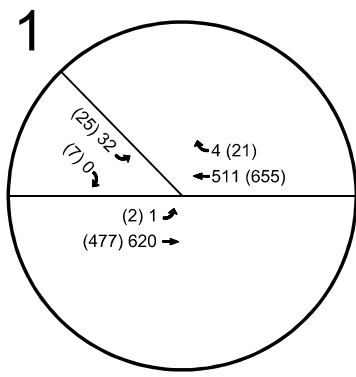
Based on analyses of the existing seven (7) day, twenty-four (24) hour volume and classification counts, the AM peak hour of the corridor was determined to be 7:30 – 8:30 a.m. and the PM peak hour of the corridor was determined to be 4:00 – 5:00 p.m. Peak hour turning movement counts were collected by Quality Counts, LLC. and Neel-Schaffer, Inc. (NSI) at the study locations shown in Exhibit 1-2 on February 21, 2013 and June 12, 2013. Note that US 190 at the intersections of Camp Villere Road and Carnation Street were counted on June 12, 2013 when schools were not in session. US 190 at the intersection of Dixie Ranch/Thompson Road (LA 433) was originally counted on February 21, 2013 when schools were in session and then again on June 12, 2013. This allowed US 190 at the intersection of Dixie Ranch/Thompson Road (LA 433) to be used as a control intersection to estimate the effect of the schools on traffic volumes within the study area. It was determined that the AM peak hour volumes were increased by 39% when schools were in session. The effects of school traffic were assumed to be negligible during the PM peak hour since the PM peak hour was outside the time frame for school dismissals. Note also that on the days that the turning movement counts were being collected, Maris Stella Street was closed for construction. Therefore, the turning movement counts collected were adjusted based on the counts at Carroll Road and Carnation Street. The existing 2013 AM and PM peak hour volumes are illustrated in Exhibit 1-2.

The existing peak hour counts for 2013 were grown at a 2.25% growth rate compounded annually to obtain the peak hour counts for 2016. 2.25% was chosen for the growth rate per instructions from the New Orleans Regional Planning Commission (NORPC). These future AM and PM peak hour volumes are illustrated in Exhibit 1-3.



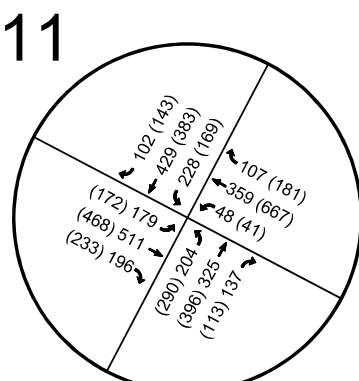
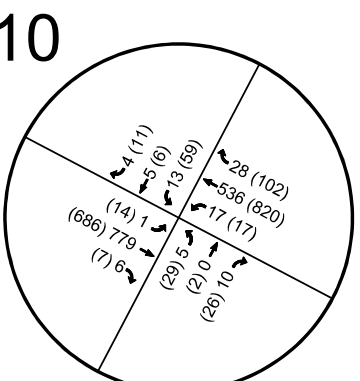
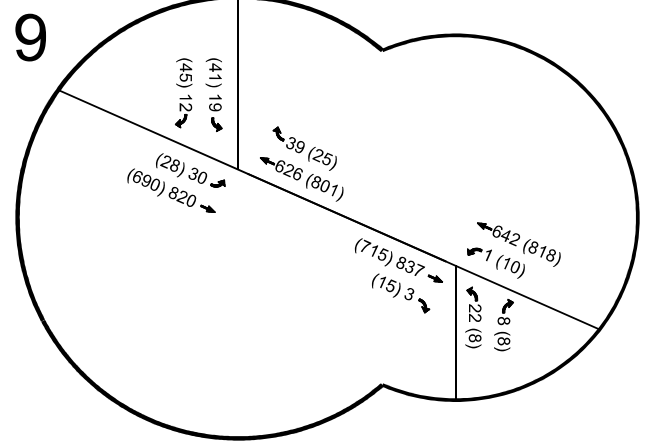
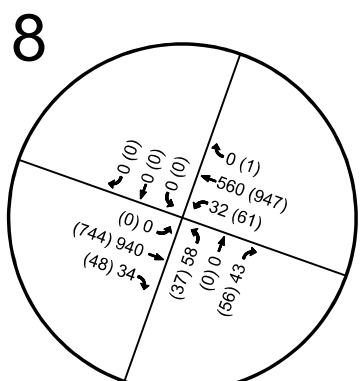
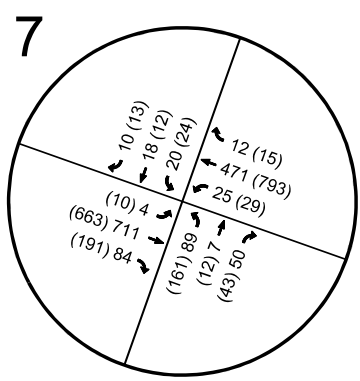
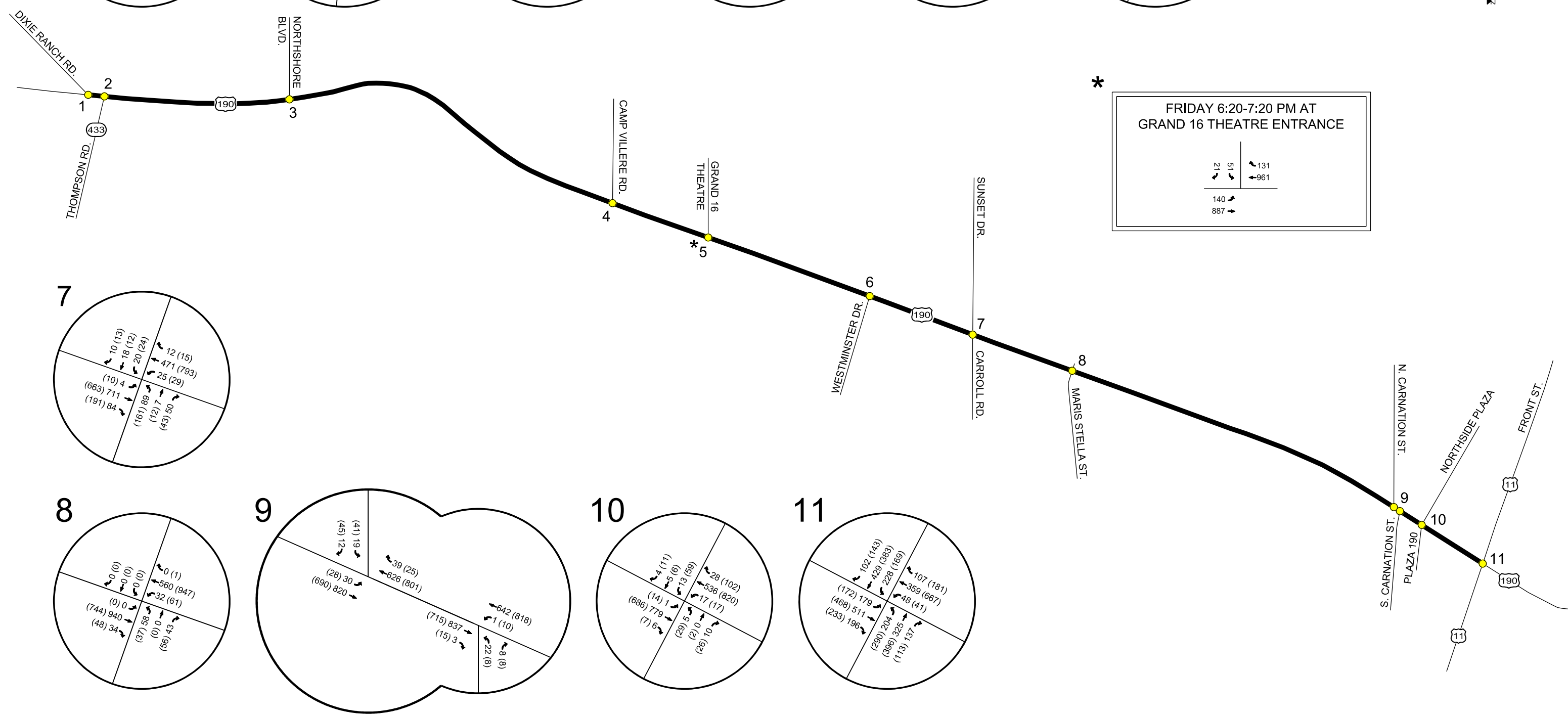
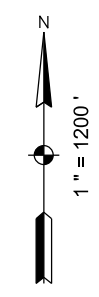
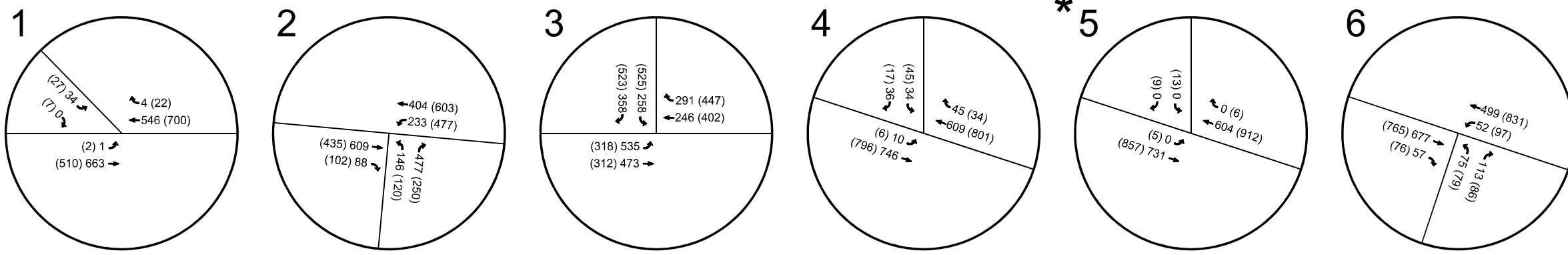
LEGEND	
	PROJECT LIMITS
	SIGNALIZED INTERSECTIONS
(XX - ADT)	OBTAINED FROM 2013 PROJECT COUNTS
(XX - ADT*)	OBTAINED FROM 2012 DOTD COUNT STATIONS

**EXHIBIT 1-1
US 190 STAGE 0
AVERAGE DAILY TRAFFIC**



LEGEND
 STUDY CORRIDOR
 STUDY INTERSECTION
 32 (6) (25) AM {NOON} (PM) PEAK HOUR VOLUMES

EXHIBIT 1-2
U.S. 190 STAGE 0
YEAR 2013 TURNING MOVEMENT COUNTS



LEGEND
 — STUDY CORRIDOR
 ● STUDY INTERSECTION
 32 {6} (25) AM {NOON} (PM) PEAK HOUR VOLUMES

EXHIBIT 1-3
U.S. 190 STAGE 0
PROJECTED YEAR 2016 TURNING MOVEMENT COUNTS

Traffic Analysis (US 190: LA 433 to US 11)

Traffic analyses performed as part of this study include the following:

- *Sidra 5.1 (Version 13.2093) Intersection Analyses for Existing Signalized and Unsignalized Intersections with Roundabout Alternatives*
- *Synchro 8 (Version 805.881) Intersection Analyses for Existing Signalized Intersections with Signalized Alternatives*
- *Safety Analyses*

The traffic analyses performed as part of this study were performed for the following conditions for Sidra 5.1 Intersection Analyses:

- *2013 Existing*
- *2016 No Build*
- *2016 Build*
- *Design Life No Build*
- *Design Life Build*

The traffic analyses performed as part of this study were performed for the following conditions for Synchro 8 Intersection Analyses:

- *2013 Existing*
- *2016 No Build*
- *2016 Build*

SIDRA Intersection Analyses

Models for both AM and PM peak hours were created for the intersection analyses of locations within the study area with a roundabout alternative using SIDRA Intersection Version 5.1 software. The AM peak hour results are for the hour of 7:30 – 8:30 a.m. The PM peak hour results are for the hour of 4:00 – 5:00 p.m. except for the intersection of US 190 and the Grand 16 Theater Driveway. During the 4:00 – 5:00 p.m. hour, the turning movement volumes at the intersection of US 190 and the Grand 16 Theater Driveway were lower than during the hour of 6:20 – 7:20 p.m. which corresponded with the peak operating time of the theater. Therefore the PM peak hour results for this intersection reflect the operating time of the theater instead of the PM peak hour of the corridor. The theater’s operating times and volumes were obtained from, “US 190 Widening (From LA 1089 to US 11 Stage 0 Feasibility Study” by Urban Systems, Inc. The results of the SIDRA intersection analyses are summarized in Tables 1 through 7.

Within the study area, four (4) study locations are two-way stop controlled intersections. US 190 at each of these intersections was the major uncontrolled street, while the cross streets were stop-controlled. The results of the 2013 analyses are shown on the following page in Table 1.

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Table 1
 2013 AM and PM Peak Hour Existing Conditions for TWSC Intersections
 Delay (sec) / LOS

Intersecting Street	Approach	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Dixie Ranch Rd.	NB	---	---	---	---
	SB	186.4	F	115.1	F
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A
Camp Villere Rd.	NB	---	---	---	---
	SB	130.7	F	202.1	F
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A
N. Carnation St.	NB	---	---	---	---
	SB	133.3	F	278.8	F
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A
S. Carnation St.	NB	167	F	99.8	F
	SB	---	---	---	---
	WB	0	N/A	0	N/A
	EB	0	N/A	0	N/A
	Intersection	N/A	N/A	N/A	N/A

According to the 2010 HCM in reference to TWSC, "LOS is not defined for the intersection as a whole or for major-street approaches... major-street through vehicles are assumed to experience zero delay".

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Six (6) intersections within the study area are signalized intersections. The results of the 2013 analyses are shown below in Table 2.

Table 2
2013 AM and PM Peak Hour Existing Conditions for Signalized Intersections
Delay (sec) / LOS

Intersecting Street	Approach	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Thompson Rd. (LA 433)	NB	56.1	E	26.1	C
	SB	---	---	---	---
	WB	15.5	B	16.9	B
	EB	31.9	C	24.9	C
	Intersection	34.3	C	20.8	C
Northshore Blvd.	NB	---	---	---	---
	SB	25.1	C	102.6	F
	WB	21.2	C	20.4	C
	EB	21.8	C	16	B
	Intersection	22.6	C	53.4	D
*Grand 16 Theater Dwy.	NB	---	---	---	---
	SB	22.7	C	46.6	D
	WB	14	B	41.3	D
	EB	5.6	A	10.1	B
	Intersection	9.5	A	26.9	C
Westminster Dr.	NB	25.1	C	29.4	C
	SB	---	---	---	---
	WB	6.9	A	9.4	A
	EB	14.5	B	14.9	B
	Intersection	13.1	B	13.6	B
Sunset Dr./ Carroll Rd.	NB	83.4	F	104.6	F
	SB	110.8	F	106.5	F
	WB	24.2	C	69.4	E
	EB	32.2	C	27.9	C
	Intersection	37.2	D	46.5	D
Maris Stella St.	NB	34.4	C	26.3	C
	SB	39.7	D	39.7	D
	WB	11.3	B	20.6	C
	EB	25.5	C	13.3	B
	Intersection	21	C	17.9	B

*PM peak hour results for Grand 16 Theater Dwy. are for the peak operating time of the theater

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

2016 year conditions were analyzed for the four (4) two-way stop control intersections. The results of the no build versus build analyses during the AM peak hour are shown below in Table 3. The build alternative for these intersections are roundabout intersections. Detailed analysis results can be found in the Appendix.

