DOTD FORM: 24-102

(Revised March 1, 2022)

PROPOSAL TO PROVIDE CONSULTANT SERVICES

Prime consultant shall complete the DOTD Form 24-102 without altering the Form's text; however, the instruction and/or guidance for Sections 12 through 23 can be removed but do not remove Section title and number.
ANY CONSULTANT FAILING TO SUBMIT ANY OF THE INFORMATION REQUIRED ON THE DOTD FORM 24-102, OR PROVIDING INACCURATE INFORMATION ON THE DOTD FORM 24-102, MAY BE CONSIDERED NON-RESPONSIVE.
Prime consultant should enter the firm name in the footer at the bottom of this page. (It will carry over to subsequent pages.)

1. Contract title as shown in the advertisement	**CMAR CONTRACT FOR HOOPER ROAD WIDENING (LA 3034 – LA 37)**
2. Contract number(s) as shown in the advertisement	**4400024084**
3. State Project Number(s), if shown in the advertisement	**H.009300.5**
4. Prime consultant name (as registered with the Louisiana Secretary of State where such registration is required by law)	**SIGMA CONSULTING GROUP, INC.**
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	**EF.0001410** **VF.0000302** SIGMA CONSULTING GROUP, INC. ENGINEERING & SURVEYING
6. Prime consultant mailing address	**10305 Airline Highway, Baton Rouge, LA 70816**
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	**10305 Airline Highway, Baton Rouge, LA 70816**
8. Name, title, phone number, and email address of prime consultant's contract point of contact	**Miles B. Williams, PE – President** **225-298-0800, mwilliams@sigmacg.com**
9. Name, title, phone number, and email address of the official with signing authority for this proposal	**Miles B. Williams, PE – President** **225-298-0800, mwilliams@sigmacg.com**

10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.	Signature (shall be the same person as #9):  Date: April 26, 2022
11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.	Firm(s): **APS Engineering and Testing** Firm(s)' %: **3%**

12. **Past Performance Evaluation Discipline Table**:

Evaluation Disciplines	% of Overall Contract	**Sigma Consulting Group, Inc.**	Arcadis	APS (DBE)			Each Discipline must total to 100%
Road	87%	**90%**	10%				100%
Bridge	5%	**100%**					100%
Traffic	5%		100%				100%
Geotech	3%			100%			100%
Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.							
Percent of Contract	**100%**	**83%**	14%	3%	0%	0%	100%

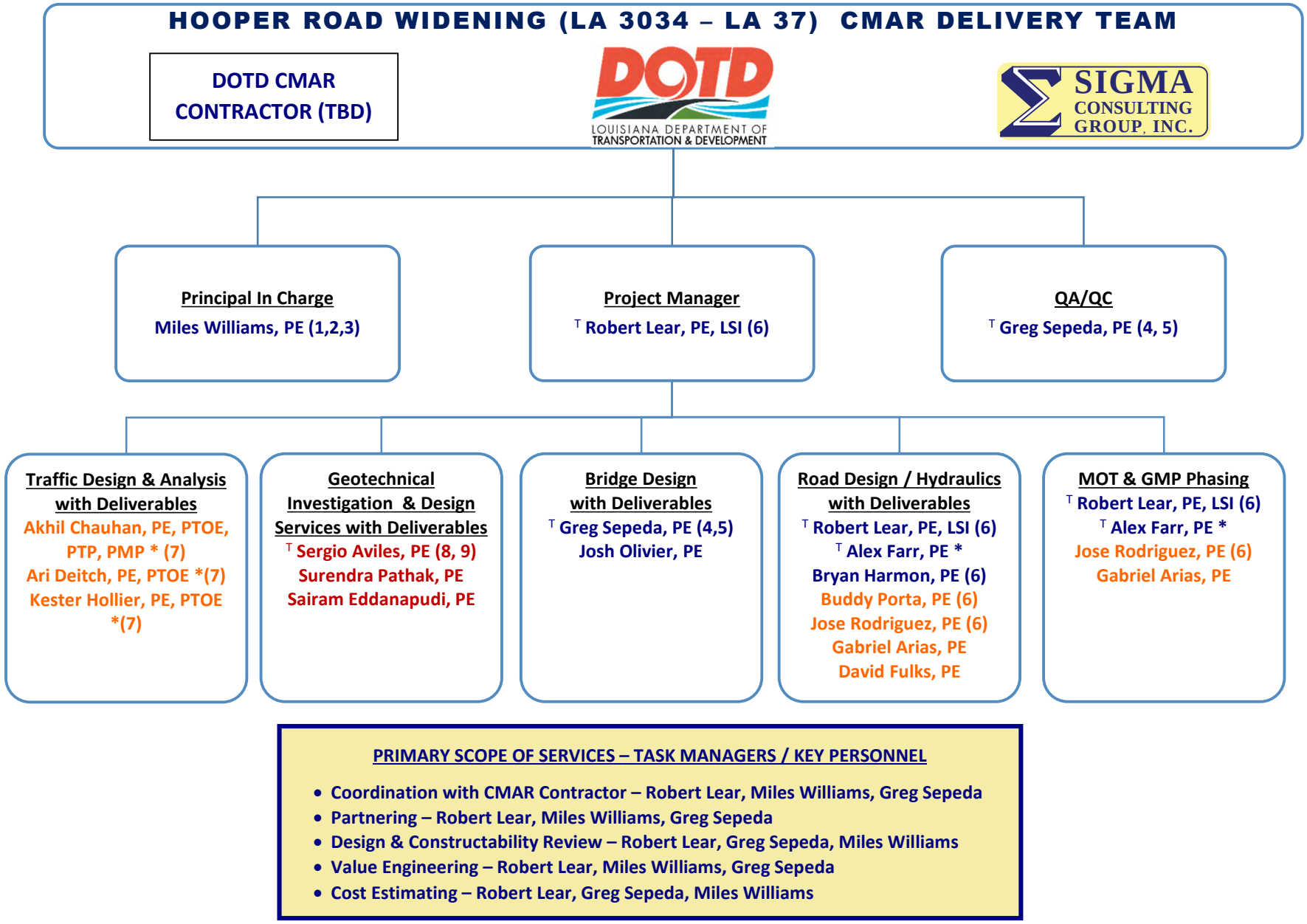
13. **Firm Size**

Firm Name	DOTD Job Classification	Number of Personnel Committed to this Contract	Total Number of Personnel Available in this DOTD Job Classification (if needed)
Sigma Consulting Group, Inc. SIGMA CONSULTING GROUP, INC. ENGINEERING & SURVEYING	Principal	1	1
	Supervisor - Eng.	3	4
	Engineer	2	4
	Surveyor	0	1
	Engineer Intern	3	5
	CADD Operator	1	2
	CADD Technician	2	3
	Party Chief	0	1
	Instrument Man	0	2
	Sr. Technician	0	2
	Clerical	1	4
APS Engineering and Testing	Engineer	5	5
	Driller	8	8
	Technician	12	12
ARCADIS	Supervisor Engineer	4	8
	Supervisor Engineer - Other	2	3
	Engineer - Other	1	1
	Engineering Aide	1	2
	Engineer	3	9
	Principal	2	4

14. Organizational Chart:

Sigma Consulting Group, Inc.
APS Engineering and Testing, LLC
Arcadis, Inc.

Legend
[T] Work Zone Training / TCS
* TEPR Training
() denotes MPR reference number



PRIMARY SCOPE OF SERVICES – TASK MANAGERS / KEY PERSONNEL

- Coordination with CMAR Contractor – Robert Lear, Miles Williams, Greg Sepeda
- Partnering – Robert Lear, Miles Williams, Greg Sepeda
- Design & Constructability Review – Robert Lear, Greg Sepeda, Miles Williams
- Value Engineering – Robert Lear, Miles Williams, Greg Sepeda
- Cost Estimating – Robert Lear, Greg Sepeda, Miles Williams

15. **Minimum Personnel Requirements**:

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of License / Certification & Number	State of license	License / Certification Expiration Date
1	**Miles Williams, PE**	**Sigma Consulting Group, Inc.**	**Professional Civil Engineer Lic. No. 23094**	**LA**	**Exp. 3/31/2024**
2					
3					
4	**Gregory Sepeda, PE**	**Sigma Consulting Group, Inc.**	**PE No. 26669**	**LA**	**Exp. 9/30/2022**
5					
6	**Robert Lear, PE, LSI**	**Sigma Consulting Group, Inc.**	**PE No. 29394**	**LA**	**Exp. 3/31/2023**
	Supporting Staff: **Bryan Harmon, PE** **Jose Rodriguez, PE** **Buddy Porta, PE**	**Sigma Consulting Group, Inc.** **Arcadis, Inc.** **Arcadis Inc.**	**PE No. 22595** **PE No. 30492** **PE No. 16425**	**LA** **LA** **LA**	**Exp. 3/31/2023** **Exp. 3/31/2023** **Exp. 9/30/2023**
7	**Akhil Chauhan, PE, PTOE, PEP, PMP**	**Arcadis, Inc.**	**PE No. 33703** **PTOE No. 2544**	**LA**	**Exp. 9/30/2022** **Exp. 11/2023**
	Supporting Staff: **Ari Deitch, PE, PTOE** **Kester Hollier, PE, PTOE**	**Arcadis, Inc.** **Arcadis Inc.**	**PE No. 30492** **PTOE No. 4346** **PE No. 16425** **PTOE No. 3928**	**LA** **LA**	**Exp. 3/31/2024** **Exp. 11/2023** **Exp. 3/31/2023** **Exp. 11/2024**

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of License / Certification & Number	State of license	License / Certification Expiration Date
8	**Sergio Aviles, PE**	**APS Engineering and Testing, LLC**	**Professional Civil Engineer Lic. No. 33571**	**LA**	**Exp. 3/31/2024**
9	**Sergio Aviles, PE**	**APS Engineering and Testing, LLC**	**N/A**	**N/A**	**N/A**

Miles Williams, PE

Greg Sepeda, PE

Robbie Lear, PE

SIGMA CONSULTING GROUP, INC.
ENGINEERING & SURVEYING

16. **Staff Experience:**

See Resume Sheets on subsequent pages.