Table 3
2016 Design Year AM Peak Hour – No Build (TWSC) vs. Build (Roundabout)
Delay (sec) / LOS

Intersecting Street	Approach	No Build - 2016 AM TWSC		Build - 2016 AM Roundabout	
		Delay	LOS	Delay	LOS
Dixie Ranch Rd.	NB	---	---	18.9	B
	SB	265	F	21.6	C
	WB	0	N/A	11.4	B
	EB	0	N/A	10.3	B
	Intersection	N/A	N/A	13.6	B
Camp Villere Rd.	NB	---	---	---	---
	SB	248.8	F	12.2	B
	WB	0	N/A	6.2	A
	EB	0	N/A	6.6	A
	Intersection	N/A	N/A	6.7	A
N. Carnation St.	NB	---	---	12.7	B
	SB	221.7	F	11	B
	WB	0	N/A	6	A
	EB	0	N/A	6	A
	Intersection	N/A	N/A	6.2	A
S. Carnation St.	NB	272.3	F	12.7	B
	SB	---	---	11	B
	WB	0	N/A	6	A
	EB	0	N/A	6	A
	Intersection	N/A	N/A	6.2	A

According to the 2010 HCM in reference to TWSC, "LOS is not defined for the intersection as a whole or for major-street approaches... major-street through vehicles are assumed to experience zero delay".

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

2016 year conditions were analyzed for the four (4) two-way stop control intersections using. The results of the no build versus build analyses during the PM peak hour are shown below in Table 4. The build alternative for these intersections are roundabout intersections. Detailed analysis results can be found in the Appendix.

Table 4
 2016 Year PM Peak Hour – No Build (TWSC) vs. Build (Roundabout)
 Delay (sec) / LOS

Intersecting Street	Approach	No Build - 2016 PM TWSC		Build - 2016 PM Roundabout	
		Delay	LOS	Delay	LOS
Dixie Ranch Rd.	NB	---	---	13.3	B
	SB	192.5	F	31.7	C
	WB	0	N/A	12.4	B
	EB	0	N/A	12.4	B
	Intersection	N/A	N/A	12.9	B
Camp Villere Rd.	NB	---	---	---	---
	SB	213	F	16.7	B
	WB	0	N/A	6.2	A
	EB	0	N/A	6.7	A
	Intersection	N/A	N/A	6.8	A
N. Carnation St.	NB	---	---	9.1	A
	SB	306.1	F	11	B
	WB	0	N/A	6	A
	EB	0	N/A	6.2	A
	Intersection	N/A	N/A	6.4	A
S. Carnation St.	NB	146.7	F	9.1	A
	SB	---	---	11	B
	WB	0	N/A	6	A
	EB	0	N/A	6.2	A
	Intersection	N/A	N/A	6.4	A

According to the 2010 HCM in reference to TWSC, "LOS is not defined for the intersection as a whole or for major-street approaches... major-street through vehicles are assumed to experience zero delay".

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

2016 year conditions were analyzed for the six (6) signalized intersections. The results of the no build versus build analyses during the AM peak hour are shown below in Table 5. The build alternative for these intersections are roundabout intersections. Detailed analysis results can be found in the Appendix.

Table 5
 2016 Design Year AM Peak Hour – No Build (Signal) vs. Build (Roundabout)
 Delay (sec) / LOS

Intersecting Street	Approach	No Build - 2016 AM Signal		Build - 2016 AM Roundabout	
		Delay	LOS	Delay	LOS
Thompson Rd. (LA 433)	NB	95.5	F	18.9	B
	SB	---	---	21.6	C
	WB	18.1	B	11.4	B
	EB	33.3	C	10.3	B
	Intersection	48.1	D	13.6	B
Northshore Blvd.	NB	---	---	---	---
	SB	26.1	C	11.7	B
	WB	22.9	C	10.1	B
	EB	28.9	C	11.9	B
	Intersection	26.6	C	11.4	B
Grand 16 Theater Dwy.	NB	---	---	---	---
	SB	23.3	C	10.8	B
	WB	14.3	B	6.3	A
	EB	5.8	A	6.3	A
	Intersection	9.7	A	6.3	A
Westminster Dr.	NB	26.3	C	13.7	B
	SB	---	---	---	---
	WB	7.3	A	8.7	A
	EB	15.7	B	6.9	A
	Intersection	13.9	B	8.4	A
Sunset Dr./ Carroll Rd.	NB	83.6	F	21.5	C
	SB	110.8	F	16.4	B
	WB	24.8	C	8.9	A
	EB	41.5	D	9.1	A
	Intersection	42.4	D	10.5	B
Maris Stella St.	NB	39	D	16.8	B
	SB	46.1	D	7.2	A
	WB	11.3	B	7	A
	EB	26.2	C	6.8	A
	Intersection	21.8	C	7.4	A

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

2016 year conditions were analyzed for the six (6) signalized intersections. The results of the no build versus build analyses during the PM peak hour are shown below in Table 6. The build alternative for these intersections are roundabout intersections. Detailed analysis results can be found in the Appendix.

Table 6
2016 Design Year PM Peak Hour – No Build (Signal) vs. Build (Roundabout)
Delay (sec) / LOS

Intersecting Street	Approach	No Build 2016 PM Signal		Build 2016 PM Roundabout	
		Delay	LOS	Delay	LOS
Thompson Rd. (LA 433)	NB	27.2	C	13.3	B
	SB	---	---	31.7	C
	WB	16.6	B	12.4	B
	EB	25.6	C	12.4	B
	Intersection	21	C	12.9	B
Northshore Blvd.	NB	---	---	---	---
	SB	131	F	14.8	B
	WB	20.8	C	8.7	A
	EB	17.1	B	13.4	B
	Intersection	65.6	E	12.4	B
*Grand 16 Theater Dwy.	NB	---	---	---	---
	SB	47	D	18.8	B
	WB	62.3	E	11.3	B
	EB	10.1	B	7.8	A
	Intersection	37.3	D	9.9	A
Westminster Dr.	NB	31.6	C	15.6	B
	SB	---	---	---	---
	WB	9.4	A	9	A
	EB	14.9	B	7.5	A
	Intersection	13.7	B	8.9	A
Sunset Dr./ Carroll Rd.	NB	138.2	F	21.4	C
	SB	183.6	F	22.2	C
	WB	63.0	E	12.9	B
	EB	31.0	C	9.2	A
	Intersection	50.4	D	12.4	B
Maris Stella St.	NB	28.2	C	11.8	B
	SB	42.9	D	14.5	B
	WB	27.4	C	7.1	A
	EB	13.9	B	7.1	A
	Intersection	21.9	C	7.4	A

*PM peak hour results for Grand 16 Theater Dwy. are for the peak operating time of the theater

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

A SIDRA Design Life analysis was conducted for all study intersections with roundabout alternatives. The Design Life analysis objective is to predict the last year before any of the subject intersection movements exceed a volume-to-capacity ratio (V/C) of 1.0 (i.e., capacity).

Table 7 shows the results of the SIDRA Design Life analysis. It shows the number of years after 2016 that each alternative will operate before exceeding capacity. The analyses was run with a limit of 20 years.

Table 7
Design Life AM and PM Peak Hours – No Build vs. Build (Roundabout)
Number of Years after 2016 until Exceeds Capacity

Intersecting Street	AM Peak Hour		PM Peak Hour	
	No Build	Build	No Build	Build
Dixie Ranch Rd.*	20*	7*	20*	10*
Thompson Rd. (LA 433)*	0*		14*	
Northshore Blvd.	1	20	0	16
Camp Villere Rd.	0	20	0	20
Grand 16 Theater Dwy.~	20	20	0~	8~
Westminster Dr.	15	20	7	18
Sunset Dr./ Carroll Rd.	0	17	2	10
Maris Stella St.	3	14	3	13
N. Carnation St.*	20*	20*	0*	20*
S. Carnation St.*	20*		20*	

*In No Build conditions, Dixie Ranch Rd. and Thompson Rd. are separate T intersections that are closely spaced. The Build condition combines the two T intersections into one roundabout. That is also the case for N. Carnation St. and S. Carnation St.

~PM peak hour results for Grand 16 Theater Dwy. are for the peak operating time of the theater

SYNCHRO Intersection Analyses

The intersections of US 190 and US 11 (Front St.) and US 190 and Northside Plaza are signalized intersections for the no build alternative. Build condition improvements for these intersections are associated with widening the roadway and not a change in the type of traffic control. Therefore, these two signalized intersections were analyzed using Synchro Version 8 software. The results of the intersection analyses are summarized in Tables 8 through 10. Table 8 below shows the results of the existing 2013 conditions.

Table 8
2013 AM and PM Peak Hour Existing Conditions Intersections
Delay (sec) / LOS

Intersecting Street	Approach	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
US 11 (Front St.)	NB	34	C	40.1	D
	SB	36.5	D	52.7	D
	WB	29.5	C	49.3	D
	EB	30.1	C	30.3	C
	Intersection	32.6	C	42.7	D
Northside Plaza	NB	41.9	D	50.2	D
	SB	45.5	D	62.5	E
	WB	2.6	A	3.9	A
	EB	5.9	A	3.2	A
	Intersection	5.5	A	7.6	A

2016 year conditions were analyzed for the two (2) signalized intersections in the build alternative. The results of these no build versus build analyses during the AM peak hour are shown below in Table 9.

Table 9
2016 Year AM Peak Hour – No Build vs. Build
Delay (sec) / LOS

Intersecting Street	Approach	2016 No Build		2016 Build	
		Delay	LOS	Delay	LOS
US 11 (Front St.)	NB	35.7	D	27.9	C
	SB	38.9	D	30.8	C
	WB	31.7	C	27.6	C
	EB	32.6	C	25	C
	Intersection	34.8	C	27.7	C
Northside Plaza	NB	41.8	D	32	C
	SB	45.7	D	34.2	C
	WB	2.6	A	1.7	A
	EB	6.5	A	3.9	A
	Intersection	5.8	A	3.7	A

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

2016 year conditions were analyzed for the two (2) signalized intersections in the build alternative. The results of these no build versus build analyses during the PM peak hour are shown below in Table 10.

Table 10
 2016 Year PM Peak Hour – No Build vs. Build
 Delay (sec) / LOS

Intersecting Street	Approach	2016 No Build		2016 Build	
		Delay	LOS	Delay	LOS
US 11 (Front St.)	NB	41.5	D	32.7	C
	SB	59.6	E	30.3	C
	WB	69.5	E	35.9	D
	EB	31.1	C	25.6	C
	Intersection	50.2	D	31.2	C
Northside Plaza	NB	50.3	D	31.2	C
	SB	67.2	E	33.3	C
	WB	4.3	A	4.8	A
	EB	4	A	5.1	A
	Intersection	8.3	A	7.0	A

The immediate geometry at the intersection of US 190 and US 11 (Front Street) does not change from no build to build conditions. However, US 190 between Northside Plaza and US 11 does change from a three-lane section in no build conditions to a four-lane section in build conditions. This allows for better timing between the signalized intersections of Northside Plaza and US 11 (Front Street), which is responsible for the decrease in delays at US 11 (Front Street) during the AM and PM peak hours under build conditions.

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Safety Analysis

In addition to the traffic analyses, safety analyses were performed for the study intersections.

A conflict point is a point at which a vehicle crosses, merges, or diverges from a road or driveway and conflicts with another vehicle. These points correspond with potential for crashes. Conflict points were determined at the study intersections along US 190 for the no build and the build alternatives. The results are shown below in Table 11 and Table 12 respectively.

Table 11
 Number of Conflict Points by Type for No Build Condition

Intersecting Street	Crossing	Merging	Diverging	Total
Dixie Ranch/ Thompson Rd. (LA 433)	8	8	7	23
Northshore Blvd.	4	4	3	11
Camp Villere Rd.	5	4	3	12
Grand 16 Theater Dwy.	6	3	3	12
Westminster Dr.	6	4	3	13
Carroll Rd/ Sunset Dr.	17	8	7	32
Maris Stella St./ Clinic Dwy.	12	5	8	25
Carnation St./ S. Carnation St.	6	7	7	20
Northside Plaza	16	8	8	32
US 11 (Front St.)	40	9	9	58
Total	120	60	58	238

Table 12
 Number of Conflict Points by Type for Build Condition

Intersecting Street	Crossing	Merging	Diverging	Total
Dixie Ranch/ Thompson Rd. (LA 433)	0	7	7	14
Northshore Blvd.	2	5	5	12
Camp Villere Rd.	0	3	3	6
Grand 16 Theater Dwy.	0	4	4	8
Westminster Dr.	0	3	3	6
Carroll Rd/ Sunset Dr.	0	4	4	8
Maris Stella St./ Clinic Dwy.	0	4	4	8
Carnation St./ S. Carnation St.	4	8	9	21
Northside Plaza	24	8	8	40
US 11 (Front St.)	40	8	8	58
Total	70	55	56	181

In accordance with FHWA guidance, crossing conflicts result in left turn and angle crashes that account for generally more severe crashes than other types. Tables 11 and 12 show that the build alternative will decrease the number of crossing conflicts along the study intersections by 42%.

The number of conflict points on US 190 were not determined along segments between the study intersections. However, it should be noted that no build conditions have numerous driveways along the corridor that are full access. Driveways that are lined up with another driveway across the street will have approximately thirty-two (32) conflict points (16 crossing, 8 merging, and 8 diverging). Driveways that are not lined up with another driveway will have approximately nine (9) conflict points (3 crossing, 3 merging, and 3 diverging). The build alternative has a median that will turn all of the full access driveways into right-in, right-out driveways. This will cut down the number of conflict points to approximately two (2) (1 merge and 1 diverge) in two-lane segments, and three (3) (2 merge and 1 diverge) in four-lane segments. The build alternative will cut down the number of conflict points dramatically along the segments of US 190. It can also be expected that the severity of crashes along the segments of US 190 will decline with build conditions since crossing conflict points will be eliminated.

In accordance with the FHWA Crash Modification Factors Clearinghouse, “A crash modification factor (CMF) is a multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure at a specific site. For example, an intersection is experiencing 100 angle crashes and 500 rear-end crashes per year. If you apply a countermeasure that has a CMF of 0.80 for angle crashes, then you can expect to see 80 angle crashes per year following the implementation of the countermeasure (100 x 0.80 = 80).” Table 13 on the following page lists the crash modification factors associated with each intersection improvement in the build condition.

Table 13
Crash Modification Factors for Build Condition

<i>Intersecting Street</i>	<i>From Existing Intersection Control to Build Improvement</i>	<i>Crash Type</i>	<i>Crash Severity</i>	<i>CMF</i>
<i>Dixie Ranch Rd/ Thompson Rd (LA 433)</i>	<i>Signalized to 2 Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.81</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.29</i>
<i>Northshore Blvd</i>	<i>Signalized to 2 Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.81</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.29</i>
<i>Camp Villere</i>	<i>Unsignalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.28</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.12</i>
<i>Grand 16 Theater</i>	<i>Signalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.74</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.45</i>
<i>Westminster Dr</i>	<i>Signalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.74</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.45</i>
<i>Sunset Dr/ Carroll Rd</i>	<i>Signalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.74</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.45</i>
<i>Maris Stella/ Clinic Dwy</i>	<i>Signalized to One Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.74</i>
		<i>All</i>	<i>Serious injury, Minor injury</i>	<i>0.45</i>
<i>Carnation St</i>	<i>Unsignalized to 2 Lane Roundabout</i>	<i>All</i>	<i>All</i>	<i>0.75</i>
		<i>All</i>	<i>Fatal, Serious injury, Minor injury</i>	<i>0.65</i>

Note: The lower the CMF, the more crash reductions can be expected. A CMF score lower than 1 predicts a reduction in the number of crashes with the suggested roadway improvement. A CMF score higher than 1 would predict an increase in crashes. A CMF of 1 would predict no change in the number of crashes.

All of the crash modification factors listed in Table 13 for the roundabout countermeasures are less than one (1). Therefore, it can reasonably be expected that the build alternative will decrease the number of crashes that are currently occurring at these locations. The build alternative for the intersection of US 190 and US 11 (Front Street) is the same layout as the no build alternative. As explained above, crash modification factors are typically used for intersection conversions, therefore US 190 at US 11 (Front Street) was excluded from Table 13. The build alternative for the intersection of US 190 and Northside Plaza includes widening US 190 from a two-lane section to a four-lane section. There are no crash modification factors available for this type of roadway improvement, therefore this intersection was also excluded from Table 13.

Appendix 1 to Stage 0 Report Documentation of Traffic Analysis (On CD in Rear Folder of Report)



Stage 0 Feasibility Study

US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements –
ST Tammany Parish

Chapter 2, Environmental Checklist

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Route US 190 / Gause Boulevard West Parish: St Tammany

C.S. 013-12 Begin Log mile 14.63 End Log mile 21.22

ADJACENT LAND USE: Commercial, residential, industrial, and public

Exhibit 2-1 shows the area of Study for the Environmental Analysis. The map also shows proximity census tracts. In addition to the desktop screening utilizing published data sources, Burk-Kleinpeter, Inc. staff conducted a limited filed screening of the corridor at which time potential affects to resources were noted.

Any property owned by a Native American Tribe? (Y or N or Unknown) If so, which Tribe?

NO. *There are no Native American Tribal properties located within the project area boundaries or adjacent to the roadway.*

Sources checked: May 2013- St Tammany Parish GIS, Windshield Survey

Any property enrolled into the Wetland Reserve Program? (Y or N or Unknown) If so, give the location. *No. LADOTD previously conducted a Stage 0 Study (2010) considering the requirements for widening US 190 in St. Tammany Parish from LA 1089 to US 11. Documentation within that study confirmed that there were no Wetlands Reserve Properties located within St. Tammany Parish.*

Sources checked: Stage 0 Study, Widen US 190 from LA 1089 to US 1, St. Tammany Parish, Louisiana (2010) State Project No. 700-52-0191

June 2013; <http://www.fws.gov/wetlands/Wetlands-Mapper.html>

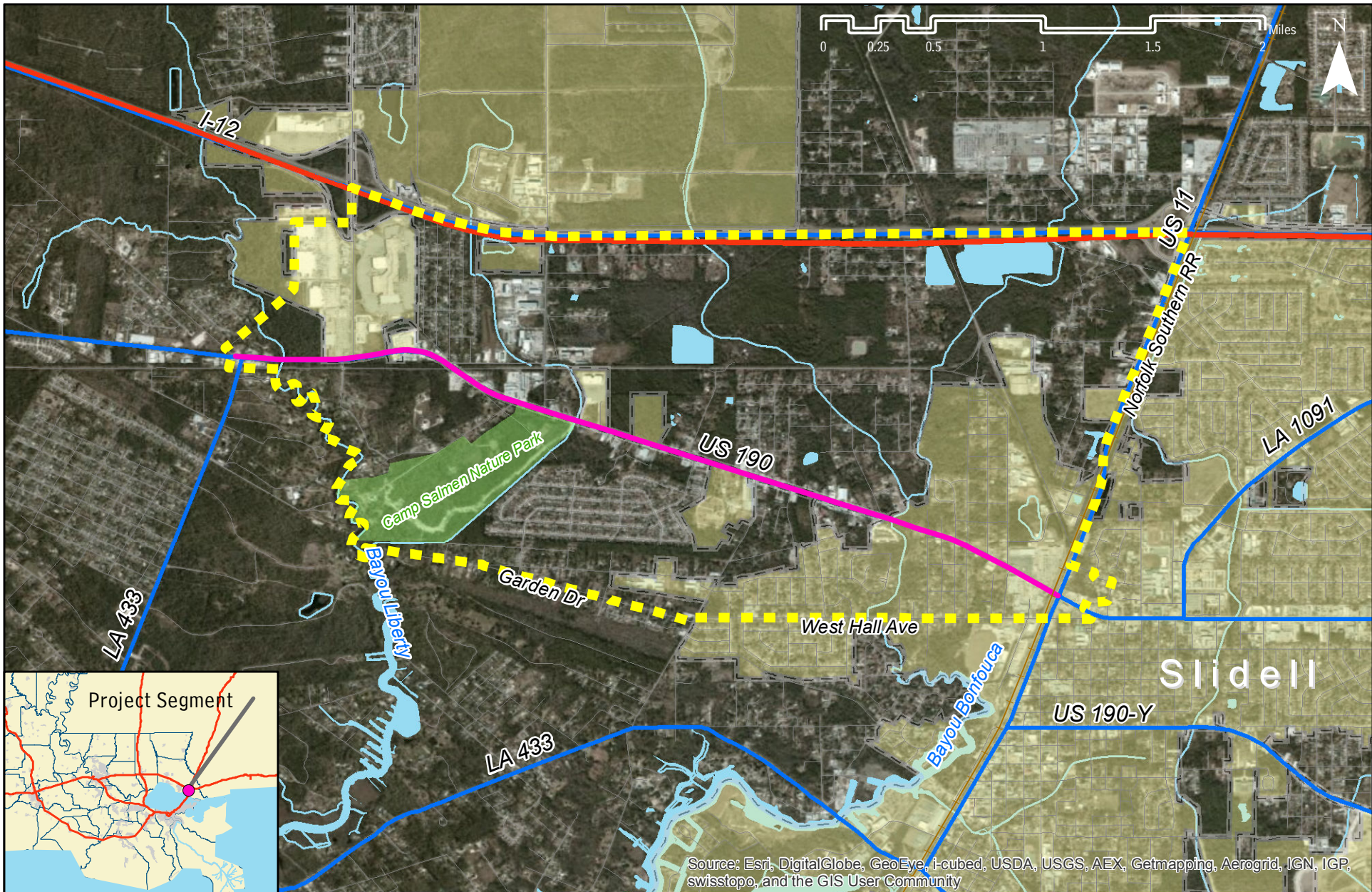
Are there any other known wetlands in the area? (Y or N) If so, give the location.

YES. *A review of the USF&WS National Wetlands Inventory (NWI) Wetlands Mapper revealed a variety of wetland types in the project area, totaling 141.1 acres. The table below summarizes these findings by wetlands type. Spatial analysis of the Wetlands Mapper tool revealed only two wetland areas within 200 feet of the project roadway - a Freshwater Emergent Wetland of 2.6 acres located 150 feet south of US 190 near the intersection with Maris Stella St and Bayou Liberty's 1.2 acres of Riverine Wetland near the western edge of the project area. Neither of these sites will be affected by the project. NWI wetlands are shown on Exhibit 2-2.*

Table 2-1
NWI Wetlands

Wetland Type	Acres
Freshwater Emergent Wetland	2.63
Freshwater Forested/ Shrub Wetland	43.9
Freshwater Pond	34.7
Lake	45.4
Riverine	14.5
Total	141.1

Sources checked: June 2013; <http://www.fws.gov/wetlands/Wetlands-Mapper.html>



Legend

- Study Area
- Slidell City Limits
- Project Segment

US 190 (LA 433 to US 11)
Interim Capacity/ Widening Improvements
Stage 0 Feasibility Study

NEEL-SCHAFFER **BKI**
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Exhibit 2-1



Legend

- Study Area
- Project Segment

Wetland Types

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

**US 190 (LA 433 to US 11)
Interim Capacity/ Widening Improvements
Stage 0 Feasibility Study**

**Exhibit 2-2
Environmental Checklist
NWI Wetlands Map**

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

COMMUNITY ELEMENTS: Is the project impacting or adjacent to any (if the answer is yes, list names and locations): *Exhibit 2-3 provides a map of community elements.*

1. (Y or N) Cemeteries – YES

Facility Name	Address	Adjacent to corridor	Potential Impacts	Within project area
Forest Lawn Cemetery	1751 Gause Blvd West	Yes	None	Yes
Parker Cemetery	25234 Camp Salmen Rd	No	None	Yes

Sources checked: May 2013- St Tammany Parish GIS, Windshield survey, and USGS GNIS Database; <http://geonames.usgs.gov/pls/gnispublic/f?p=132:1:1363344133482430>

2. (Y or N) Churches – YES

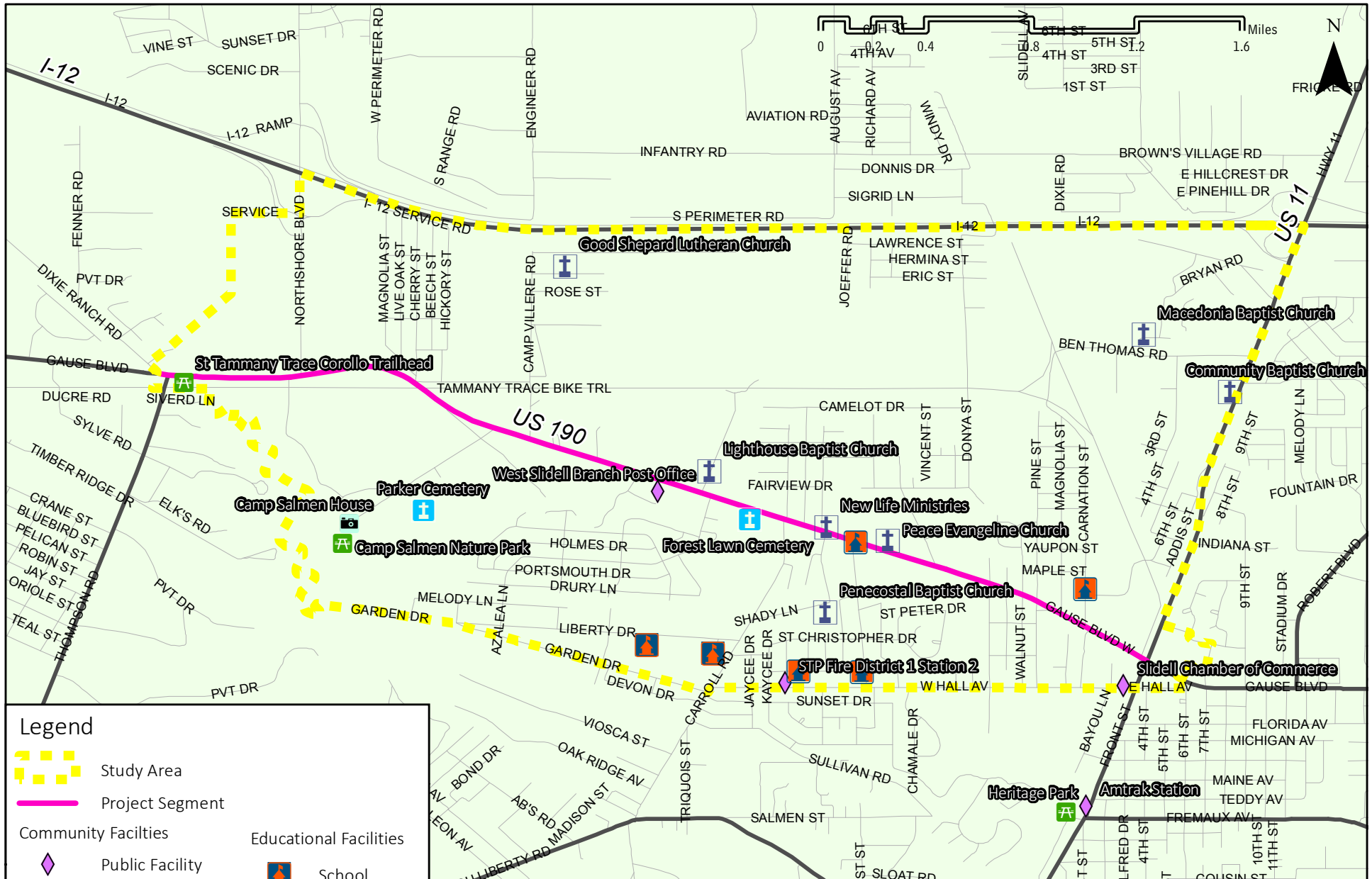
Facility Name	Address	Adjacent to corridor	Potential Impacts	Within project area
Peace Evangeline Church	1320 Gause Blvd West	Yes	None	Yes
New Life Ministries	US 190 @ Edgewood Dr	Yes	None	Yes
Lighthouse Baptist Church	60010 Badon Rd	No	None	Yes
Community Baptist Church	60059 Hwy 11	No	None	Yes
Pentecostal Baptist Church	36138 Shady Lane	No	None	Yes
Macedonia Baptist Church	60183 Bryan Rd	No	None	Yes
Good Shepard Lutheran Church	35386 Home Estate Dr	No	None	Yes

Sources checked: May 2013- St Tammany Parish GIS, Windshield survey, and USGS GNIS Database; <http://geonames.usgs.gov/pls/gnispublic/f?p=132:1:1363344133482430>

3. (Y or N) Schools – NO.