Name	Project Responsibilities	Firm
Robert Lear, Jr., PE, LSI	Project Manager / Road Design	SIGMA CONSULTING GROUP, INC. ENGINEERING & SURVEYING
Miles B. Williams, PE	Principal-in-Charge	
Greg Sepeda, PE	QC/QA Manager / Bridge Design	
Bryan Harmon, PE	Road Design / Drainage Design	
Alex Farr, PE	Road Design / Maintenance of Traffic	
Joshua Renard, PE	Road Design / Utility Coordination	
Josh Olivier, PE	Bridge Design	
Lloyd “Buddy” Porta, PE	Road Design / QA/QC	ARCADIS
Jose Rodriguez, PE	Road Design	
Gabriel Arias, PE	Road Design	
David Fulks, PE	Road Design	
Akhil Chauhan, PE, PTOE, PTP, PMP	Traffic / QA/QC	
Ari Deitch, PE, PTOE	Traffic	
Kester Hollier, PE, PTOE	Traffic	
Sergio Aviles, PE	Geotechnical Investigation & Design	APS Engineering and Testing
Sairam Eddanapudi, ME, PE	Geotechnical Investigation & Design	
Surendra Pathak, MS, PE	Geotechnical Investigation & Design	

Firm employed by: **SIGMA CONSULTING GROUP, INC.**					
Name	**ROBERT LEAR, JR., PE, LSI**		Years of relevant experience with this employer	**23**	
Title	**Vice-President / Sr. Project Manager**		Years of relevant experience with other employer(s)	**3**	
Degree(s) / Years / Specialization			**BS / 1996 / Civil Engineering**		
Active registration number / state / expiration date			**PE.0029394 / LA / 3-31-2023 & LSI.0000508 / LA / 9-30-2021**		
Year registered	**2001 / 2005**	Discipline	**Civil / Land Surveyor Intern**		
Contract role(s) / brief description of responsibilities			**Project Manager: Coordination w/CMAR contractor, partnering, road & hydraulic design and plans, value engineering, cost estimating**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
2005 2021 2006 – Present 2000 - Present	**NEPA and Transportation Decision Making Seminar** **ATSSA Traffic Control Supervisor Certification #337850 (TCT/TCS)** **6+ Years In Responsible Charge of Urban Freeway Transportation Projects Delivered By Alternative Delivery** **22+ years responsible charge for designing DOTD roadway projects in urban settings**
10/2020 – Present	**I-10: LA 415 to Essen Lane, West and East Baton Rouge Parish, LA (H.004100.5) CMAR DELIVERY** Mr. Lear is a road design engineer for the replacement of I-10, interchange improvements, and surface street improvements through Metro Baton Rouge. His responsibilities include road and drainage design, complex interchange geometric design, maintenance of traffic / sequencing plans, road plan preparation, coordinating with the CMAR contractor, design and constructability reviews, value engineering assessments, project phasing for GMP limit determination, proposed right of way and control-of-access limit determination and utility coordination.
10/16 – 06/20	**I-10: Highland Rd to LA73 Design-Build Project, East Baton Rouge/Ascension Parishes. H.009250 D-B DELIVERY** Mr. Lear was the Roadway Design Engineer for this LaDOTD Design Build Project. The project included widening I-10 for 6.6 miles to 3-lanes in each direction from the Highland Road Interchange to the LA73 Interchange. The I-10 bridges over Highland Road and approaching roadway are being replaced with a new structure and profile grade. Adjustments to the ramp gore areas were required to accommodate the new profile. A 54" median barrier is included for 3.6 miles, with additional detail required for superelevated curves through flat profile grades to ensure adequate drainage. Also, design considerations were necessary to minimize tree clearing through the 3-mile wooded median section of the freeway. A double exit with 2 dedicated exit lanes was design at the I-10 EB exit at Highland Road and a double exit with 1 dedicated exit lane and 1 shared exit lane was designed at the I-10 EB exit at LA73. Existing ramp acceleration and deceleration lanes were lengthened to address traffic queing problems at the Highland Road Interchange. Mr. Lear was responsible for all road design components of the project.

Robert Lear, Jr. (continued)

Firm employed by: **SIGMA CONSULTING GROUP, INC.**			
Name	**ROBERT LEAR, JR., PE, LSI**	Years of relevant experience with this employer	**23**
Title	**Vice-President / Sr. Project Manager**	Years of relevant experience with other employer(s)	**3**

04/19 – Present	**I-220/I-20 Interchange & BAFB Access Design-Build, Bossier Parish, LA** **D-B DELIVERY** The project includes adding ramps to the existing I-20/I-220 Interchange and providing full access to the Barksdale Air Force Base via a new 4-lane rural arterial roadway. Mr. Lear is the Roadway Design Engineer for this LaDOTD Design-Build Project. He is responsible for preparing the geometric design criteria reports, design exceptions, horizontal and vertical geometrics for the interstate, diagonal and loop ramps, C-D road, and rural arterial; superelevation transitions, typical sections, plan profile sheets, geometric control, geometric layout, geometric details, cross sections, drainage design including cross drains, storm drains, side drains, roadside ditches, existing and design drainage maps, clearing and grubbing plans, and construction support. Mr. Lear also was responsible for QA/QC reviews and/or independent reviews of the Stormwater Pollution Prevention Plan, Interchange Modification Report re-evaluation, traffic control plans, signing and striping plans, and transportation management plan. He also participated in partnering and coordination with the contractor throughout the RFQ, RFP, design and construction phases of the project. As key personnel for the DB process, he participated in all of the required pre-construction project meetings as well as design-build team constructability reviews.
04/18 – Present	**Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project, Plaquemines and Jefferson Parish, LA (H.004791)** **PPP DELIVERY** Mr. Lear is a project engineer for this public/private partnership project for DOTD. He performed the independent technical review of the horizontal and vertical geometrics, superelevation calculations, design reports, and geometric layout and details. He also performed an independent technical review of the right of way maps for the project.
09/2020 - Present	**Owner Verification Services - College Drive Flyover Ramp I-10/I-12 West, East Baton Rouge Parish (H.013897)** **D-B DELIVERY** Sigma is a technical subconsultant for owner verification services for this urban freeway alternative delivery project. Mr. Lear is Sigma's project manager and is responsible for technical design and constructability reviews for definitive design and the following design units: clearing and grubbing, roadway design, hydraulics/drainage design, and maintenance of traffic. Reviews include technical comments, design review meetings with the design consultant, builder, and DOTD, and concurrence reviews of D-B team responses.
2013 - Present	**I-10: LA 347 to Atchafalaya Floodway Bridge, St. Martin Parish (H.003014)** Mr. Lear was the project manager and lead roadway engineer for replacing and upgrading 2.7 miles of I-10 and intersection safety improvements near Henderson, LA. He was responsible for all roadway design components of the project including typical sections, plan profiles, geometric details, sequencing, level 4 TMP, and cross sections. The project scope also included two roundabouts at the ramp termini points and intersection improvements to LA352/LA347 based on traffic data and access management. Mr. Lear was the road design engineer for these one-lane roundabouts and intersection improvements and attended public meetings for DOTD environmental clearance. Mr. Lear also coordinated the roadway lighting and utility conflicts with subconsultants, and bridge design with DOTD Bridge section, and assembled the multi-discipline construction plan set. **He is currently providing construction support for the project which includes partnering, value engineering proposal reviews and plan changes.**

Firm employed by: **SIGMA CONSULTING GROUP, INC.**					
Name	**MILES B. WILLIAMS, PE**		Years of relevant experience with this employer	**32**	
Title	**President / Principal-in-Charge**		Years of relevant experience with other employer(s)	**8**	
Degree(s) / Years / Specialization		**BS / 1983 / Civil Engineering**			
Active registration number / state / expiration date		**23094 / LA / 3-31-2024**			
Year registered	**1988**	Discipline	**Civil**		
Contract role(s) / brief description of responsibilities		**Principal-in-Charge: Contracting, coordination w/CMAR contractor, partnering, design reviews, value engineering, cost estimating**			