Facility Name	Type	Address	Adjacent to corridor	Within project area
Honeycomb School Day Care	private preschool	700 Maris Stella St	No	Yes
Children's College	private preschool	967 Carnation St	No	Yes
Noah's Ark Child Care	private preschool	1541 Saint Ann Pl	No	Yes
Just Kids Day Care	private preschool	1413 Saint Ann Pl	No	Yes
Bayou Woods	public elementary school	35614 Liberty Dr	No	Yes
Carolyn Park Middle School	public middle school	35708 Liberty Dr	No	Yes

Sources checked: May 2013- St Tammany Parish GIS, Windshield survey, and USGS GNIS Database; <http://geonames.usgs.gov/pls/gnispublic/f?p=132:1:1363344133482430>



Legend

- Study Area
- Project Segment

Community Facilities

- Public Facility
- Cemetery
- Historic
- Park
- Religious

Educational Facilities

- School
- Daycare

**US 190 (LA 433 to US 11)
Interim Capacity/ Widening Improvements
Stage 0 Feasibility Study**

**Exhibit 2-3
Environmental Checklist
Community Facilities**

4. (Y or N) Public Facilities (i.e., fire station, library, etc.) – YES.

Facility Name	Address	Adjacent to corridor	Potential Impacts	Within project area
US Post Office, West Slidell Branch	1897 Gause Blvd W	Yes	None	Yes
St Tammany Parish Fire District 1, Station 2	15665 W Hall Ave	No	None	Yes
Slidell Chamber of Commerce	118 W Hall Ave	No	None	Yes

Sources checked: May 2013- St Tammany Parish GIS, Windshield survey, and USGS GNIS Database; <http://geonames.usgs.gov/pls/gnispublic/f?p=132:1:1363344133482430>

5. (Y or N) Community water well/supply – YES.

There are 13 water wells located within 250 feet of the project area, which have a range of users including domestic, industrial, commercial public supply, environmental recovery, and monitoring.

Water Wells within 250 feet of Project Segment

Water Well #	Owners Name	Well Depth	Use Description	Well Status	Longitude	Latitude
103-15676Z	MONTES BLDGS	310	commercial public supply	Active	-89.83139	30.30194
103-5012Z	BROOM, JOHN C	1932	domestic	Active	-89.80333	30.29583
103-9359Z	STAR ENTERPRISE	12	environmental recovery	Active	-89.78139	30.28667
103-9	AMERICAN CREOSO	885	industrial	Active	-89.78083	30.28639
103-6464Z	CHEVRON	17	monitor	Active	-89.78028	30.28639
103-6129Z	THOMPSON RD GRO	16	monitor	Active	-89.83333	30.30167
103-9357Z	STAR ENTERPRISE	14	monitor	Active	-89.78139	30.28667
103-9358Z	STAR ENTERPRISE	17	monitor	Active	-89.78139	30.28667
103-6130Z	THOMPSON RD GRO	16	monitor	Active	-89.83333	30.30167
103-6462Z	CHEVRON	17	monitor	Active	-89.78028	30.28639
103-6128Z	THOMPSON RD GRO	16	monitor	Active	-89.83333	30.30167
103-9352Z	STAR ENTERPRISE	15	monitor	Active	-89.78139	30.28667

Water wells obtained through Louisiana Dept of Natural Resources, SONRIS Interactive Maps Online (<http://sonris-www.dnr.state.la.us>).

The well sites have also been incorporated into the project GIS database.

SECTION 4(F) ISSUE: Is the project impacting or adjacent to any (if the answer is yes, list names and locations):

1. (Y or N) Public recreation areas – YES.

Slidell/ Carollo Trailhead of the Tammany Trace- 2289 Hwy. 190. This public facility provides restrooms, a small playground and other amenities to bicyclists using the Tammany Trace, meanwhile it serves as a formal carpool Park and Ride lot for St Tammany Parish. This facility is adjacent to the Tammany Trace and 180 feet east of the intersection of US 190 and LA 433. Alternatives under consideration do not affect the property, but it is adjacent to the project corridor.

Tammany Trace- Camp Salmen Extension- parallel to southern edge of US 190 into Slidell, LA. The Tammany Trace recreation facility current runs from Covington, LA eastward and ends at Bayou Liberty near Neslo Rd. St Tammany Parish in conjunction with the City of Slidell are currently designing an extension of this facility which will be located in close proximity to this US 190 Improvement project. The Tammany Trace extension right-of-way is 200 feet wide and near the US 190/ Northshore Blvd intersection improvements. A very small area of the Tammany Trace ROW is impacted by the construction of the roundabout intersection. The impact does not affect trail facilities or the trail usage.

Camp Salmen Nature Park- 35122 Parish Parkway Slidell, LA 70460. This former Boy Scout camp along Bayou Liberty, since 2001 been utilized by St Tammany Parish as a recreation, education, and historic site. Access to Camp Salmen is obtained from US 190, but the public buildings are located approximately ¾ miles southwest with various trails and greenspace between yet to be developed. Alternatives under consideration do not affect this recreational area.

Sources checked: May 2013- St Tammany Parish GIS, Windshield survey, and USGS GNIS Database; <http://geonames.usgs.gov/pls/gnispublic/f?p=132:1:1363344133482430;>
[http://www.campsalmennaturepark.org/;](http://www.campsalmennaturepark.org/) <http://www.tammanytrace.org/index.shtml>
St Tammany Parish Engineering Department

2. **(Y or N) Public parks – NO.** There are no public parks in the project area besides those public recreation areas listed in the above.
3. **(Y or N) Wildlife Refuges – NO.** According to the Louisiana Department of Wildlife and Fisheries, there are no wildlife refuges within the project area or adjacent to the project corridor.

Sources checked: May 2013- LWF <http://www.wlf.louisiana.gov/wma?tid=263;>
<http://www.wlf.louisiana.gov/refuges;> <http://www.wlf.louisiana.gov/refuge/st-tammany-wildlife-refuge;>
<http://www.fws.gov/refuges/refugeLocatorMaps/Louisiana.html>.

4. **(Y or N) Historic Sites – YES.** One historic site, the Camp Salmen House, is located within the project area, but it is not adjacent to the project alternatives nor will it be affected by any of the alternatives. The Camp Salmen House, 35122 Camp Salmen Rd, is listed on the National Register of Historic Properties. It has a local level of significance as a creole cottage.

Sources checked: June 2013- National Register of Historic Places - <http://www.nationalregisterofhistoricplaces.com/la/St.+Tammany/state.html>;
Louisiana Office of Cultural Development, Division of Historic Preservation
<http://www.crt.state.la.us/parks/iparkmap.aspx>.

Is the project impacting, or adjacent to, a property listed on the National Register of Historic Places? (Y or N) Is the project within a historic district or a national landmark district? (Y or N) If the answer is yes to either question, list names and locations below:

NO. As mentioned above, the Camp Salmen House is the only historic property and it is not impacted by or adjacent to the project. Additionally, the project is not adjacent to or impacting any historic districts or national landmark districts.

Do you know of any threatened or endangered species in the area? (Y or N) If so, list species and location.

YES. According to the US Fish and Wildlife Service, there are 11 animal species which are either endangered, threatened, in recovery, or candidates for endangerment in St Tammany Parish. A listing of Threatened and Endangered Species know to inhabit St. Tammany St Tammany Parish Endangered Species is shown on the following table. Additional ROW acquired within this project is located within a developed corridor and no

impacts to T&E species are anticipated as a result of the project. The single exception may be the Gulf Sturgeon. The existing bridge over Bayou Bonfouca will be widened as part of the project, and consultation with USF&WS service may be required in association with the bridge widening.

Table 2-2

**St Tammany Parish - Threatened and Endangered Species
 US Fish and Wildlife Service**

Group	Name	Status
Birds	Brown pelican (<i>Pelecanus occidentalis</i>)	Recovery
Birds	Red-cockaded woodpecker (<i>Picoides borealis</i>)	Endangered
Birds	Sprague's pipit (<i>Anthus spragueii</i>)	Candidate
Clams	Alabama (=inflated) heelsplitter (<i>Potamilus inflatus</i>)	Threatened
Ferns and Allies	Louisiana quillwort (<i>Isoetes louisianensis</i>)	Endangered
Fishes	Gulf sturgeon (<i>Acipenser oxyrinchus desotoi</i>)	Threatened
Mammals	West Indian Manatee (<i>Trichechus manatus</i>)	Endangered
Mammals	West Indian Manatee (<i>Trichechus manatus</i>)	Endangered
Mammals	Louisiana black bear (<i>Ursus americanus luteolus</i>)	Threatened
Reptiles	Ringed map turtle (<i>Graptemys oculifera</i>)	Threatened
Reptiles	Gopher tortoise (<i>Gopherus polyphemus</i>)	Threatened

Sources checked: US Fish and Wildlife Service:
http://ecos.fws.gov/tess_public/countySearch!speciesByCountyReport.action?fips=22103

Does the project impact or adjacent to a stream protected by the Louisiana Scenic Rivers Act? (Y or N) If yes, name the stream.

YES. The road segment of US 190 from LA 433 to US 11 crosses over Bayou Liberty, an identified natural stream under the Louisiana Scenic River Act. However, no construction is proposed in close proximity to the scenic stream.

Sources checked: Louisiana law: <http://www.legis.state.la.us/lss/lss.asp?doc=104995> and LA Dept of Wildlife and Fisheries <http://www.wlf.louisiana.gov/louisiana-natural-and-scenic-rivers-descriptions-and-map>

Are there any Significant Trees as defined by EDSM I.1.1.21 within proposed ROW? (Y or N) If so, where?

For the purposes of this policy, a significant tree is a Live Oak, Red Oak, White Oak, Magnolia or Cypress that is considered aesthetically important, 18" or greater in diameter at breast height (4' to 6') above the ground), and having a form that separates it from the surrounding vegetation or is considered historic. A historic tree that stands at a place where an event of historic significance occurred that had a local, regional, or national importance. A tree may also be considered historic if it has taken on a legendary stature to the community; mentioned in literature or documents of historic value; considered unusual due to size, age; or has landmark status. Significant trees must be in good health and not in a declining condition.

On the site of the Camp Salmen Nature Park there are several significant trees. Additionally, the areas around Bayou Liberty and Bayou Bonfouca have several significant trees. However, there do not appear to be any significant trees adjacent to the project segment.

Sources checked: DOTD Standards
 Neel-Schaffer, Inc. / Burk Kleinpeter, Inc.
 Stage 0 Environmental Checklist

[http://webmail.dotd.louisiana.gov/ppmemos.nsf/0/152FAD712D9C560D86256F1D004EF436/\\$file/EDSM.htm](http://webmail.dotd.louisiana.gov/ppmemos.nsf/0/152FAD712D9C560D86256F1D004EF436/$file/EDSM.htm)

LA Forestry Association:

<http://www.laforestry.com/site/ForestFacts/ChampionTreesinLouisiana.aspx>

LA Purchase Cypress Legacy Inventory:

http://www.lapurchasecypresslegacy.net/pdf/inventory_lpcl.pdf

What year was the existing bridge built?

The US 190 bridge crossing over Bayou Liberty was constructed in 1933. According to the National Bridge Inventory Database, this 150 ft long, 2-lane, concrete bridge is not eligible for listing in the National Register of Historic Places. The US 190 bridge crossing over Bayou Bonfouca was also constructed in 1933. According to the National Bridge Inventory Database, this 180 ft long, 2-lane, concrete bridge is also not eligible for listing in the National Register of Historic Places.

Sources checked: National Bridge Inventory Database: <http://nationalbridges.com/>

Are any waterways impacted by the project considered navigable? (Y or N) If unknown, state so, list the waterways:

NO. *There are no known navigable waterways potentially impacted by the proposed project.*

HAZARDOUS MATERIALS: **Have you checked the following DEQ and EPA databases for potential problems? (If the answer is yes, list names and locations.)**

1. (Y or N) Leaking Underground Storage Tanks –

NO. *A search of the Louisiana Dept of Environmental Quality maintained list of UST facilities that are prohibited from receiving deliveries of regulated substances revealed that there are no identified Leaking Underground Storage Tanks (LUSTs) located within the project area.*

Sources checked: May 2013. <http://www.epa-echo.gov/echo/#>

2. (Y or N) CERCLIS –

NO. *A search of the US Environmental Protection Agency maintained database of Superfund site locations and details of mitigation status revealed that there are no currently identified Superfund sites located within the project area.*

Sources checked: May 2013. <http://www.epa.gov/superfund/sites/cursites/>

3. (Y or N) ERNS –

ERNS is a database no longer maintained by EPA.

Sources checked: June 2013.

4. (Y or N) Enforcement and Compliance History –

YES. *A search of the US Environmental Protection maintained Enforcement and Compliance History Online revealed that there are several recently reported environmental incidents within the project area. The table below provides locations and general information, while the full ECHO report is provided in Attachment 1. Please note that the tables only include active violators.*

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

<i>Business Name</i>	<i>Address</i>	<i>Type</i>	<i>Adjacent to corridor</i>	<i>Within project area</i>
<i>Slidell Seafood West, LLC</i>	<i>1001 Gause Blvd W</i>	<i>Minor Active</i>	<i>Yes</i>	<i>Yes</i>
<i>Western Slidell LLC</i>	<i>250 Strawberry Rd</i>	<i>Minor Active</i>	<i>No</i>	<i>Yes</i>
<i>Coco's Auto & Truck Repair</i>	<i>1613 Gause Blvd W</i>	<i>Minor Active</i>	<i>Yes</i>	<i>Yes</i>
<i>Jolly Investments, LLC</i>	<i>59388 Gause Blvd W</i>	<i>Minor Active</i>	<i>Yes</i>	<i>Yes</i>
<i>Piney Ridge Trailer Park</i>	<i>510 Sunset Dr</i>	<i>Minor Active</i>	<i>No</i>	<i>Yes</i>
<i>Hanna Brother Extreme Motion Picture Catering</i>	<i>435 South St</i>	<i>Minor Active</i>	<i>Yes</i>	<i>Yes</i>
<i>Hanna Brother Extreme Motion Picture Catering</i>	<i>435 South St</i>	<i>Minor Active</i>	<i>Yes</i>	<i>Yes</i>
<i>Sparrows Offshore LLC</i>	<i>60143 Camp Villere Rd</i>	<i>Minor Active</i>	<i>No</i>	<i>Yes</i>
<i>Sunbelt Innovative Plastics</i>	<i>60054 Camp Villere Rd</i>	<i>Minor Active</i>	<i>No</i>	<i>Yes</i>
<i>Diversified Oil Field Services Inc.</i>	<i>60185 Camp Villere Rd</i>	<i>Minor Active</i>	<i>No</i>	<i>Yes</i>
<i>Jubilee Express Store #4815</i>	<i>60328 Powell Dr</i>	<i>Minor Active</i>	<i>No</i>	<i>Yes</i>
<i>Tymeless Flooring, Inc</i>	<i>1345 Gause Blvd W</i>	<i>NC-RNC Violations Only</i>	<i>Yes</i>	<i>Yes</i>
<i>Thompson Packers Inc.</i>	<i>550 Carnation</i>	<i>Non-Major, Violations</i>	<i>No</i>	<i>Yes</i>

Sources checked: June 2013. <http://www.epa-echo.gov/echo/#>

Underground Storage Tanks (UST): Are there any Gasoline Stations or other facilities that may have UST on or adjacent to the project? (Y or N) If so, give the name and location:

According to the latest Louisiana Dept of Environmental Quality maintained list of USTs (last updated on Sept 20, 2010), there are four USTs adjacent to the project segment.

<i>Facility Name</i>	<i>Address</i>	<i>Master ID Number</i>
<i>Speedy G's #1</i>	<i>1703 Gause Blvd W</i>	<i>70929</i>
<i>Circle K #1689</i>	<i>1706 Hwy 190 W</i>	<i>75145</i>
<i>Check In & Out Deli</i>	<i>1797 Hwy 190 W</i>	<i>75963</i>
<i>Value Zone</i>	<i>1801 Gause Blvd W</i>	<i>91845</i>

Sources checked: June 2013. LDEQ List of Active USTs

<http://www.deq.louisiana.gov/portal/Portals/0/UndergroundStorageTank/Active%20UST%20Facilities%209%202%202010.pdf>

Any chemical plants, refineries or landfills adjacent to the project? (Y or N)

NO. *There are no active chemical plants, refineries, or landfills adjacent to the project. However, on the southside of US 190 near the intersection of Cherry St, a commercial property is currently up for sale, which was formerly used as a dump/ landfill. Searches of LDEQ and EPA databases have not recovered any history of environmental accidents or spills.*

Sources checked: May 2013. Review of aerial photography; Windshield survey;

<http://www.deq.louisiana.gov/portal/tabid/2604/Default.aspx>

Any large manufacturing facilities adjacent to the project? (Y or N)

NO. *There are no large manufacturing facilities adjacent to the project area. However, several manufacturing facilities have been identified within the project area boundaries. As facilities generate industrial wastes and have unique freight transportation requirements, these facilities have been noted in the report. They are generally located along Camp Villere Rd, Carnation St, and Ben Thomas Rd.*

*Sources checked: May 2013. Review of aerial photography; Windshield survey;
<http://www.deq.louisiana.gov/portal/tabid/2604/Default.aspx>*

Dry Cleaners? (Y or N) If yes to any, give names and locations:

There are three dry cleaners adjacent to the project segment:

Corporate Cleaners- 106 Gause Blvd W. Located within "The Crossing" Shopping Center near the junction of US 11.

Sunshine Cleaners- 2165 Gause Blvd W. Located within a strip mall on the southside of US 190 near intersection with Northshore Blvd.

Laundry Mat- Westminster St @ US 190. Located within a strip shopping center on the southside of US 190 at Westminster St.

*Sources checked: May 2013. Review of aerial photography; Windshield survey;
<http://www.deq.louisiana.gov/portal/tabid/2604/Default.aspx>*

Oil/Gas wells: Have you checked DNR database for registered oil and gas wells? (Y or N) List the type and location of wells being impacted by the project.

NO. *The Louisiana Department of Natural Resources SONRIS database was reviewed and there were no oil/gas wells within the project area boundaries.*

Sources checked: June 2013. <http://sonris-www.dnr.state.la.us>

Are there any possible residential or commercial relocations/displacements? (Y or N) How many?

- *Linear Real Estate Impacts- Intersection improvements include a new 7' wide sidewalk on the northside of US 190 extending from Neslo Rd westward until US 11 in Slidell. Meanwhile, the Tammany Trace Extension will occupy a portion of the southside of the US 190 ROW. This new 10' wide multi-use path will extend approximately 1/2 mile from the current terminus near Neslo Rd until Williams Rd. These two linear pedestrian and bicycle improvements will require frontage from residential, commercial, and undeveloped properties.*
- *Site Specific Real Estate Impacts- See following table for impacts associated with proposed improved at intersections.*

Stage 0 Feasibility Study
US 190 (LA 433 TO US 11) Interim Capacity / Widening Improvements – St. Tammany Parish

Table 2-3

Site Specific Real Estate Impacts					
Layout Sheet #	Intersection	Approximate Address	Description	Possible Building Relocation?	Real Estate Type
1	LA 433	Top Fuel Gas Station @ Southeast quadrant	Loss of Driveway access on US 190; Driveway relocation on LA 433	Y	Commercial
		Citgo Gas Station @ Southwest quadrant	Driveway relocation on LA 433 and US190	Y	Commercial
		Unoccupied structure @ Northeast quadrant	Building relocation	Y	Commercial
		Eastside of Dixie Ranch Rd near US 190	Dixie Ranch Rd to be rerouted through this vacant property		Undeveloped
2	Northshore Blvd	Chevron @ Northwest quadrant	Driveway relocation		Commercial
		McDonalds @ Northeast quadrant	Driveway relocation		Commercial
3	Camp Villere Rd	Northwestern quadrant	Camp Villere to be rerouted through this property		Undeveloped Land
		Southwestern quadrant	New roundabout extends onto this property adjacent to existing roadway		Undeveloped Land
4	Grand Theatre Access	Southern road edge	New roundabout extends onto this property adjacent to existing roadway		Undeveloped Land
		Southside of US 190 just east of intersection	Driveway relocation		Commercial
5	Westminster Dr	Northern road edge	New roundabout extends onto this property adjacent to existing roadway		Undeveloped Land
		Westminster Drive	Neighborhood entrance sign relocation	Y	Residential
		Southern edge	Various driveway relocations		Commercial
	Sunset Dr	Northeastern quadrant	Property relocation	Y	Residential
			Vacant property relocation	Y	Commercial
		Southeastern quadrant	TV Repair Shop property relocation	Y	Commercial
		Premier Motorsport property relocation	Y	Commercial	
		Southwestern quadrant	Driveway relocation	Y	Commercial
6	Maris Stella St	Southeastern quadrant	Commercial property loses access		Commercial
		Maris Stella St	Neighborhood entrance sign relocation	Y	Residential
		Northern road edge	Doctor office relocation	Y	Commercial
			Law office relocation	Y	Commercial
		Northwestern quadrant	Driveway relocation		Commercial
7	Carnation St	Take 5 Oil Change @Northeastern quadrant	Property relocation	Y	Commercial
7	Carnation St. to US 11	Adjacent Shopping Centers	There is a single signalized intersection providing access to commercial areas both north and south of US 190. The use of the single intersection may create hazards as drivers cross through parking areas within the shopping centers to reach the signalized intersection.	N	Commercial

Source: BKL / NSI

Do you know of any sensitive community or cultural issues related to the project? (Y or N) If so, explain

- There are no sensitive community or cultural issues related to this project.

Is the project area population minority or low income? (Y or N)

As the table below summarizes, analysis of the 2011 5-year American Community Survey reveals that the project area's minority population does not represent a large portion of the overall population. Meanwhile, low-income populations are certainly living in the project area, but it is not possible to identify the precise location of these households as the smallest reported geographic unit, the Census Tract, is too large to pinpoint the location of this at-risk population.

US Census Project Area Demographics

Total Population	% minority	% low income
6,936	41.52%	25.99%

Sources checked: June 2013. <http://www.census.gov>

What type of detour/closures could be used on the job?

- Interstate 12 could be used as a detour around improvements along the entire length of the corridor. Depending on the implementation/ construction sequencing for intersection or roadway improvements, a variety of detours/ closures could be used. These include LA 433, Carroll Road, and West Hall Ave.
- Construction sequencing, traffic maintenance criteria, and plans would be developed as part of the final design to coordinate construction activities and ensure continued access between all affected roadways. Needs for special considerations would be identified and addressed during final design.

Did you notice anything of environmental concern during your site/windshield survey of the area? If so, explain below.

Site surveys identified a current commercial property which was formerly a dump / landfill on the south side of US 190 near the intersection of Cherry St. This was identified above and was not reported in any environmental reporting database.

Photo Documentation of the project corridor is presented in Attachment 2.

POINT OF CONTACT

Roadway Design Engineer
Daniel Thornhill, P.E.
Neel-Schaffer Inc.
(225) 925-0235

Traffic Engineering
Nick Ferlito, P.E., P.T.O.E.
Neel-Schaffer Inc.
(225) 925-0235

Stage 0 Documents
Barry Brupbacher
Neel-Schaffer Inc.
(985) 674-9820

Attachment 1

Enforcement and Compliance History Online Report

OBJECTID	Name	Address	EventType	LastInspection
1	ROMAR WAREHOUSE	59013 CARROLL RD, SLIDELL, LA 70469	MINOR INACTIVE	No Inspection
2	ALFRED A. SINGER WAREHOUSE	59125 CARROLL RD, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
3	GUARDIAN ANGELS LEARNING CENTER	35647 LIBERTY DR., SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
4	SUPERIOR CAR CARE	360 HWY 190 W, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
5	PENTECOST MISSIONARY BAPTIST CHURCH OF SLIDELL	36138 SHADY LANE, SLIDELL, LA 70469	MINOR INACTIVE	No Inspection
6	PENTECOST MISSIONARY BAPTIST CHURCH OF SLIDELL	36138 SHADY LANE, SLIDELL, LA 70469	MINOR INACTIVE	No Inspection
7	FACTORY DIRECT FURNITURE	1590 GAUSE BLVD W, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
8	GEM AUTO CLINIC	600 HWY 190 W, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
9	CUTRITE INC	1003 HWY 190 W, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
10	ALLIANCE LASER	220 STRAWBERRY ST, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	557 days since last insp
11	FOURPLEX PROPERTY	59244 PREARCHERS OAK LN, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
12	SLIDELL SEAFOOD WEST, LLC	1001 GAUSE BLVD W, SLIDELL, LA 70460		No Inspection
13	SLIDELL SEAFOOD WEST, LLC	1001 GAUSE BLVD W, SLIDELL, LA 70460	MINOR ACTIVE	170 days since last insp
14	WESTERN SLIDELL LLC	250 STRAWBERRY RD, SLIDELL, LA 70459	MINOR ACTIVE	1247 days since last insp
15	WESTERN SLIDELL LLC	250 STRAWBERRY RD, SLIDELL, LA 70459		No Inspection
16	CUT-RITE'NORTHSHORE DRIVELINE	1003 GAUSE BLVD WEST, SLIDELL, LA 70459	MINOR INACTIVE	No Inspection
17	CUT-RITE'NORTHSHORE DRIVELINE	1003 GAUSE BLVD WEST, SLIDELL, LA 70459		No Inspection
18	JANICE & LEONARD BROWN COMMERCIAL PROPERTY	1015 GAUSE BLVD WEST, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
19	HIGHWAY 190 WEST	1385 HWY 190 WEST, SLIDELL, LA 70460	MINOR INACTIVE	1156 days since last insp
20	TYMELESS FLOORING, INC	1345 W. GAUSE BLVD., SLIDELL, LA 70460	NC-RNC VIOLATIONS ONLY	3354 days since last insp
21	PEACE EVANGELICAL LUTHERAN CHURCH	SLIDELL, LA 70460	MINOR INACTIVE	1123 days since last insp
22	OFFICE WAREHOUSE	1340 GAUSE BLVD W, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
23	RANDALL A EVANS DDS LLC	1350 GAUSE BLVD WEST, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
24	RANDALL A EVANS DDS LLC	1350 GAUSE BLVD WEST, SLIDELL, LA 70460		1123 days since last insp
25	DONS SLIDELL AUTO CENTER	1410 HWY 190 W, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
26	COCO'S AUTO & TRUCK REPAIR	1613 W. GAUSE BLVD., SLIDELL, LA 70469	MINOR ACTIVE	No Inspection
27	SPEEDY G'S #1	1703 GAUSE BLVD, WEST, SLIDELL, LA 70460		No Inspection
28	SPEEDY G'S #1	1703 GAUSE BLVD, WEST, SLIDELL, LA 70460		No Inspection
29	KIK (LOUISIANA) INC	646 CARNATION RD, SLIDELL, LA 70460	NON-MAJOR, NO VIOLATIONS RECORDED	5121 days since last insp
30	KIK (LOUISIANA) INC	646 CARNATION RD, SLIDELL, LA 70460		No Inspection
31	KIK (LOUISIANA) INC	646 CARNATION RD, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	4716 days since last insp
32	LOUISIANA LUMBER INC	2014 OLD COVINGTON HWY, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
33	SOUTH SEAS CHINESE RESTAURANT	1714 HWY 190 WEST, SLIDELL, LA 70460	MINOR INACTIVE, NC-RNC VIOLATIONS ONLY	2944 days since last insp
34	SOUTH SEAS CHINESE RESTAURANT	1714 HWY 190 WEST, SLIDELL, LA 70460		2944 days since last insp
35	FOREST LAWN CEMETARY	1751 GAUSE BLVD WEST, SLIDELL, LA 70469	MINOR INACTIVE	No Inspection
36	THOMPSON PACKERS INC.(22-103-6E001)	550 CARNATION, SLIDELL, LA 70460	NON-MAJOR, VIOLATIONS	1697 days since last insp
37	JOLLY INVESTMENTS, LLC	59388 HWY 190 WEST, SLIDELL, LA 70460	MINOR ACTIVE	1169 days since last insp
38	PINEY RIDGE TRAILER PARK	510 SUNSET DR, SLIDELL, LA 70460	MINOR ACTIVE	4399 days since last insp
39	GBR PROPERTIES, INC.	ADVANCE AUTO, SLIDELL, LA 70459	MINOR INACTIVE	No Inspection
40	SHOPPING CENTER FOR	FAYE WAGNER, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
41	BEAU'S AIR CONDITIONING & HEATING LLC	SLIDELL, LA 70460	MINOR INACTIVE	3174 days since last insp
42	ABC ELECTRIC	2090 GAUSE BLVD WEST, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
43	CALWES PROPERTIES, LLC	SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
44	SOUTHERN PIPE	59489 CAMP VILLERE RD., SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
45	SOUTHERN PIPE	59489 CAMP VILLERE RD., SLIDELL, LA 70460		No Inspection
46	HANNA BROTHER EXTREME	435 SOUTH ST., SLIDELL, LA 70460	MINOR ACTIVE	No Inspection
47	AIRGAS USA LLC	417 SOUTH STREET, SLIDELL, LA 70461	MINOR INACTIVE	No Inspection
48	M&R FILE SERVICES LLC	411 SOUTH STREET, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
49	HALL INVESTMENT LLC	PIT STOP PETROLEUM #3, SLIDELL, LA 70460	MINOR INACTIVE	3003 days since last insp
50	THE ANTEBELLUM HOUSE	430 SOUTH ST., SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
51	THE ANTEBELLUM HOUSE	430 SOUTH ST., SLIDELL, LA 70460		No Inspection
52	SOUTHERN PLASTICS OF LA CORP	CAMP VILLERE RD & SOUTH ST, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
53	PLATFORM CRANE SERVICE, INC.	255 STONE RD, SLIDELL, LA 70459	MINOR INACTIVE, NC-RNC VIOLATIONS ONLY	No Inspection
54	PLATFORM CRANE SERVICE, INC.	255 STONE RD, SLIDELL, LA 70459		No Inspection
55	PLATFORM CRANE SERVICE, INC.	255 STONE RD, SLIDELL, LA 70459	OTHERS, NO VIOLATIONS	3950 days since last insp
56	NUFAB REBAR	250 STONE RD, SLIDELL, LA 70000	MINOR INACTIVE	No Inspection
57	EAGLE CARWASH	2167 GAUSE WEST, SLIDELL, LA 70000	MINOR INACTIVE	No Inspection
58	HANNA BROTHER EXTREME MOTION PICTURE CATERINC		MINOR ACTIVE	No Inspection
59	HYDRALIFT CABIRAN INC	60042 CABIRAN RD, SLIDELL, LA 70460	NON-MAJOR, NO VIOLATIONS RECORDED	No Inspection
60	HYDRALIFT CABIRAN INC	60042 CABIRAN RD, SLIDELL, LA 70460	LOG, NO VIOLATIONS	No Inspection
61	FERNANDEZ-ZIMMERLE, LLC	60042 CABIRAN RD, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
62	UNITED MEDICAL CARE_WALK IN	2104 GAUSE BLVD, SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
63	JOHNS AUTOMOTIVE MACHINE SHOP INC	37397 BEN THOMAS RD, SLIDELL, LA 70460	MINOR INACTIVE, RESOLVED PENDING	4253 days since last insp
64	JOHNS AUTOMOTIVE MACHINE SHOP INC	37397 BEN THOMAS RD, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
65	SIGNLITE	37262 BEN THOMAS, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
66	CHARTER COMMUNICATIONS LLC	37356 BEN THOMAS RD, SLIDELL, LA 70460	MINOR INACTIVE, NC-RNC VIOLATIONS ONLY	2950 days since last insp
67	CHARTER COMMUNICATIONS LLC	37356 BEN THOMAS RD, SLIDELL, LA 70460		2950 days since last insp
68	JGILS	37159 BEN THOMAS RD, SLIDELL, LA 70000	MINOR INACTIVE	No Inspection
69	PMC SLIDELL PLANT	37210 BEN THOMAS RD, SLIDELL, LA 70000	MINOR INACTIVE	2933 days since last insp
70	PMC SLIDELL PLANT	37210 BEN THOMAS RD, SLIDELL, LA 70000	MINOR INACTIVE	No Inspection
71	SLIDELL SUPPORT FACILITY	100 STONE RD, SLIDELL, LA 70458	OTHERS, NO VIOLATIONS	No Inspection
72	AWD CORP	37210 BEN THOMAS RD, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
73	CLECO SLIDELL SVC CENTER	60095 CAMP VILLERE RD., SLIDELL, LA 70460	MINOR INACTIVE	No Inspection
74	SPARROWS OFFSHORE LLC	60143 CAMP VILLERE RD, SLIDELL, LA 70460	MINOR ACTIVE	114 days since last insp
75	SUNBELT INNOVATIVE PLASTICS	60054 CAMP VILLERE ROAD, SLIDELL, LA 70469	MINOR ACTIVE	1284 days since last insp
76	BAKER SALES WAREHOUSE	60207 CAMP VILLERE RD, SLIDELL, LA 70460	MINOR INACTIVE	1157 days since last insp
77	BAKER SALES WAREHOUSE	60207 CAMP VILLERE RD, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
78	DIVERSIFIED OIL FIELD SERVICES INC.	60185 CAMP VILLERE RD, SLIDELL, LA 70460		No Inspection
79	DIVERSIFIED OIL FIELD SERVICES INC.	60185 CAMP VILLERE RD, SLIDELL, LA 70460	MINOR ACTIVE	198 days since last insp
80	JUBILEE EXPRESS STORE #4815	60328 POWELL DRIVE, SLIDELL, LA 70458	MINOR INACTIVE	716 days since last insp
81	JUBILEE EXPRESS STORE #4815	60328 POWELL DRIVE, SLIDELL, LA 70458	MINOR ACTIVE	No Inspection
82	WALMART SUPERCENTER #2665	167 NORTHSHORE BLVD, SLIDELL, LA 70460	OTHERS, NO VIOLATIONS	No Inspection
83	JOHNSON APARTMENTS	60281 GRACE AVE, SLIDELL, LA 70458	MINOR INACTIVE	2905 days since last insp
84	SAMS CLUB #6220	181 NORTHSHORE BLVD, SLIDELL, LA 70458	OTHERS, NO VIOLATIONS	No Inspection
85	TERMINIX NORTHSHORE SVCS	35297 HOME ESTATE DR., SLIDELL, LA 70469	MINOR INACTIVE	1157 days since last insp
86	RDG PROPERTIES, LLC	SLIDELL, LA 70460	MINOR INACTIVE	No Inspection