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
2004	**NEPA and Transportation Decision Making Seminar**
2006 – Present	**6+ Years In Responsible Charge of Urban Freeway Transportation Projects Delivered By Alternative Delivery**
1988 - Present	**34+ Years responsible charge for designing DOTD roadway projects in urban settings**
10/20 – Present	**I-10: LA 415 to Essen Lane, West and East Baton Rouge Parish, LA (H.004100.5) CMAR DELIVERY** Mr. Williams is the Road Design Lead Professional for the replacement of I-10, interchange improvements, and surface street improvements through Metro Baton Rouge. His responsibilities include road and drainage design, complex interchange geometric design, maintenance of traffic / sequencing plans, coordinating with the CMAR contractor, design and constructability reviews, value engineering assessments, cost estimating, project phasing for GMP limit determination, proposed right of way and control-of-access limit determination, utility coordination, and public involvement.
2016-2020	**I-10: Highland to LA 73 Design-Build Project, E. Baton Rouge and Ascension Parish, LA (H.009250) D-B DELIVERY** Mr. Williams served as the Project Design Manager for all design efforts for this urban freeway design-build project. He was responsible for leading and coordinating all disciplines: road design; bridge design; lighting; geotechnical investigation; and traffic control. He also is the responsible engineer for geometric design, roadway construction and traffic control plans. The project included coordinating with the D-B contractor and DOTD, partnering, design and constructability reviews, and cost estimating.
04/18 – Present	**Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project, Plaquemines and Jefferson Parish, LA (H.004791) PPP DELIVERY** Sigma is a design subconsultant providing drainage design for this alternative delivery project. Mr. Williams is serving as project principal and hydraulic design engineer. His work entails liaison with the prime consultant, builder, concessionaire and LADOTD. He is also assisting in the design of the drainage system for the roadways throughout the project including storm sewer design, drainage plans preparation and generation of quantities.

Miles Williams (continued)

Firm employed by: **SIGMA CONSULTING GROUP, INC.**			
Name	**MILES B. WILLIAMS, PE**	Years of relevant experience with this employer	**32**
Title	**President / Principal-in-Charge**	Years of relevant experience with other employer(s)	**8**

09/20 - Present	**Owner Verification Services - College Drive Flyover Ramp I-10/I-12 West, East Baton Rouge Parish (H.013897)** **D-B DELIVERY** Sigma is a technical subconsultant for owner verification services for this urban freeway alternative delivery project. Mr. Williams is responsible for technical design and constructability reviews for definitive design and the following design units: clearing and grubbing, roadway design, hydraulics/drainage design, and maintenance of traffic. Reviews include technical comments, design review meetings with the design consultant, builder, and DOTD, and concurrence reviews of D-B team responses.
03/13 – 10/20	**I-10: LA 347 to Atchafalaya Floodway Bridge, St. Martin Parish (H.003014)** Mr. Williams was the principal in charge for the roadway design for the three laning of the westbound lanes and rehabilitation of the two lanes eastbound for 2.7 miles of I-10 and intersection safety improvements near Henderson, LA. He supervised the plan preparation for all roadway design components of the project including typical sections, plan profiles, geometric details, sequencing, level 4 TMP, and cross sections. The project scope also included two roundabouts at the ramp termini points and intersection improvements to LA352/LA347. Sigma also provided construction support which included partnering, value engineering proposal reviews, and plan changes.
03/13 – 09/20	**I-10: East Jct. I-49 to LA 328, Lafayette & St. Martin Parishes (H.003003)** Mr. Williams was the principal in charge for the roadway design for the six laning of 6.7 miles of I-10 in Lafayette, LA. He supervised the preparation of the urban freeway design components of the project including typical sections, plan profiles, geometric details, sequencing and cross sections. The project included median barrier divided urban interstate with superelevation, bridge replacement and widening, and local road pier protection. Sigma also provided construction support which included partnering, value engineering proposal reviews, and plan changes.
12/03 – 01/12	**Sullivan Road Improvements, East Baton Rouge Parish, LA.** Mr. Williams was the principal in charge for the design of a 4-lane / 5-lane suburban roadway in Central, LA. Miles also serves as a project engineer for the design study and roadway design, with an emphasis on Construction Sequencing and Traffic Control.

Firm employed by: **SIGMA CONSULTING GROUP, INC.**					
Name	**GREGORY P. SEPEDA, PE**			Years of relevant experience with this employer	**25**
Title	**Vice President / Chief Engineer**			Years of relevant experience with other employer(s)	**5**
Degree(s) / Years / Specialization			**BS / 1990 / Civil Engineering** **MS / 2002 / Civil Engineering - Structural**		
Active registration number / state / expiration date			**26669 / LA / 9-30-2022**		
Year registered	**1996**	Discipline	**Civil**		
Contract role(s) / brief description of responsibilities			**QA/QC & Bridge Design: Coordination w/CMAR contractor, partnering, bridge design and plans, value engineering, cost estimating**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
2012 2016 2018	**NEPA and Transportation Decision Making Seminar** **Maintenance and Rehabilitation of Historic Bridges Course** **Traffic Control Supervisor (TCS) course** **10+ years experience as a professional engineer designing bridges in urban settings** **5+ years experience as a professional engineer performing bridge ratings**
10/16 – 06/20	**I-10: Highland to LA 73 Design-Build Project, E. Baton Rouge and Ascension Parish, LA (H.009250)** **D-B DELIVERY** Mr. Sepeda served as the project Design Quality Manager (DQM) for all design efforts on the project. Mr. Sepeda developed a project specific Design Quality Plan as well as QA processes to ensure that the design activities comply with the Contract requirements. As a component of the QA process, he also performed design assessment reviews of every submittal to review for general compliance with the requirements of the Contract, taking into consideration the proposed method of construction, and covered areas such as: design criteria; codes and standards; constructability; and fatigue and durability performance. For critical structural members, Mr. Sepeda also performed an independent analytical design check using separate calculations to verify the structural adequacy and integrity of the members. This analytical check included the following: structural geometry & modeling; material and member properties; loads; and structural boundary conditions.
2014 – 08/21	**Ambassador Caffery & US 90 I/C (Future I-49), Lafayette, LA (H.002868)** Mr. Sepeda assumed the role of lead bridge engineer for the final design and plan development of a new bridge structure over Ambassador Caffery Boulevard. The proposed structure was designed according to the AASHTO L.R.F.D. design guide and utilized the newly developed "LG" prestressed concrete girders. Mr. Sepeda served in the checking and QC role on the project, while supervising the development of the construction plans and cost estimate. Mr. Sepeda also supervised and reviewed the structural as-designed load rating calculations and report.

Gregory Sepeda (continued)

Firm employed by: **SIGMA CONSULTING GROUP, INC.**			
Name	**GREGORY P. SEPEDA, PE**	Years of relevant experience with this employer	**25**
Title	**Vice President / Chief Engineer**	Years of relevant experience with other employer(s)	**5**

08/12 – Present	**Hooper Road (LA 408) Improvements, East Baton Rouge Parish, LA (H.002316/CP No. 12-CS-HC-0017)** Mr. Sepeda is the project manager for the widening of an existing 2-lane roadway to a 4-lane boulevard to increase capacity. The project began with an Environmental Assessment (E.A.) and NEPA environmental documentation. Mr. Sepeda worked with all technical team members and successfully obtained a FONSI. As the project continues into plan development, Mr. Sepeda coordinated the topographic and property surveys to identify major topography and existing utilities, as well as developing geometry consistent with MOVEBR and DOTD guidelines. With the route being a state highway, coordinating with LA DOTD is a necessity. Sigma facilitated the development of a traffic study with a subconsultant, following criteria established by LA DOTD. Multiple roadway sections and intersection arrangements were evaluated through a tiered approached to reach the final proposal. Mr. Sepeda is now managing the plan development efforts, including the multi-laned roundabout for the Lovett Road intersection.
01/16 – 11/19	**Pecue Lane / I-10 Interchange, East Baton Rouge Parish, LA (H.003047)** Mr. Sepeda was the lead bridge designer to widen two (2) prestressed concrete girder structures over Ward's Creek along the mainline I-10 roadway. Both structures must be widened under traffic. The design matches the existing structure type but utilize current AASHTO LRFD Bridge Design manual and design criteria. Sigma's project scope also includes the replacement of a slab span structure over Ward's Creek along the local roadway south of the proposed interchange structure. Mr. Sepeda also supervised and reviewed the structural as-designed load rating calculations and report.
07/12 – 10/18	**I-10 Widening, LA30 - LA22, Ascension Parish, LA (H.009276)** Mr. Sepeda served as project manager and lead bridge engineer for the widening of a 5 mile segment of I-10. He was responsible for the overall project management and coordination with the subconsultant team, road bridge design, and plan production. Sigma is also responsible for the design of a concrete slab span bridge, and the deck design of four girder-supported bridge structures. Under a contract supplement, Mr. Sepeda lead the design for a replacement of the LA 941 structure over the mainline interstate. LA 941 is a rural 2-lane roadway.
2009-2012	**I-12: O'Neal Lane - Pete's Highway, Livingston Parish, LA (454-02-0025)** Mr. Sepeda was the lead design engineer for plans to widen the eastbound 4-H Club Road overpass along Interstate 12 in Baton Rouge as part of a Design-Build contract. Being a widening project, special attention had to be paid to the connection to the existing bridge to remain; this included a field review of the existing structure, joint, and bearings. Design of this prestressed concrete girder bridge (with column bents and pile foundations) utilized the AASHTO LRFD Bridge Design manual and design criteria.
1998-2002	**Bridge Load Factor Rating – Statewide (700-99-0199)** Mr. Sepeda was project manager for the load rating of 125 bridges of varying types located in LA Districts 05, 08, & 58. Tasks included structural rating, critical member selection, report preparation and data management. Phase I involved identifying critical members while Phase II involved actually rating the critical members using the AASHTO VIRTIS.