Attachment 2

Photo Documentation of the Project Corridor

Potential Hazards

Sheet 1



Citgo Gas Station



Top Fuel Gas Station

Sheet 2



Chevron Gas Station

Sheet 5



Value Zone Gas Station at Westminster



Unused Gas Station at Westminster



Texaco at Sunset Dr.



Circle K at Sunset Dr.

Potential Impacts or Relocations

Sheet 1



Vacant Commercial Buildings



Citgo Gas Station



Top Fuel Gas Station

Sheet 4



Acme Refrigeration

Sheet 5



Neighborhood Sign



Residence on Sunset Dr

Sheet 5 (cont.)



The TV Shop at Sunset Dr



Premiere Motorsports at Sunset Dr



Vacant Commercial at Sunset Dr.

Sheet 6



Doctor's Office



Law Office



Former Car Wash at Maris Stella St



Neighborhood Sign at Maris Stella St

Sheet 8



Take 5 Oil Change

Other Properties of Interest



Tammany Trace Trailhead



USPS West Slidell Post Office



Forest Lawn Cemetery

Typical Drainage



Typical Drainage



Drainage infrastructure at site of Carnation Roundabout

Attachment 3

Traffic and Safety Analysis

CONTRACT FOR PROFESSIONAL SERVICES

Contract No.: «txtContractNum»

Be it known, that on this _____ day of _____, 202_, the Parish of St. Tammany, through the Office of the Parish President (hereinafter sometimes referred to as the "Parish") and «txtREQCompanyName», an entity qualified to do and doing business in this State and Parish (hereinafter referred to as "Provider") do hereby enter into this Contract for Professional Services under the following terms and conditions.

1. SCOPE OF SERVICES

Provider hereby agrees to furnish the following services:
«txtScopeSummary»

2. DOCUMENTS

- A. The Provider shall furnish sufficient sets of plans, specifications and Contract documents.
- B. All data collected by the Provider and all documents, notes, drawings, tracings, and files shall remain the property of the Parish except as otherwise provided herein. The Provider shall furnish to the Parish copies of any project documents requested by the Parish.
- C. The Parish shall furnish without charge all standard plans and specifications and any other information which the Parish now has in its files which may be of use to the Provider. Provider has the duty to and must confirm and verify all information contained therein.
- D. The Provider shall use the most current version of the standard forms of documents adopted and specified by the Parish in the performance of the Contract, all as of the date of the signing of this Contract. Notwithstanding anything to the contrary in any other provision of this Contract, none of the Contract documents provided by the Parish are or will become the property of the Provider but shall remain the property of the Parish to the extent the Parish has a property interest therein.

E. Notwithstanding any Section hereinafter, there will be retention of all related records as follows:

- 1) All records, reports, documents and other material delivered or transmitted to Provider by Parish shall remain the property of Parish, and shall be returned by Provider to Parish, at Provider's expense, at termination or expiration of this Contract. All records, reports, documents, exhibits or other material related to this Contract and/or obtained or prepared by Provider in connection with the performance of the services contracted for herein shall become the property of Parish, and shall, upon request, be returned by Provider to Parish, at Provider's expense, at termination or expiration of this Contract.
- 2) The Parish and Provider acknowledge and agree that the Parish has the right to review all records, reports, worksheets or any other material of either party related to this Contract. Provider further agrees that Provider will furnish to the Parish, upon request, copies of any and all records, reports, worksheets, bills, statements or any other material of Provider or Parish related to this Contract.
- 3) Provider shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and shall make such materials available at its offices at any reasonable time for inspection and copying by the Parish.
- 4) Provider shall retain all of its records and supporting documentation applicable to this Contract with the Parish for a period of three (3) years after termination of the Contract, except as follows:
 - a. Records that are subject to audit findings shall be retained for three (3) years after such findings have been resolved.
 - b. All such records and supporting documentation shall be made readily available, upon request, for inspection, copying or audit by representatives of the Parish. In the event the Provider goes out of existence, it shall turn over to the Parish all of its records relating to this Contract to be retained by the Parish for the required period of time.

F. In the event there is re-use of any documents created by Provider, Provider invokes the protections afforded it as per La. Revised Statute R.S. 38:2317.

- G. All of Provider's pre-existing or proprietary computer programs, software, information, standard details or material developed by Provider outside of this agreement shall remain the exclusive property of the Provider.

3. PAYMENT OF ALL FEES AND ALL EXPENSES

This Section shall apply to all payments that may be due Provider by Parish. The Payment Schedule is set forth in Section I, above.

A. IF ON AN HOURLY BASIS:

- 1) Provider agrees to submit, at the end of each calendar month, a written and detailed itemization of all work performed listing time by date the work performed by hours with specific reference to the nature of the work performed (e.g., drafting of plans, review of files, etc.). All invoices submitted covering services rendered on an hourly basis shall include time sheets showing actual hours worked by each individual delineated incrementally to the tenth of the hour, their name, classifications, and a detailed description of the work performed.
- 2) Unless otherwise authorized in writing, Provider will not be paid for research, or for photocopies at more than \$0.15 (fifteen cents) per copy for copies less than 11" x 17" and copies larger than 11" x 17" shall be charged on a reasonable basis.
- 3) There shall be no fees charged by nor paid to Provider for consultation with the Parish, secretarial time, attendance at public meetings, and/or travel time for consultation with the Parish, unless specifically provided for in the Scope of Work to be performed, without the express written pre-approval of the Parish.
- 4) Invoices for services shall be submitted by Provider to the Director of the Department within the Parish issuing the work for review and approval.
 - (a) All invoices must indicate the Parish Purchase Order Number and Work Order Number.
 - (b) All billings by Provider for services rendered shall be submitted in writing.

- (c) Provider shall be reimbursed for reasonable out-of-pocket expenses. Any out-of-pocket expense in excess of \$250.00 shall be pre-approved by the Parish. Failure by Provider to obtain pre-approval from the Parish of expenditures in excess of \$250.00 shall constitute grounds for denial of payment for that expense.
 - (d) Out of state or parish travel time is billable as services only and specifically at the direction and convenience of the Parish, if it is performed during normal working hours, and if it does not cause service charges for the day to exceed eight hours. Such travel time must be pre-approved, in writing, by the Parish.
 - (e) Provider hereby agrees that it shall be solely responsible for the payment of all applicable local, state and, federal taxes on the funds it receives under this Contract.
- 5) The Parish agrees to make payment to Provider for services upon receipt and approval of each invoice. The Parish will pay Provider the amount due and payable within thirty (30) days of receipt, unless a conflict results in a delay of payment. Upon receipt of each invoice, the Parish shall have the right and opportunity to review, confirm or otherwise determine the accuracy of each invoice and performance of service. In the event that the Parish disputes or otherwise may question the accuracy of each invoice or quality of all work performed in connection with an invoice, the Parish may withhold full or partial payment of any invoice until a successful and satisfactory resolution can be reached between the Parties. Parish agrees to not unreasonably withhold payments of any invoice.
- 6) Other than the fee schedule herein, there will be absolutely no additional fees due Provider to cover its overhead costs, general expenses, capital expenses, expenses for principal/branch/ field offices, employees salaries, direct and indirect costs, additional costs or profit of any nature whatsoever in excess of the previously agreed hourly rate.

B. IF ON A LUMP SUM BASIS:

Where there is payment based upon a lump sum fee for all required for this project, the Parish shall pay the Provider a lump sum fee at the conclusion of the project and acceptance by the Parish, unless other terms are negotiated and agreed upon by both Parties in the Scope.

C. IF ON OTHER BASIS

If there is any other payment method, other than hourly or lump sum, the terms shall be specified in Section 1 (Scope of Services) above.

4. NON-ASSIGNABILITY

Provider shall not assign nor transfer any interest in this Contract (whether by assignment or novation) without prior written consent of the Parish. Failure to obtain the prior written consent of the Parish may be grounds for termination of this Contract. Claims for money due or to become due to the Provider from the Parish under this Contract may be assigned to a bank, trust company, or other financial institution without such prior written consent. Notice of any such assignment or transfer shall be furnished promptly to the Parish.

5. BUDGET LIMITATION

- A.** The Parish shall determine the budget for this project, and the Parish shall advise the Provider of the budget limitation in writing. The Provider shall use its best judgment and expertise to design this project within the proposed budget. Any subsequent budget revisions shall be confirmed in writing.
- B.** It is the responsibility of the Provider to advise the Parish in advance if Contract funds or Contract terms may be insufficient to complete Contract objectives. Provider understands and specifically warrants that it assumes the sole responsibility to advise the Parish in advance if Contract funds or Contract terms may be insufficient to complete Contract objectives. In providing opinions of probable construction cost, the Parish understands that the Provider has no control over costs and price of labor, equipment or materials or over the general Provider's method of pricing, and that the opinion of probable costs provided herein are made on the basis of the Provider's qualifications and experience.
- C.** The continuation of this Contract is contingent upon the appropriation of funds by the Parish to fulfill the requirements of the Contract. If the Parish fails to appropriate sufficient monies to provide for the continuation of this or any other related Contract, or if such appropriation is reduced by the veto of Parish President by any means provided in the appropriations Ordinance to prevent the total appropriation for the year from exceeding revenues for that year, or for any other lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the Contract, the

Contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated.

6. NOTICE TO PROCEED

The Parish, or a Department Director, shall issue the Provider a Notice to Proceed in writing. This notice shall include the Work Order Number, Purchase Order Number, and instructions to undertake the services stated herein. The Provider shall commence the services within ten (10) days after receipt of such notification, unless a shorter time period has been provided in the scope of services, or in emergency situations. The work necessary for the completion of each task shall be completed promptly following the Provider's receipt of the Notice to Proceed. If the Parish desires to divide the Project into various parts, a Notice to Proceed shall be issued for each part, and the Parish and the Provider shall mutually agree upon the period of time within which services for each part of the Project shall be performed. The Provider will be given time extensions for delays beyond its control, or for those delays caused by tardy approvals of work in progress by various official agencies, but no additional compensation shall be allowed or due Provider for such delays caused by the Provider.

7. INSURANCE

The Provider shall secure and maintain at its expense such insurance as may be required by the attached "Insurance Requirements". It is specifically understood that this agreement shall not be effective until such time as all insurance requirements are met by the Provider and approved by the Parish.

8. OTHER TERMS AND CONDITIONS

- A.** The Provider shall, at all times during the term of this Contract, maintain valid Louisiana licenses and commissions as are customarily required of such a Provider, including but not limited to those that may be required by this State and/or Parish. The Provider agrees to renew and or keep current all licenses and commissions herein. The Provider agrees to maintain a copy of all such licenses or commissions on file at all time and make same available for review as may be reasonably requested by the Parish of St. Tammany.
- B.** The professional and technical adequacy and accuracy of designs, drawings, specifications, documents, and other work products furnished under this Contract will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession in St. Tammany Parish. In the event the Parish must have work performed on a construction Contract via a Change Order resulting from an error or

omission by the Provider, the Provider shall provide, at no cost to the Parish, all professional services attributable to that Change Order. This is in addition to Parish's right to recover from Provider any damages for its errors and omissions.

- C.** To the fullest extent permitted by law, Provider shall indemnify and hold harmless the St. Tammany Parish Government, its elected and appointed officials, departments, agencies, boards and commissions, their officers, agents, servants, employees including volunteers, from and against any and all claims, demands, suits, costs, liabilities or judgments for sums of money, and fines or penalties asserted by any party, firm or organization for loss of life, injury or damages to persons or property, growing out of, resulting from, or by reason of any acts, errors, and/or omissions, by Provider, its agents, servants or employees, and subcontractors, as well as any and all costs, expenses and/or attorney fees incurred as a result of any claims, demands, and/or causes of actions that arise while engaged in connection with the services required to be performed by the Provider under this Contract. Provider further agrees to pay all reasonable expenses and attorneys' fees incurred by the Parish in establishing the right to indemnity pursuant to the provisions in this Contract.
- D.** This Contract shall be binding upon the successors and assigns for the Parties hereto.
- E.** This Contract represents the entire Contract between Parish and Provider.
- F.** This Contract is made under the Laws of the State of Louisiana, and for all purposes shall be interpreted in its entirety in accordance with the laws of said State. The Provider hereby agrees and consents to the jurisdiction of the courts of the State of Louisiana over its person. The Parties hereto agree that the sole and exclusive venue for all lawsuits, claims, disputes, and other matters in question between the Parties to this Contract or any breach thereof shall be in the 22nd Judicial District Court for the Parish of St. Tammany, State of Louisiana. It is also understood and agreed that the laws and ordinances of St. Tammany shall apply.
- G.** In the event that the Provider modifies the Parish's Contract documents without the expressed prior written consent of the Parish, the Provider shall indemnify and hold harmless the Parish from any claims, lawsuits, or damages that arise out of or are attributable to the modification. This indemnification and hold harmless obligation shall include not only the damages suffered by the Parish but also all reasonable expenses including, but not limited to, any and all litigation or other dispute resolution costs and any and all professional fees incurred by the Parish as a result of the Provider's deviation from the Parish's Contract documents, or fees incurred by the Parish in establishing the right to indemnity pursuant to the provisions in this Contract.

- H.** Provider agrees to a covenant against contingent fees. Provider warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Provider, to solicit or secure this Contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the Provider, any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, the Parish shall have the right to annul this Contract without liability.
- I.** This Contract may be amended only by mutual written consent of the respective Parties.
- J.** Third Party Beneficiary: it is specifically agreed by and between the Parties to this Contract that no person or party is intended, deemed, considered, or construed to be a third party beneficiary of this Contract.
- K.** Neither party will be liable for failure to fulfill its obligations when due to causes beyond its reasonable control.
- L.** Any failure or delay by either party in exercising any right or remedy will not constitute a waiver of such right or remedy.
- M.** Severability: if any provision or item in this Contract is held invalid or unenforceable for any reason, then such invalidity or unenforceability shall not affect other provisions or items of this Contract. In such event, the remaining portions shall be given full force and effect without the invalid provision or item, and to this end the provisions or items of this Contract are hereby declared severable.
- N.** It is specifically understood that the terms "agreement" and "Contract" may be used interchangeably. It is specifically understood that the terms "Owner", "Director" and "Parish" and "the Parish of St. Tammany" may be used interchangeably.
- O.** Conflict of Interest: it is understood and agreed between the Parties hereto that Provider is not retained exclusively by the Parish but that the Parish may be retain other Providers during the term of this Contract. In the event of reasonably known conflicts of interest or potential conflicts of interest between the Parish and other Parties who have engaged Provider, the Provider agrees to make full disclosure of the same, and that they will take no action on behalf of any other client directly adverse to the Parish, nor will Provider take any action on behalf of the Parish directly adverse to any other client.

- P.** Provider warrants that Provider is qualified to perform the intended purposes of this agreement. In the event that Provider becomes not fit nor qualified for any reason whatsoever, then Provider agrees to withdraw from work herein at no cost to the Parish. In the event that the Parish determines that Provider is not suited for Parish purposes or otherwise fails to represent Parish policies to the satisfaction of the Parish, then Provider agrees to withdraw from this agreement.
- Q.** Provider specifically agrees and understands that Provider shall not maintain or otherwise claim that it possesses any security interest in any aspect of the work that forms the basis of this agreement.
- R.** Provider agrees to ensure that its personnel are, at all times, educated and trained, and further, that Provider and its personnel will perform all work and services as would a reasonably-related Provider in St. Tammany Parish.
- S.** Provider agrees to perform all services in a workmanlike and professional manner. Provider recognizes and understands that time is of the essence. Provider agrees to perform and provide services in accordance with this agreement and all incorporated attachments.

9. TERMINATION, CANCELLATION, AND SUSPENSION

A. Termination

The term of this Contract shall be binding upon the Parties hereto until the work has been completed by the Provider and accepted by the Parish, and all payments required to be made to the Provider have been made. But, this Contract may be terminated upon thirty (30) days written notice under any or all of the following conditions:

- 1) By mutual agreement and consent of the Parties hereto;
- 2) By the Parish as a consequence of the failure of the Provider to comply with the terms, progress, or quality of the work in a satisfactory manner, proper allowances being made for circumstances beyond the control of the Provider;
- 3) By either party upon failure of the other party to fulfill its obligations as set forth in this Contract;
- 4) By the Parish with less than thirty (30) days notice due to budgetary reductions and changes in funding priorities by the Parish;

5) In the event of the abandonment of the project by the Parish.

Upon termination, the Provider shall be paid for actual work performed prior to the Notice of Termination, either based upon the established hourly rate for services actually performed, or on a pro-rata share of the basic fee based upon the phase or percentage of work actually completed, depending on the type of compensation previously established under this Contract.

Upon Termination, the Provider shall deliver to the Parish all original documents, notes, drawings, tracings, computer files, and other files pertaining to this Contract or the Work performed, except for the Provider's personal and administrative files.

B. Cancellation

The continuation of this Contract is contingent upon the appropriation of funds to fulfill the requirements of the Contract by the Parish. If the Parish fails to appropriate sufficient monies to provide for the continuation of this or any other Contract, or if such appropriation is reduced by the veto of Parish President by any means provided in the appropriations Ordinance to prevent the total appropriation for the year from exceeding revenues for that year, or for any other lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the Contract, the Contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated. It is understood and agreed that paragraph (9)(C) below may preempt this paragraph, all at the exclusive and unilateral option of the Parish.

C. Suspension

Should the Parish desire to suspend the work, but not definitely terminate the Contract, the Parish shall supply the Provider with thirty (30) days notice. The Parish will also supply Provider thirty (30) days notice that the work is to be reinstated and resumed in full force. Provider shall receive no additional compensation during the suspension period. The Parties may revisit the terms of this Contract during the suspension period. The suspension shall not exceed six (6) months, unless mutually agreed upon between the Parties.

D. In the event of a default and/or breach of this agreement and this matter is forwarded to legal counsel, then the prevailing party may be entitled to collect a reasonable attorney fees and all costs associated therewith whether or not litigation is initiated. Attorney fees shall be based upon the current, reasonable prevailing rate for counsel in the private sector. The Parties agree to be responsible for such attorney fees, together for all with legal interest from date of agreement breach, plus all costs of collection.

- E.** Termination or cancellation of this agreement will not affect any rights or duties arising under any term or condition herein.

- F.** As to the filing of voluntary or involuntary bankruptcy by Provider, Provider agrees that if any execution or legal process is levied upon its interest in this Contract, or if any liens or privileges are filed against its interest, or if a petition in bankruptcy is filed against it, or if it is adjudicated bankrupt in involuntary proceedings, or if it should breach this Contract in any material respect, the Parish shall have the right, at its unilateral option, to immediately cancel and terminate this Contract. In the event that Provider is placed in any chapter of bankruptcy, voluntarily or involuntarily, or otherwise triggers any provision of the preceding sentence herein, it is understood and agreed that all materials, goods and/or services provided shall be and remain the property of the Parish. All rights of Provider as to goods, wares, products, services, materials and the like supplied to Parish shall be deemed forfeited.

10. AUDITORS

Notwithstanding other Sections herein, Provider shall maintain all records for a period of three years after the date of final payment under this Contract. It is hereby agreed that the Parish Department of Finance or its designated auditor shall have the sole, unilateral and exclusive option of auditing all accounts of Provider which relate to this Contract. Such audit may be commenced at any reasonable time. Provider agrees not to delay, retard, interrupt or unduly interfere with commencement and completion of such an audit. If in the exclusive and unilateral opinion of the Parish that Provider delays, retards, interferes with or otherwise interrupts such an audit, the Parish may seek such relief as per law. In such an event, Provider agrees to be liable for all reasonable attorney fees, costs of auditors, court costs, and any other reasonably related expenses with such litigation.

11. TERM OF CONTRACT

- A.** The effective date of this agreement shall begin on the date of the Parish President's signature or acceptance of the Provider's insurance carrier, whichever occurs last. Notwithstanding the foregoing, in no event, shall this Contract be valid until it has been approved in writing by the Parish President or his designee.

- B.** This Professional Services Contract shall terminate as follows:
 - 1) As per the terms and conditions of Paragraph 9 hereinabove, or;
 - 2) As per operation of law, or;
 - 3) As agreement between the Parties, or;
 - 4) Upon the satisfactory completion of all services and obligations described herein, or;

5) As per the Parish Charter, under Section 5-06(B).

12. DISCRIMINATION CLAUSE

Provider agrees to comply with the Americans with Disabilities Act of 1990 and any current amendments thereto. All individuals shall have equal access to employment opportunities available to a similarly suited individual. Provider agrees not to discriminate in its employment practices, and will render services under this Contract without regard to race, color, religion, sex, national origin, veteran status, political affiliation, or disabilities. Any act of discrimination committed by Provider, or failure to comply with these statutory obligations when applicable shall be grounds for termination of this Contract. Provider agrees to abide by the requirements of all local, state, and/or federal law, including but not limited to the following: Title VI and VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended, the Vietnam Era Veteran's Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, the Age Act of 1975, and the requirements of the Americans with Disabilities Act of 1990. Provider warrants and guarantees that it is an Equal Employment Opportunity employer. In all hiring or employment made possible by or resulting from this Contract, there shall not be any discrimination against any person because of race, color, religion, sex, national origin, disability, age or veterans status; and where applicable, affirmative action will be taken to ensure that Provider's employees are treated equally during employment without regard to their race, color, religion, sex, national origin, disability, age, political affiliation, disabilities or veteran status. This requirement shall apply to but not be limited to the following: employment upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. All solicitations or advertisements for employees shall state that all applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, age or veteran status.

13. INDEPENDENT CONTRACTOR

- A.** While in the performance of services or carrying out obligations herein, the Provider shall be acting in the capacity of an independent contractor (as defined in LA R.S. 23:1021(7)), and not as an employee of the Parish. Nothing herein shall create a partnership between the Provider and the Parish. The Parish shall not be obliged to any person, firm or corporation for any obligations of the Provider arising from the performance of its services under this agreement. The Provider shall not be authorized to represent the Parish with respect to services being performed, dealings with other agencies, and administration of specifically related contracts, unless done so in writing by the Parish.

B. Provider hereby agrees to be responsible for payment of taxes from the funds thus received under this Contract. Provider agrees to be responsible for and to pay all applicable federal income taxes, federal social security tax (or self-employment tax in lieu thereof) and any other applicable federal or state unemployment taxes. Provider agrees to indemnify and hold the Parish harmless for any and all federal and/or state income tax liability, including taxes, interest and penalties, resulting from the Parish's treatment of Provider as independent contractor. Provider further agrees to reimburse Parish for any and all costs it incurs, including, but not limited to, accounting fees and legal fees, in defending itself against any such liability.

C. Provider acknowledges Exclusions of Workmen's Compensation and/or Unemployment Coverage.

14. NOTICES

All notices shall be by certified mail, return receipt requested, and sent to the following individuals at the following addresses. Changes of person and addresses are to be exchanged in a like manner:

Parish of St. Tammany: Office of the Parish President
P.O. Box 628
Covington, La. 70434
(985) 898-2700

Provider: «txtREQCompanyName»
 «txtREQAddress»
 «txtREQCity», «txtREQState» «txtREQZip»

15. RECORDATION OF CONTRACT

Provider authorizes Parish to deduct from any payment due herein costs for recordation of this Contract in full or an excerpt hereof, or any revisions or modifications thereof as required by law. Provider agrees to execute an excerpt or extract of this agreement for recordation purposes. If Provider fails to execute such an excerpt, then the Parish shall file and record the entire Contract and all attachments at the expense of Provider and Parish is hereby authorized to deduct all related costs from any proceeds due to the Provider.

16. AUTHORITY TO ENTER CONTRACT

The undersigned representative of Provider warrants and personally guarantees that he/she has the requisite and necessary authority to enter and sign this Contract on behalf of the corporate entity, partnership, etc. The undersigned Parties warrant and represent that they each have the respective authority and permission to enter this Contract. In the event that Provider is a member of a corporation, partnership, LLC, LLP, or any other juridical entity, the Parish requires, as an additional provision, that Provider supplies a certified copy of a corporate resolution authorizing the undersigned to enter and sign this Contract.

This Contract is executed in **Three (3)** originals. IN TESTIMONY WHEREOF, they have executed this agreement, the date(s) written below.

WITNESSES:

Signature

Print Name

Signature

Print Name

PROVIDER:

Signature

Print Name

Title

Date

WITNESSES:

Signature

Print Name

Signature

Print Name

ST. TAMMANY PARISH GOVERNMENT:

Michael B. Cooper
Parish President

Date

APPROVED BY:

Assistant District Attorney – Civil Division

Date

Attachment "C"

ACKNOWLEDGMENT AND WAIVER

_____ ("Respondent") hereby acknowledges that it has received Request for Qualifications No. _____ ("RFQ"), issued by the St. Tammany Parish Government, and has been advised that same is not subject to the Louisiana Public Bid Law or the Louisiana Procurement Code. As such, Respondent understands and acknowledges that it has not been granted and otherwise possesses no right to protest, contest, debate or otherwise call in question the processes, procedures, methodology or results of the RFQ or the selection of a Contractor in connection therewith.