Firm employed by: **SIGMA CONSULTING GROUP, INC.**					
Name	**BRYAN K. HARMON, PE**			Years of relevant experience with this employer	**6**
Title	**Vice-President / Special Projects Engineer**			Years of relevant experience with other employer(s)	**33**
Degree(s) / Years / Specialization			**BS / 1981 / Agricultural Engineering** **BS / 1982 / Civil Engineering**		
Active registration number / state / expiration date			**22595 / LA / 3-31-2023**		
Year registered	**1987/1994**	Discipline	**Civil / Environmental**		
Contract role(s) / brief description of responsibilities			**Hydraulics / Road Design**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
2008 2010	**NEPA and Transportation Decision Making Seminar** **Principles of Writing Hwy Construction Specifications**
10/20 - Present	**I-10: LA 415 to Essen Lane, West and East Baton Rouge Parish, LA (H.004100.5) CMAR DELIVERY** Mr. Harmon is the lead hydraulics design engineer for the replacement of I-10, interchange improvements, and surface street improvements through Metro Baton Rouge. He is responsible for developing the existing and design drainage maps, hydraulic calculations, and drainage outfall assessments. Drainage is being designed for both final conditions and interim construction phases consistent with limits defined for each GMP. In addition, he is coordinating with the CMAR contractor, DOTD, and East Baton Rouge DTD to orchestrate future improvements to Dawson's creek at the Acadian Thruway underpass at KCS RR
2016 – 2020	**I-10: Highland to LA 73 Design-Build Project, E. Baton Rouge and Ascension Parish, LA (H.009250) D-B DELIVERY** Mr. Harmon served as the project Design & Construction Liaison and lead drainage engineer for the project. He was responsible for coordinating design and construction efforts for the D-B team to ensure a cost effective and efficient delivery process. His drainage design responsibilities included open ditch and subsurface drainage systems, box culvert and cross drain extension design, and flood elevation assessments to ensure that project features did not negatively affect base flood elevations along the 6.7 mile project corridor.
10/18 – 03/20	**I-220/I-20 Interchange & BAFB Access Design-Build, Bossier Parish, LA D-B DELIVERY** Mr. Harmon served as a drainage design engineer and was responsible for the evaluation and design of both the existing and proposed drainage systems for this new 4-lane rural arterial and roadway and urban freeway interchange. In addition to the standard DOTD drainage evaluations for storm drain systems (inlets, pipes, box culverts, and bridges) consideration of impacts to the surrounding floodplain storage basins and wetlands had to be considered. The floodplain area along the southern limits of the project is also bisected by the KCSRR and is subject to significant backwater and overbank flooding from Red Chute Bayou. Due to the floodplain complexities associated with this lateral overflow storage area, coordination with the Bossier Levee District was required which included utilizing elements of thier 2-D Unsteadey Flow Hec Ras Model for this region. Due to the lateral overflows and interchange of flows, consideration of bridge scour was evaluated for the KCSRR Overpass utilizing the HEC -RAS computer model.

Bryan Harmon (continued)

Firm employed by: **SIGMA CONSULTING GROUP, INC.**			
Name	**BRYAN K. HARMON, PE**	Years of relevant experience with this employer	**6**
Title	**Vice-President / Special Projects Engineer**	Years of relevant experience with other employer(s)	**33**

04/18 – Present	**Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project, Plaquemines and Jefferson Parish, LA (H.004791) PPP DELIVERY** Sigma is providing the drainage design for this major highway improvement that is being designed and constructed under this alternative delivery method. Mr. Harmon is serving as the lead drainage engineer and is responsible for the coordination and proper consideration of the impacts that the large multi-jurisdictional pumped drainage outfall systems have on the project drainage system performance. Project drainage considerations include bridge deck scupper design conforming to FHWA HEC-21 requirements, and standard storm drainage piping and inlet design for associated local roadway improvements. The drainage system design must account for the final full build conditions but must also function during the various construction sequences with the addition of temporary systems.
09/20 - Present	**Owner Verification Services - College Drive Flyover Ramp I-10/I-12 West, East Baton Rouge Parish (H.013897) D-B DELIVERY** Sigma is a technical subconsultant for owner verification services for this urban freeway alternative delivery project. Mr. Harmon is responsible for technical design and constructability reviews for definitive design and roadway hydraulic design units: Reviews include technical comments, design review meetings with the design consultant, builder, and DOTD, and concurrence reviews of D-B team responses.
01/22 – Present	**Hooper Road (LA 408) Improvements, East Baton Rouge Parish, LA (H.002316/CP No. 12-CS-HC-0017)** Mr. Harmon is the lead hydraulics engineer for the widening of an existing 2-lane roadway to a 4-lane boulevard to increase capacity. His responsibilities include development of the existing and design drainage maps, cross drain design, storm drain system design, open ditch design, and evaluation of impacts for open ditch vs storm drain system alternatives along the project corridor.
	Prior to joining Sigma, Mr. Harmon spent the previous year serving as the Interim Director of the Department of Public Works for the City of Baton Rouge and Parish of East Baton. Prior to his tenure as the Director, he served 9.5 years as the DPW Deputy Director/Chief Engineer and 15 years as the Assistant Chief and Drainage Engineer. As Deputy Director/Chief Engineer, one of his primary responsibilities included the over sight of all engineering functions and project construction for the Department. Specific duties included the administration of flood plain and storm water regulations, right of way acquisitions, standard plans and specifications, engineering studies and plan development, cost estimates, funding pursuits, bid phase services, and construction administration for several types of municipal infrastructure projects throughout East Baton Rouge Parish. As an owner's representative for EBR parish, he coordinated with contractors for construction projects, participated in project partnering, performed design and constructability reviews, evaluated value engineering proposals, and prepared independent cost estimates for project.

Firm employed by: **SIGMA CONSULTING GROUP, INC.**					
Name	**ALEX D. FARR, PE**		Years of relevant experience with this employer	**8**	
Title	**Project Engineer**		Years of relevant experience with other employer(s)	**2**	
Degree(s) / Years / Specialization			**BS / 2011 / Civil Engineering**		
Active registration number / state / expiration date			**40426 / LA / 9-30-2022**		
Year registered	**2016**	Discipline	**Civil**		
Contract role(s) / brief description of responsibilities			**Road Design**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
2015 2018	**Traffic Control Supervisor (TCS) course** **Traffic Engineering Analysis Process and Report Course (Modules 1, 2 & 3)**
10/2020 – Present	**I-10: LA 415 to Essen Lane, West and East Baton Rouge Parish, LA (H.004100.5) CMAR DELIVERY** Mr. Farr was responsible for developing the proposed vertical profiles along the I-10 mainline corridor, service roads, surface streets, entrance, and exit ramps. This included determining existing vertical clearance along the corridor and adjusting the profile to meet the minimum vertical clearance per LA DOTD minimum design guidelines. This was performed along this corridor by using as-builts pertaining to their respective locations. Mr. Farr was also responsible for calculating the roadway and bridge construction costs for the Project Opinion of Probable Costs for the I-10 Corridor Environmental Assessment.
02/17 - 06/20	**I-10: Highland Rd to LA73 Design-Build Project, East Baton Rouge/Ascension Parishes. H.009250 D-B DELIVERY** Mr. Farr was responsible for preparing the Transportation Management Plan (TMP) and Safety Analysis for this project. The safety analysis was prepared to determine what safety concerns related to the construction and maintenance of traffic phasing. Mr. Farr was also responsible for designing and preparing the suggested sequence of construction, guardrail design, and the quantity estimate for the above-mentioned project.
04/19 - Present	**I-220/I-20 Interchange & BAFB Access Design-Build, Bossier Parish, LA D-B DELIVERY** Mr. Farr was responsible for performing the design of the interchange ramp profiles, super elevation calculations, and graphical grades. Mr. Farr was also responsible for the permanent striping plans, clearing and grubbing plans, and the quantity estimates.
01/14 – 08/16	**I-10: LA 347 to Atchafalaya Floodway Bridge, St. Martin Parish, LA (H.003014)** Mr. Farr was responsible for producing the Level 4 Transportation Management Plan (TMP) for the I-10 widening project from LA 347 to the Atchafalaya Floodway Bridge. The TMP pertained to alternate route analysis, public information, stakeholder involvement, traffic and safety data, temporary traffic control, and work zone impact management strategies. Mr. Farr was also responsible for the suggested sequence of construction, temporary signing, quantity computations and pay items using DOTD 2016 specifications.