To the extent that the Respondent may otherwise have any such rights, Respondent herein waives all such rights to protest, contest, debate or otherwise call in question the processes, procedures, methodology or results of the RFQ or the selection of a Contractor in connection therewith and agrees it will not file claims of any type or manner, in a court of law or otherwise, in any way related to same.

SIGNED, this _____ day of _____, 202__.

WITNESSES:

Respondent

Printed Name: _____

By: _____
(Signature of Authorized Representative)

Printed Name: _____

Printed Name: _____

Title: _____

STATE OF _____

PARISH/COUNTY OF _____

SWORN TO and subscribed before me, Notary, on this _____ day of _____, 202__.

NOTARY PUBLIC
My Commission Expires: _____

Attachment "D"



INSURANCE REQUIREMENTS*

Professional Services Project: US 190 W Roundabouts

Project/Quote/Bid#: RFQ No.: 21-1-4

*****IMPORTANT – PLEASE READ*****

Prior to submitting your quote or bid, it is recommended that you review these insurance requirements with your insurance broker/agent.

These requirements modify portions of the insurance language found in the General Conditions and/or Supplementary General Conditions; however, there is no intention to remove all sections pertaining to insurance requirements and limits set forth in the General Conditions and/or Supplementary General Conditions, only to amend and specify those items particular for this Project.

- A. The Provider shall secure and maintain at its expense such insurance that will protect it and St. Tammany Parish Government (the "Parish") from claims for bodily injury, death or property damage as well as from claims under the Workers' Compensation Acts that may arise from the performance of services under this agreement. All certificates of insurance shall be furnished to the Parish and provide thirty (30) days prior notice of cancellation to the Parish, in writing, on all of the required coverage.
- B. All policies shall provide for and certificates of insurance shall indicate the following:
1. Waiver of Subrogation: The Provider's insurers will have no right of recovery or subrogation against the Parish of St. Tammany, it being the intention of the parties that all insurance policy(ies) so affected shall protect both parties and be the primary coverage for any and all losses covered by the below described insurance.
 2. Additional Insured: St. Tammany Parish Government shall be named as Additional Insured with respect to general liability, automobile liability and excess liability coverages, as well as marine liability and pollution/environmental liability, when those coverages are required or necessary.
 3. Payment of Premiums: The insurance companies issuing the policy or policies will have no recourse against St. Tammany Parish Government for payment of any premiums or for assessments under any form of policy.
 4. Deductibles/Self-Insured Retentions: Any deductibles and/or self-insured retentions in the described insurance policies **must be declared on the Certificate of Insurance**, and are both assumed by and the sole risk of the Provider. The Parish will have the sole discretion to accept or reject deductibles and/or self-insured retentions exceeding \$100,000 as it deems appropriate. The Parish may require Provider to produce evidence of verifiable financial ability to satisfy its deductibles and/or self-insured retentions; however, the Parish assumes no liability or obligation resulting from its examination, acceptance, or rejection of information presented.
 5. Project Reference: The project(s) and location(s) shall be referenced in the Comment or Description of Operations section of the Certificate of Insurance (Project ##-###, or Bid # if applicable, Type of Work, Location).
- C. Coverage must be issued by insurance companies authorized to do business in the State of Louisiana. Companies must have an A.M. Best rating of no less than A-, Category VII. St. Tammany Parish Risk Management Department may waive this requirement only for Workers Compensation coverage at their discretion.

Provider shall secure and present proof of insurance on forms acceptable to St. Tammany Parish Government, Office of Risk Management no later than the time of submission of the Contract to the Parish. However, should any work performed under this Contract by or on behalf of Provider include exposures that are not covered by those insurance coverages, Provider is not relieved of its obligation to maintain appropriate levels and types of insurance necessary to protect itself, its agents and employees, its subcontractors, St. Tammany Parish Government (Owner), and all other interested third parties, from any and all claims for damage or injury in connection with the services performed or provided throughout the duration of this Project, as well as for any subsequent periods required under this Contract.

The insurance coverages checked (✓) below are those required for this Contract.



1. **Commercial General Liability*** insurance – **Occurrence Form** - with a Combined Single Limit for bodily injury and property damage of at least \$1,000,000 per Occurrence / \$2,000,000 General Aggregate and \$2,000,000 Products-Completed Operations. Contracts over \$1,000,000 may require higher limits. The insurance shall provide for and the certificate(s) of insurance shall indicate the following coverages:
 - a) Premises - operations;
 - b) Broad form contractual liability;
 - c) Products and completed operations;
 - d) Personal/Advertising Injury.



2. **Business Automobile Liability*** insurance with a Combined Single Limit of \$1,000,000 per Occurrence for bodily injury and property damage, and shall include coverage for the following:
 - a) Any auto;

or

 - b) Owned autos; **and**
 - c) Hired autos; **and**
 - d) Non-owned autos.

(If no owned vehicles, hired and non-owned may be acceptable, subject to the review and approval of St. Tammany Parish, Office of Risk Management.)



3. **Workers' Compensation/Employers Liability insurance*** - Workers' Compensation coverage as required by State law. Employers' liability limits shall be a minimum of \$500,000 each accident, \$500,000 each disease, \$500,000 disease policy aggregate. When water activities are expected to be performed in connection with this project, limits shall be a minimum of \$1,000,000 each accident, \$1,000,000 each disease, \$1,000,000 disease policy aggregate and coverage under the USL&H Act, Jones Act and/or Maritime Employers Liability (MEL) must be included. **Coverage for owners, officers and/or partners in any way engaged in the Project shall be included in the policy.** The names of any excluded individual must be shown in the Description of Operations/Comments section of the Certificate.



4. **Pollution Liability and Environmental Liability*** insurance in the minimum amount of \$1,000,000 per occurrence / \$2,000,000 aggregate including full contractual liability and third party claims for bodily injury and/or property damage, for all such hazardous waste, pollutants and/or environmental exposures that may be affected by this project stemming from pollution/environmental incidents as a result of Contractor's operations.

If coverage is provided on a claims-made basis, the following conditions apply:

- 1) the retroactive date must be prior to or coinciding with the effective date of the Contract, or prior to the commencement of any services provided by the Contractor on behalf of the Parish, whichever is earlier; AND
- 2) continuous coverage must be provided to the Parish with the same retro date for 24 months following acceptance or termination of the Project by the Parish either by
 - a) continued renewal certificates **OR**
 - b) a 24 month Extended Reporting Period

*The Certificate must indicate whether the policy is written on an occurrence or claims-made basis and, if claims-made, the applicable retro date must be stated.



5. **Professional Liability/Errors and Omissions*** insurance in the sum of at least \$1,000,000 per claim / \$2,000,000 aggregate is required when work performed by Contractor or on behalf of Contractor includes professional or technical services including, but not limited to, construction administration and/or management, engineering services such as design, surveying, and/or inspection, technical services such as testing and laboratory analysis, and/or environmental assessments. An occurrence basis policy is preferred.

If coverage is provided on a claims-made basis, the following conditions apply:

- 1) the retroactive date must be prior to or coinciding with the effective date of the Contract, or prior to the commencement of any services provided by the Contractor on behalf of the Parish, whichever is earlier; AND
- 2) continuous coverage must be provided to the Parish with the same retro date for 24 months following acceptance or termination of the Project by the Parish either by
 - a) continued renewal certificates **OR**
 - b) a 24 month Extended Reporting Period

*The Certificate must indicate whether the policy is written on an occurrence or claims-made basis and, if claims-made, the applicable retro date must be stated.



6. **Marine Liability/Protection and Indemnity*** insurance is required for any and all vessel and/or marine operations in the minimum limits of \$1,000,000 per occurrence / \$2,000,000 per project general aggregate. The coverage shall include, but is not limited to, the basic coverages found in the Commercial General Liability insurance and coverage for third party liability

***Excess/Umbrella Liability** insurance may be provided to meet the limit requirements for any Liability coverage. For example: if the General Liability requirement is \$3,000,000 per occurrence, but the policy is only \$1,000,000 per occurrence, then the excess policy should be at least \$2,000,000 per occurrence thereby providing a combined per occurrence limit of \$3,000,000.)

- D. All policies of insurance shall meet the requirements of the Parish prior to the commencing of any work. The Parish has the right, but not the duty, to approve all insurance coverages prior to commencement of work. If any of the required policies are or become unsatisfactory to the Parish as to form or substance; or if a company issuing any policy is or becomes unsatisfactory to the Parish, the Provider shall promptly obtain a new policy, timely submit same to the Parish for approval, and submit a certificate thereof as provided above. The Parish agrees not to unreasonably withhold approval of any insurance carrier selected by Provider. In the event that Parish cannot agree or otherwise authorize a carrier, Provider shall have the option of selecting and submitting a new insurance carrier within 30 days of said notice by the Parish. In the event that the second submission is insufficient or is not approved, then the Parish shall have the unilateral opportunity to thereafter select a responsive and responsible insurance carrier all at the cost of Provider and thereafter deduct from Provider's fee the cost of such insurance.
- E. Provider shall maintain a current copy of all annual insurance policies and agrees to provide a certificate of insurance to the Parish on an annual basis or as may be reasonably requested for the term of the contract or any required Extended Reporting Period. Provider further shall ensure that all insurance policies are maintained in full force and effect throughout the duration of the Project and shall provide the Parish with annual renewal certificates of insurance evidencing continued coverage, without any prompting by the Parish.

- F. Provider shall maintain a current copy of all annual insurance policies and agrees to provide same to the Parish on an annual basis or as may be reasonably requested. Provider further shall ensure that all insurance policies are maintained in full force and effect throughout the duration of the Project and shall provide the Parish with annual renewal certificates of insurance evidencing continued coverage, without any prompting by the Parish.
- G. It shall be the responsibility of Provider to require that these insurance requirements are met by all contractors and sub-contractors performing work for and on behalf of Provider. Provider shall further ensure the Parish is named as an additional insured on all insurance policies provided by said contractor and/or sub-contractor throughout the duration of the project.
- H. Certificates of Insurance shall be issued as follows:

**St. Tammany Parish Government
Attn: Risk Management
P O Box 628
Covington, LA 70434**

To avoid contract processing delays, be certain the project name/number is included on all correspondence including Certificates of Insurance.

***NOTICE: St. Tammany Parish Government reserves the rights to remove, replace, make additions to and/or modify any and all of the insurance requirements at any time.**

Any inquiry regarding these insurance requirements should be addressed to:

**St. Tammany Parish Government
Office of Risk Management
P O Box 628
Covington, LA 70434
Telephone: 985-898-5226
Email: riskman@stpgov.org**

Attachment "E"

HOLD HARMLESS AGREEMENT

_____ (Contractor) agrees to protect, defend, indemnify, save, and hold harmless St. Tammany Parish Government, its elected and appointed officials, departments, agencies, boards and commissions, its officers, agents servants, employees, including volunteers, from and against any and all claims, demands, expense and liability arising out of injury or death to any person or the damage, loss or destruction of any property to the extent caused by any act or omission of Contractor, its agents, servants, employees, and subcontractors, or any and all costs, expense and/or attorney fees incurred as a result of any claim, demands, and/or causes of action that results under the performance or non-performance of this contract.

_____ (Contractor) agrees to investigate, handle, respond to, provide defense for and defend any such claims, demand, or suit, as described in the paragraph above, at its sole expense and agrees to bear all other costs and expenses related thereto, even if it (claims, etc.) is groundless, false or fraudulent.

SIGNED, this ____ day of _____, 20__

WITNESSES:

_____ (Name of Contractor)

Print Name: _____

BY: _____ (Signature of Authorized Officer)

Print Name: : _____

Print Name: _____

Title: _____

STATE OF _____

PARISH/COUNTY OF _____

SWORN TO and subscribed before me, Notary, on this ____ day of _____, 20__.

_____ NOTARY PUBLIC

My Commission Expires: _____

Please complete the following:

Claims contact for this project will be:

_____ (Print name and title of Contact Person)

_____ Address

_____ Email address

_____ Telephone#

_____ Cell #

_____ Fax #

**AFFIDAVIT PURSUANT TO LA R.S. 38:2224 AND ETHICS PROVISIONS
FOR PROFESSIONAL & ESSENTIAL SERVICE CONTRACTS**

STATE OF _____

PARISH/COUNTY OF _____

BEFORE ME, the undersigned authority, in and for the above stated State and Parish (or County), personally came and appeared:

Print Name

who, after first being duly sworn, did depose and state:

1. That affiant is appearing on behalf of _____, who is seeking a Professional or Essential Service Contract with St. Tammany Parish Government.
2. That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant; and

3. That no part of the contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.

4. If affiant is a sole proprietor, that neither affiant, nor his/her immediate family is a public servant of St. Tammany Parish Government or the Contract is not under the supervision or jurisdiction of the public servant's agency.

5. If affiant is executing this affidavit on behalf of a juridical entity such as a partnership, corporation, or LLC, etc., that no public servant of St. Tammany Parish Government, or his/her immediate family, either individually or collectively, has more than a 25% ownership interest in the entity seeking the Contract with St. Tammany Parish Government if the Contract will be under the supervision or jurisdiction of the public servant's agency.

Printed Name: _____

Title: _____

Entity name: _____

THUS SWORN TO AND SUBSCRIBED BEFORE ME,
THIS _____, DAY OF _____, 202__.

Notary Public

Print Name: _____

Notary I.D./Bar No.: _____

My commission expires: _____

**AFFIDAVIT PURSUANT TO LA R.S. 38:2212.10 CONFIRMING
REGISTRATION AND PARTICIPATION IN A STATUS VERIFICATION
SYSTEM**

STATE OF _____

PARISH/COUNTY OF _____

BEFORE ME, the undersigned authority, in and for the above stated State and Parish (or County), personally came and appeared:

Print Name

who, after first being duly sworn, did depose and state:

1. That affiant is appearing on behalf of _____, a private employer seeking a bid or a contract with St. Tammany Parish Government for the physical performance of services within the State of Louisiana.
2. That affiant is registered and participates in a status verification system to verify that all employees in the state of Louisiana are legal citizens of the United States or are legal aliens; and
3. That affiant shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.
4. That affiant shall require all subcontractors to submit to the affiant a sworn affidavit verifying compliance with this law.

Printed Name: _____
Title: _____
Name of Entity: _____

**THUS SWORN TO AND SUBSCRIBED BEFORE ME,
THIS _____, DAY OF _____, 202__.**

Notary Public

Attachment "G"
Sample Scoring Matrix
 RFQ # 21-1-4
 US 190 W Roundabouts

 Vendor/Business Name

 Evaluator's Name

CRITERIA	POSSIBLE POINTS	ASSIGNED POINTS	COMMENTS
Compliance with the RFQ	15pts		
Understanding of the Project	15pts		
Approach to the Project	15pts		
Ability to perform within the stated timeframe	20pts		
Qualifications of the Respondent, including, but not limited to, its experience and personnel assigned to the projects	20pts		
Proposal quality and references	15pts		

Vendor Total

100pts

Signature of Evaluator: _____

Date: _____