Alex Farr (continued)

Firm employed by: **SIGMA CONSULTING GROUP, INC.**			
Name	**ALEX D. FARR, PE**	Years of relevant experience with this employer	**8**
Title	**Project Engineer**	Years of relevant experience with other employer(s)	**2**

2016 – Present	**I-10: LA 328 to LA 347, St. Martin Parish (H.010601)** Mr. Farr was responsible for producing the Transportation Management Plan (TMP) for the I-10 widening project from LA 328 to LA 347. The TMPs pertained to alternate route analysis, public information, stakeholder involvement, traffic and safety data, temporary traffic control, and work zone impact management strategies. Mr. Farr was also responsible for the suggested sequence of construction, temporary signing, quantity computations and pay items using DOTD 2017 specifications, permanent signing and roadway plan preparation. **He is currently providing construction support for the project which includes partnering, contractor coordination and plan changes.**
2014 – Present	**I-10: East Jct. I-49 to LA 328, Lafayette & St. Martin Parishes (H.003003)** Mr. Farr was responsible for producing the Level 4 Transportation Management Plan (TMP) for the I-10 widening project from I-49 to the LA 328. The TMPs pertained to alternate route analysis, public information, stakeholder involvement, traffic and safety data, temporary traffic control, and work zone impact management strategies. Mr. Farr was also responsible for the suggested sequence of construction design, temporary signing design, quantity/pay item computations, and roadway plan preparation.
2016 – 2018	**I-10: LA 30 to LA 22, Ascension Parish, LA (H.009276)** Mr. Farr was responsible for performing the Transportation Management Plan (TMP) as well as the Safety Analysis for this project to determine what safety concerns correlated to the construction of this segment. Mr. Farr was also responsible for the suggested sequence of construction design, diversion road design, guardrail design, and the quantity estimate.

Firm employed by: **SIGMA CONSULTING GROUP, INC.**					
Name	**JOSH K. RENARD, PE**		Years of relevant experience with this employer	**15**	
Title	**Project Manager**		Years of relevant experience with other employer(s)	**0**	
Degree(s) / Years / Specialization		**BS / 2006 / Civil Engineering**			
Active registration number / state / expiration date		**PE.0036015/ LA/ 3/31/2023**			
Year registered	**2010**	Discipline	**Civil**		
Contract role(s) / brief description of responsibilities		**Road Design / Utility Coordination**			

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
10/16 – 06/20	**I-10: Highland Rd to LA73 Design-Build Project, East Baton Rouge/Ascension Parishes. H.009250 D-B DELIVERY** Mr. Renard served as the utility coordinator for this interstate design build project. He communicated with and gathered information from utility owners to ensure that the road was designed with minimal utility conflicts. Mr. Renard coordinated efforts to have telecommunications, water, and gas lines marked in the field and then led efforts to have Level A test holes performed to ensure a successful no-conflict design.
08/19 – 10/19	**I-220/I-20 Interchange & BAFB Access Design-Build, Bossier Parish, LA D-B DELIVERY** This project will extend I-220 south at the I-220/I20 interchange with new roadway and bridges connecting and creating access to the Barksdale Air Force Base. Mr. Renard was responsible for all Subsurface Utility Engineering for this project, including utility conflict matrix development, utility coordination, utility relocation, Level D through A locates and test holes.
04/18 – Present	**Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project, Plaquemines and Jefferson Parish, LA (H.004791) PPP DELIVERY** Mr. Renard served as the drainage design Quality Control checker for this road design project. His efforts ensure that the project's drainage meets the requirements of the owner, parish and project specifications. This included technical checking for the existing and design drainage maps, HydroWIN calculation checks, drainage plan profile checking, and hydraulic computation book checking.
10/2020 – Present	**I-10: LA 415 to Essen Lane, West and East Baton Rouge Parish, LA (H.004100.5) CMAR DELIVERY** Mr. Renard is a roadway and utility engineer for the replacement of I-10, interchange improvements, and surface street improvements through Metro Baton Rouge. He prepared a utility conflict matrix for the project and designed a utility duct bank to expedite utility relocations with minimal construction conflicts. The duct bank design was an independent GMP for CMAR delivery. He is also designing drainage and roadway plans for surface streets between Washington Street and Acadian Blvd.
01/22 – Present	**Hooper Road (LA 408) Improvements, East Baton Rouge Parish, LA (H.002316/CP No. 12-CS-HC-0017)** Mr. Renard served as a lead road design engineer for the widening of an existing 2-lane roadway to a 4-lane boulevard to increase capacity. He is responsible for horizontal and vertical geometric design, drainage design, typical sections and plan preparation. He is also coordinating utilities for QL-D and QL-C locates and designing utility relocation space allocation plans.

Firm employed by: **SIGMA CONSULTING GROUP, INC.**					
Name	**JOSHUA P. OLIVIER, PE**		Years of relevant experience with this employer	**4**	
Title	**Project Engineer**		Years of relevant experience with other employer(s)	**0**	
Degree(s) / Years / Specialization		**BS / 2017 / Civil Engineering**			
Active registration number / state / expiration date		**46498 / LA / 9-30-2022**			
Year registered	**2022**	Discipline	**Civil**		
Contract role(s) / brief description of responsibilities		**Bridge Design**			

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/18 – 05/20	**I-10 Corridor Improvements (LA 415 to Essen Lane) Environmental Assessment, West and East Baton Rouge Parish, LA (H.004100)** Mr. Olivier assisted in the development of the proposed vertical profiles for the Perkins Dr. through Acadian Thwy. section of the corridor. He was responsible for the identification of critical points of clearance along this region and the corresponding impacts to the design Profile Grade Line. He was also responsible for developing construction sequencing for the removal of the straddle bent over the Kansas City Rail Road overpass.
01/18 – 06/20	**I-10: Highland to LA 73 Design-Build Project, E. Baton Rouge and Ascension Parish, LA (H.009250)** **D-B DELIVERY** The project includes widening I-10 for 6.6 miles to 3-lanes in each direction from the Highland Road Interchange to the LA73 Interchange. The I-10 bridges over Highland Road and approaching roadway are being replaced with a new structure and profile grade. Mr. Olivier assisted in the drainage design and was responsible for checking the graphical grade design for the mainline and ramps. Additionally, he prepared details for the size and placement of several overhead exit signs along the route. During construction, he revised the lane shift stations to accommodate unanticipated site-specific limitations.
01/18 - Present	**I-220/I-20 Interchange & BAFB Access Design-Build, Bossier Parish, LA** **D-B DELIVERY** The project consists of constructing a new 4-lane rural arterial extending from the existing I-220 terminus north of I-20 southward to a terminus within Barksdale Air Force Base. This includes bridges over the Kansas City Southern Railway (KCS RR). Mr. Olivier was responsible for checking the roadway cross sections and the drainage design of the project area. He also coordinated the roadway and bridge interface points for slope protection and drainage requirements.
01/18 - 10/18	**I-10 Widening, LA30 - LA22, Ascension Parish, LA (H.009276)** This project involves the widening of a 5 mile segment of I-10, including two girder bridge structures and one slab span structure as well as the replacement of the LA 941 bridge structure. Mr. Olivier was responsible for checking the longitudinal reinforcing design of the slab span bridge as well as the reinforcement of the new LA 941 bridge. He was also responsible for a preliminary bridge quantity estimate for the LA 941 overpass. All design was performed with the AASHTO L.R.F.D. guidelines and LADOTD's Bridge Design and Evaluation Manual.

Firm employed by: **SIGMA CONSULTING GROUP, INC.**			
Name	**JOSHUA P. OLIVIER, PE**	Years of relevant experience with this employer	**4**
Title	**Project Engineer**	Years of relevant experience with other employer(s)	**0**
2021 - Present	**Rural Bridge Replacement Initiative Phase II (South), LA (440001338)** Mr. Olivier is in charge of managing 4 of 16 state projects for this contract including 6 bridge replacements throughout south Louisiana. This work involves assessing site conditions, evaluating structure types, and designing the roadway approaches. He will be responsible for preparing the submittals for these projects and will submit monthly reports as work progresses.		

Firm employed by. Arcadis					
Name	Lloyd "Buddy" Porta, Jr., PE		Years of relevant experience with this employer	10	
Title	Principal Engineer		Years of relevant experience with other employer(s)	37	
Degree(s) / Years / Specialization			BS / 1973 / Civil Engineering, Louisiana State University		
Active registration number / state / expiration date			PE.016425 / LA / Exp. 09/2023		
Year registered	1977	Discipline	Civil Engineer, Environmental Engineer		
Contract role(s) / brief description of responsibilities	QA / QC (Roadway Design) / Mr. Porta brings more than 47 years of experience in the transportation field. During his 37-year career at LADOTD, he practiced highway design for 11 years with eight of those years in responsible charge of a design squad. He spent the next 21 years of his career in project/program management. He managed the Off-System Bridge Replacement Program and the Urban System Program. Both programs replaced or constructed new bridges on parish and state routes. In 2001 he was tasked with being the LADOTD TIMED Program Manager. This $5 billion program was developed to multi-lane over 500 miles of state highways as well as construct three new bridges, two of these bridges across the Mississippi River. He spent the last five years of his career at LADOTD as the State Road Design Engineer Administrator.				

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/15 – 05/19	**Safety Design Retainer - US 190B at Jefferson Ave. Roundabouts, LADOTD, Covington,** LA. *QA / QC Reviewer*. Supported the construction of a new roundabout in Covington as a quality assurance/quality control reviewer for roadway plans. Plans reviewed included the construction of sidewalk for use by pedestrians.
04/12 – 01/14	**US 11 Norfolk Southern Railroad Overpass Replacement Environmental Assessment and Line and Grade Study, LADOTD, Slidell, LA.** *QA / QC Reviewer*. Responsible for LADOTD design guideline compliance. Replacement and widening of the US 11 roadway overpass of the Norfolk Southern Railroad. The project included evaluating partial and full-access intersection options and bridge alignment and type alternatives for the heavily skewed and long steel span bridge in this urban area of Slidell, Louisiana. Key issues included the bridge's imminent historic status, commercial parking impacts and adapting to the Norfolk Southern right-of-way and travel pattern changes following the construction.
01/14 – Ongoing	**Pete's Highway EA and Alternatives, LADOTD, Livingston Parish, LA**. *QA / QC Reviewer*. Responsible for QAQC of roadway plans, line and grade, and LADOTD design guideline compliance. High-priority project completing an EA and traffic engineering services related to improving congestion and operations along Range Avenue in the vicinity of the I-12. Alternatives included two split diamond interchange options with roundabout, partial clover leafs, and c-d road components at both Range Avenue and the next existing, eastern overpass at Pete's Highway (LA 16); and a diverging diamond interchange alternative at Range Avenue.
10/16 – 02/18	**North Bayou Black Drive Bridge Off-System Highway Bridge Replacement Program, LADOTD, Terrebonne Parish, Louisiana.** *QA / QC Reviewer*. Reviewed plans for the replacement of an off-system highway bridge. Detailed designed effort included field surveying, right of way adjustments, crash barrier selection, hydraulic analysis, preliminary and final plan preparation and quantity estimation.
09/12 – Ongoing	**US 165 Connector and Ouachita River Bridge - Environmental Impact Statement, Line and Grade and Toll Study, LADOTD, Monroe, LA.** *QA / QC Reviewer*. Responsible for QAQC of roadway plans, line and grade, and LADOTD design guideline compliance. Three alternatives were developed and evaluated along with various tolling scenarios. All alternatives traverse substantial tracts of wooded wetlands associated with Chauvin Swamp near the Russell Sage Wildlife Management Area.

04/12 – 01/14	**LA 434 Corridor Stage 1 Environmental Assessment, New Orleans Regional Planning Commission, Lacombe, LA.** *QA / QC Reviewer*. Responsible for LADOTD design guideline compliance. EA for the widening and improvements of LA 434 between LA 36 and the anticipated new junction with LA 3241 near LaCombe, Louisiana in St. Tammany Parish. The project involved stream permit application coordination.
10/90 – 10/01 10/05 – 10/10	**Urban System Program MPOs & Urbanized Areas, Statewide, LA.** *QA / QC Reviewer*. Responsible for the selection of the consultants, coordinating with the Metropolitan Planning Officials (MPOs) and the cities/parishes officials, coordinating with the LADOTD Planning Section, developing the scope of services and fee for the projects, reviewing the construction plans and providing comments to the consultants and cities / parishes, and approving all invoices. Mr. Porta was responsible for developing the Urban Systems Program Seminar, which provided information on the processes and procedures used in the program. He served as project manager for signal projects in St. Bernard and Orleans Parishes.
09/01 – 05/06	**Transportation Infrastructure Model for Economic Development (TIMED) Program, LADOTD, Statewide, LA** *LADOTD TIMED Program Manager.* Worked and coordinated on a daily basis with the TIMED Program Manager (LTM) to develop training, procedures, policies, and guidelines for the program. This $5 billion program was developed to multilane over 500 miles of state highways as well as construct three new bridges; two of these bridges across the Mississippi River. The program manager was required to monitor the progress of the program and had full invoice approval of the consultant's monthly invoice. This position was a member of the TIMED Program Executive Committee and reported to the Secretary of the LADOTD. This program was mandated in the Louisiana Constitution. There were 16 projects that were recognized throughout the state. Bonds were sold to finance and, therefore, accelerate the program. Over 500 miles of state roadways were multilaned and three new bridge projects were designed.
05/06 – 07/10	**Road Design Engineer Administrator, LADOTD, Statewide, LA.** Responsible for transitioning the focus of his section from project management back to roadway design as desired by the Chief Engineer. To support this mandate, brought in training from the FHWA Resource Center in Atlanta, GA to assist the development of a young group. Coordinated the training and provided through the Louisiana Transportation Training Education Center. Developed a Legal Seminar to address the lack of experience in Road Design and other LADOTD sections in depositions and representing the Department in court with the assistance of the Attorney General's Office. This seminar was presented in several cities in Louisiana to LADOTD employees. Responsible for the development of design criteria for Offset Left Turn Lanes and design guidelines for the replacement of bridges on state routes.
06/84 – 10/90 10/05 – 10/10	**Off-System Bridge Program, LADOTD, Stateside, LA.** Replaced / rehabilitated existing bridges located on nonfederal routes in the cities and/or parishes in Louisiana. Provided the project and program management. Responsible for the selection of the qualifying sites, the distribution of the federal funds to the participating parishes, the selection of the design consultant, the coordination with the parishes and the consultants, the development of the scope of services and fee for each project, the technical review of the topographic surveys and construction plans and providing comments to the consultants and parishes, and the approval of all invoices.

Firm employed by. Arcadis					
Name	Jose L. Rodriguez, PE		Years of relevant experience with this employer	1	
Title	Senior Civil Engineer		Years of relevant experience with other employer(s)	24	
Degree(s) / Years / Specialization			BS / 1992 / Civil Engineering, University of New Orleans		
Active registration number / state / expiration date			PE.0030492 / LA / Exp. 03/2023		
Year registered	2003	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities	Roadway Design / Mr. Rodriguez has more than 24 years of experience with roles of progressive responsibility as a civil engineer performing roadway design, bridge design, project management, hydraulic analysis, utility coordination, construction supervision, estimating, and project implementation for various clients in the states of Louisiana, Texas, Georgia, and North Carolina. Worked in close relationship with the Louisiana Department of Transportation, City of New Orleans Department of Public Works, New Orleans Sewer and Water Board, Plaquemines Parish, Jefferson Parish, St. Bernard Parish, U.S. Army Corps of Engineers, New Orleans Regional Planning Commission, Marathon Petroleum Co., Yuhuang Chemicals, and others. Extensive experience in Inroads, Autodesk Civil 3d, Leap Bridge for Concrete Bridge Design, and Excel Spread Sheets. Served on the American Concrete Institute (ACI) Louisiana Board, becoming president of the Louisiana Chapter in 2010.				

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/12 – 12/15	**Earhart Boulevard Causeway Interchange, LADOTD, New Orleans, LA.** *Project Designer*. Responsible for the geometric design and roadway plan preparation for the Earhart Boulevard-Causeway Interchange. The Earhart Boulevard Causeway Interchange purpose was to assist in traffic congestion relief for the east-west flow in traffic for the New Orleans Metro Area. It consisted of the development roadway and bridge ramps for the creation of an elevated signal-controlled interchange. The estimated construction cost for this project was approximately fifty-nine million dollars. Responsible for the development of all horizontal and vertical alignments for this project as well as roadway plan preparation, developing all roadway cross sections, drainage design, utility conflict resolution and cost estimating for the project. Bentley InRoads was used for the development of the roadway plans for this project.
02/10 – 06/11	**I-10 from Veterans to Clearview, LADOTD, Metairie, LA.** *Project Designer.* Responsible for roadway plan preparation for widening 1.2 miles of I-10 from three lanes to five lanes in each direction. The project also included bridge work to accommodate the new roadway widening. Jose was also responsible for the alignment and design of concrete sound walls along the corridor. He helped implement an innovative two-sided concrete stamp process for the noise wall precast concrete panels.
07/09 – 07/15	**Peters Road Expansion, Phases I, II and III, LADOTD, Plaquemines, LA.** *Project Designer.* Responsible for the geometric design, plan preparation and wetland delineation of Peters Road Phases I, II and III. The projects consisted of a new roadway, elevated crossing over the Intracoastal Waterway, approach roadways in Jefferson and Plaquemines Parishes to tie Peters Road to Louisiana 23 near Barrier Road. The projects were prepared in coordination with Plaquemines, DOTD and the U.S. Army Corps of Engineers.
01/08 – 05/08	**Stage 0 Feasibility Study - I-12 to Bush Corridor Study Phase III, LADOTD, St. Tammany Parish (STP), LA.** *Project Designer*. Responsible for evaluating environmental issues and developing design alternatives in accordance with the National Environmental Policy Act (NEPA) for transportation improvements.

02/07 – 10/09	**John James Audubon Bridge Approach (Design-Build [DB]), LADOTD, New Roads, LA.** *Project Designer.* Responsible for the geometric horizontal and vertical alignment for five approach bridges to the John James Audubon Cable Stay Bridge. The longest cable-stayed bridge in the Western Hemisphere consisting of 1,583' main span. Jose was also in charge of the quality control for all bridge approaches and the design of all precast concrete girders for the project.
10/17 – 03/18	**Traffic Turn Lanes on Highway LA 3127, Yuhuang Chemical Inc., St. James, LA.** *Quality Control (QC).* Review for the design of two turn lanes into the Yuhuang Chemical Methanol plant in St. James Louisiana. During construction, Jose provided the owner, with construction design services for the duration of the construction phase.
1/06 – 09/09	**New Orleans Submerged Roadway Program Management, LADOTD / New Orleans Regional Planning Commission, New Orleans, LA.** *Project Designer and Quality Control Reviewer.* For this multi-million-dollar program management team for the DOTD and the Federal Highway Administration (FHWA). Jose helped develop design guidelines and processes for the standardization of engineering work for the repair of damaged roadways by Hurricane Katrina in the City of New Orleans and other Parishes. He was responsible for conducting quality control reviews on roadway plans prepared by other engineering firms for compliance with DOTD and FHWA design standards.
12/15 – 01/16	**Magnolia Ridge Levee Project, City of New Orleans, St. Charles Parish, LA.** *Quality Control (QC).* QC review and plan preparation for the Magnolia Ridge Levee project for St. Charles Parish.
06/04 – 01/11	**Causeway Boulevard Interchange Improvements Phase I and II, LADOTD, Metairie, LA.** *Project Designer*. For the project, which consisted of widening Causeway Boulevard elevated structure at Veterans Boulevard and the construction of new at grade and elevated ramps to provide better accesses, improve safety and ease congestion at this heavily travel interchange. Responsible for evaluating existing girders, the design of new precast concrete girders and the roadway plan preparation for this project. Also, responsible for evaluating and design of new sewer and water lines for the project as well as coordinating the removal and replacement of all utilities affected by the new roadways or/and structure foundations.
01/20 – 5/20	**NC73 Highway Widening, North Carolina DOT, Mecklenburg County, NC.** *Project Engineer*. Responsible for the Temporary Traffic Control Plan preparation for the widening of NC 73. A principal arterial roadway, NC 73 Highway, was widened from a two-lane undivided roadway into a four-lane divided highway with a 30 foot wide median. The project presented many challenges for the Temporary Traffic Management Plan's preparation due to the high traffic volumes on NC 73, time restrictions for lane closures, and all NASCAR events at Charlotte Motor Speedway for the duration of the project. To mitigate traffic disruption and enhance roadway safety, assisted in preparing the Transportation Operation Plans and sequence of construction for the project. All design work was performed following NCDOT and the latest MUTCD standards.
3/2019 – 5/20	**Eastern Federal Lands Highway Division (EFLHD), Puerto Rico.** *Assessment Roadway Lead.* Responsible for the review, report preparation, and coordination for the repairs of over 70 roadway sites damaged by Hurricane Maria. Provided technical assistance to local engineering firms to ensure the project stayed within the client's guidance and strict schedules.

Firm employed by. Arcadis					
Name	Gabriel Arias, PE			Years of relevant experience with this employer	<1
Title	Roadway Design Engineer			Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			BS / 2013 / Civil Engineering, Auburn University		
Active registration number / state / expiration date			PE. 0042599 / LA / Exp. 09/2022		
Year registered	2018	Discipline	Civil Engineer		

Contract role(s) / brief description of responsibilities	Roadway / Mr. Arias has more than eight years' experience performing complex geometric design on roadway including H&V alignment, hydraulic design CDP's and open ditches, turn lane design, striping/signage, structural design analysis and QC, traffic management plans, and roadway plan production.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/16 – 02/17	**LA 435 to LA 40/LA 41, LADOTD, St. Tammany Parish, LA.** *Project Engineer*. The project calls for the construction of a new four-lane highway connecting I-12 to Bush, Louisiana, in St. Tammany Parish. The new roadway is approximately 19.8 miles in length and begins at LA 434, north of the existing LA 434 interchange with I-12, and traverses in a northeasterly direction until encountering an abandoned rail corridor. It then follows the rail corridor terminating at the LA 21/LA 41 intersection near Bush, Louisiana. Assisted with roadway geometric design including H&V alignment, hydraulic design for storm drains, CDP's and open ditches, structural design analysis and QC, Traffic management plans and roadway plan production for the new 5.5 mile 4-lane RA-3 roadway from LA 435 to Bush, LA.
07/13 – 06/16	**Bayou Mercier Road/Berard Canal Bayou, LADOTD, St. Martin Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a quad-beam concrete structure.
07/13 – 02/17	**Derrick Road Bridge, LADOTD, Iberville Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.
07/13 – 02/17	**Jude & Placide Road Bridges, LADOTD, Vermilion Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridges timber structures with slab span, concrete structures.
07/13 – 10/16	**City of Thibodaux Overlay Projects, LADOTD, Lafourche Parish, LA.** *Project Engineer*. Project required chip sealing, joint & crack sealing, resurfacing and complete pavement replacement for four separate locations in the city of Thibodaux, LA. The goal was to prolong the life of the existing pavements by preventing future deterioration and/or rehabilitating the existing pavements. Assisted with roadway geometric design including horizontal alignments, selection of treatment type for pavements, hydraulic design for storm drains, CDP's and open ditches and roadway plan production.

09/13 – 02/17	**Pecan Island Road Bridge Over The Chenal, LADOTD, Pointe Coupee Parish, LA**. *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a customized slab span, concrete structure.
07/13 – 02/17	**Gracie Lane Bridge, LADOTD, Iberville Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.
04/14 – 02/17	**Lajaunie Rd/Lateral 1 Bayou St. LADOTD, Clair, Lafayette Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.
11/15 – 02/17	**Babin Rd./Bayou Narcisse, LADOTD, Ascension Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.
10/18 – 11/19	**I-10 to Loyola Dr. Interchange, Jefferson Parish, LA.** *Project Engineer*. Proposal effort for adapting the interchange at Loyola Drive to handle traffic flowing to and from the new passenger terminal at Louis Armstrong International Airport. Assisted with roadway geometric design, QC, and Plan production for proposal.
06/18 – 10/19	**Mid-Barataria Diversion Design, Plaquemines Parish, LA.** *Project Engineer*. Planning, engineering and design services for the creation of the Mid-Barataria sediment diversion basin to strategically reintroduce sediment and freshwater inputs into the Barataria Basin. Assisted with detour roadway alignment creation/selection, TTC planning, and roadway plan preparation.
09/13 – 02/17	**West 15th Avenue/Mile Branch, City of Covington, St. Tammany Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing bridge timber structure with a customized slab span, concrete structure. Included an integral pedestrian/bicycle path and custom barrier to separate pedestrians and vehicles.
02/18 – 04/18	**US 377 Cresson Relief Route, TXDOT, TX.** *Project Engineer*. TXDOT will construct a three-mile relief route west of the city of Cresson. The relief route will be a new four-lane divided highway on US 377 beginning one mile south of the intersection of US 377 and SH 171 and ending one mile north of the same intersection. Assisted with plan creation including H&V alignment review, TTC plans, construction quantity estimation and roadway plan production for the realigned roadway.
06/17 –10/17	**Hwy 270 Widening Connecting Arkansas Program (CAP), CA0607, Garland County, AR.** *Project Engineer*. Was contracted by AHTD, as part of their Connecting Arkansas Program (CAP), to assist with the design of widening approximately three miles of Hwy 270 in Garland County. The proposed roadway is 4 lanes with a painted median from Hwy 270 to Black Snake Road, then 5 lanes curb & gutter from Black Snake Road to Hwy 227. Responsibilities include the drainage design and plan production, wetland delineation and maintenance of traffic plans. Tasks include preliminary site visits, developing hydraulic and hydrologic models for the pipes, submittal of Hydraulic Report, drainage ditch design, maintenance of traffic plan submittals and wetlands report.

Firm employed by. Arcadis					
Name	David Fulks, PE		Years of relevant experience with this employer	14	
Title	Roadway Design Engineer		Years of relevant experience with other employer(s)	12	
Degree(s) / Years / Specialization			MS / 2019 / Engineering Management, The George Washington University; BS / 1997 / Civil Engineering, Portland State University		
Active registration number / state / expiration date			PE.030151 / LA / Exp. 09/30/2022		
Year registered	2003	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities	Roadway Design / Mr. Fulks has more than 26 years of experience in the design of roadways and pedestrian facilities, land developments, flood protection systems, and airports. His experience encompasses analysis and design of geometric and pavement design of highways, streets, sidewalks, restrictive intersections, roundabouts, and interchanges; site hydrology and hydraulics; and traffic impact analysis. His responsibilities have included preparing engineering designs, reports, plans, and specifications preparing and managing project schedules and cost estimates and providing construction administration.				

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/14 – 05/15	**Joe Sevario / Roddy Road Roundabouts Stage 0 Safety Feasibility Study, LADOTD, Ascension Parish, LA.** *Task Manager and Lead Engineer.* Geometric and roadway design and cost estimates for the replacement of ten existing stop-controlled intersections with single-lane roundabouts.
07/15 – 06/17	**Safety Design Retainer - US 190B at Jefferson Ave Roundabout Design, LADOTD, St. Tammany Parish, LA.** *Roadway Engineer.* Geometric and roadway design, preliminary plans preparation, and cost estimate for replacing an existing four-way signalized intersection with a single-lane elliptical roundabout.
12/13 – 06/15	**LA 3235 Stage 0 Safety Feasibility Study, LADOTD, Lafourche Parish, LA.** *Lead Roadway Geometrics and Cost Engineer*. Designed geometric layout of safety improvements including access management, restrictive intersections, and added turn lanes. Developed construction cost estimates for proposed improvements to assess feasibility of proposed alternatives.
11/12 – 04/13	**LA 594 Millhaven Road Feasibility Study and Preliminary Design, I-20 Economic Development Corporation, Ouachita Parish, LA.** *Roadway Designer*. Roadway intersection and roundabout improvement alternatives for a LADOTD Stage 0 Study. Two roundabouts were evaluated in compliance with LADOTD EDSM V.1.1.5 (Analysis) and EDSM V.1.1.6 (Design). Performed geometric and roadway design of intersection and roadway alternatives and developed construction cost estimates.
11/14 – 10/15	**LA 44 and Loosemore Road Roundabout, LADOTD, Ascension Parish, LA.** *Deputy Project Manager and Lead Engineer.* Geometric and roadway design, preliminary subsurface utility investigation, and cost estimates for the replacement of an existing two-way stop-controlled intersection with either a single-lane roundabout or two single-lane roundabouts and right-in/right-out control at the existing intersection.
04/13 – 07/14	**US 11 Environmental Assessment, Bridge Replacement, and Roadway Improvements, LADOTD, St. Tammany Parish, LA.** *Lead Engineer.* Geometry and roadway design, line and grade study development, and cost estimates for the replacement of an historic railroad overpass bridge and upgrading an existing two-lane rural highway to a four-lane divided highway with access control. Early coordination with Norfolk Southern Railroad.

01/14 – 03/17	**Pete's Highway Interchange Alternative and Environmental Assessment, LADOTD, Livingston Parish, LA.** *Lead Roadway / Bridge Geometrics and Cost Engineer.* High-priority project completing an environmental assessment and traffic engineering services related to improving congestion and operations along Range Avenue in the vicinity of the I-12 interchange. Design alternatives included two split diamond interchange options with roundabout, partial clover leaves, and collector-distributor road components at both Range Avenue and the next existing, eastern overpass at Pete's Highway (LA 16) and a diverging diamond interchange alternative at Range Avenue. Developed roadway geometry, line and grade, construction sequencing strategies, and construction cost estimate.
09/09 – 03/12	**I-20 – Garrett Road Connector Interchange Improvements, LADOTD, Ouachita Parish, LA.** *Lead Engineer.* Geometry and roadway design of the new KCS Railroad overpass and connector between Kansas Lane and Garrett Road, including interstate interchange modifications to include two-lane roundabouts at ramp intersections, and three two-lane roundabouts along the corridor outside of the interchange. Improvements to the pedestrian and bicycle facilities were included in accordance with the LADOTD Complete Streets Policy. The compact project area required a detailed layout to confirm feasibility.
08/11 – 09/13	**Chef Menteur Bridge and Approaches Replacement EA and Line and Grade Study, LADOTD, Orleans Parish, LA.** *Lead Roadway/Bridge Geometrics and Cost Engineer.* Responsible for preparing the proposed geometric configurations of a bridge replacement at Chef Menteur Pass. Investigated four alignments as well as both low-level moveable and high-level fixed span bridge configurations. Performed detailed geometric layouts of both the mainline highway, bridge, and adjacent collector roadways to mitigate impacts to environmentally sensitive resources and local residential, commercial, and historical interests.
09/12 – 09/13	**US 165 Connector and Ouachita River Bridge EIS, LADOTD, Ouachita Parish, LA.** *Roadway Design Engineer.* Responsible for preparing roadway and bridge general plan designs, line and grade report development, and cost estimates for a new five-mile elevated highway through Chauvin Swamp north of Monroe, LA. An in-town corridor was also developed which entailed upgrading Louisville Avenue and Hudson Lane in Monroe, the Lea Joyner Bridge over the Ouachita River, and Stella Street in West Monroe to function as a one-way couplet. Early coordination with Delta Southern Railroad was included.
06/00 – 12/00	**Hesper and Helios Avenue Street Rehabilitation, Jefferson Parish Engineering Department, Harvey, LA.** *Roadway Engineer.* Completed inspections and rehabilitation recommendations for eight blocks of local streets. Rehabilitation required demolition and replacement of concrete road panels, milling and overlay of asphalt surfaces, and installation of drainage inlets and subsurface drainage, as well as replacement of damaged and under-performing subsurface drainage. Performed inspections, collaborated with Parish representatives and utility companies, identified appropriate rehabilitation measures, and produced plans illustrating the rehabilitation recommendations.
02/09 – 4/10	**US 90 – WBV 73 Western Tie-In Crossing Lake Cataouatche Area, United States Army Corps of Engineers (USACE) – New Orleans District, Jefferson Parish & St. Charles Parish, LA.** *Deputy Project Manager and Lead Roadway / Drainage Engineer.* Development of preliminary and final design P&S for a 2,540-foot PPC girder / column bent bridge, highway approaches, and frontage roadways.

Firm employed by. Arcadis					
Name	Akhil Chauhan, PE, PTOE, PTP, PMP		Years of relevant experience with this employer	14	
Title	Principal Engineer		Years of relevant experience with other employer(s)	6	
Degree(s) / Years / Specialization			MS / 2003 / Transportation Engineering, Massachusetts Institute of Technology BS / 2001 / Civil Engineering, Indian Institute of Technology		
Active registration number / state / expiration date			PE.033703 / LA / Exp. 09/2022; PTOE #2544 / USA / Exp. 11/2023; PTP #246 / USA / Exp. 12/2024; PMP #1444676 / PA / Exp. 08/2023		
Year registered	2008	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities	QA / QC (Traffic) / Mr. Chauhan is a principal traffic engineer with more than 20 years of applied research and industry experience in the fields of highway safety, traffic engineering, traffic modeling and simulation, transportation planning, demand modeling/forecasting, intersection/corridor analysis, safety studies, NEPA studies, and access management. Akhil has successfully led, managed, and mentored numerous projects related to transportation modeling, simulation, and planning for public agency clients located across the nation including several state Departments of Transportation. He is proficient in the use of many macro-, meso-, and microscopic traffic simulation software programs such as HCS, Vistro, Synchro, SIDRA, Vissim, MITSIM, Dynameq, DynaMIT, TransCAD, Visum, and OREMS. Mr. Chauhan meets Minimum Personnel Requirements #1 and has completed the LADOTD Traffic Engineering Process and Report Training.				

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/13 – 10/20	**US 11 Railroad Bridge Replacement and Corridor Improvements EA, LADOTD, St. Tammany Parish, LA**. *Principal Engineer*. Responsible for crash analysis, operating speed tabulations, intersection and corridor analysis, line and grade, and public outreach for the proposed widening of US 11 between US 190 (Gause Boulevard) and I-12 in Slidell. Proposed improvements include the replacement of a bridge crossing the Norfolk Southern Railroad. Critically, this project includes analysis of several innovative alternatives for the proposed corridor, including "superstreets" and J-turn concepts.
07/12 – 11/14	**Chef Menteur Bridge and Approaches EA, Orleans Parish, LA**. *Principal Traffic Engineer*. Responsible for the High-priority bridge replacement EA and Line and Grade Study, responsible for coordinating traffic impact study. Traffic impact study coordination include reviewing available data with DOTD traffic engineer to identify gaps and propose additional data needs, investigating planned transportation improvement projects and traffic generators with DOTD and New Orleans RPC, reviewing design hour volumes (DHVs), average daily traffic (ADTs), and peak hour and24-hour truck percentages, and reviewing intersection and road segment capacity analyses.
11/20 – Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA**. *Principal Engineer*. Responsible for technical advisory and QAQC of all traffic engineering tasks including development of permanent signing plans, Interchange Modification Reports, and Transportation Management Plans for the widening of Interstate-10 from LA 415 to Essen Lane and improvements to interchanges along this segment. One critical component of the project is maintaining traffic during the construction of new bridge structures. Multiple scenarios are being evaluated using a calibrated mesoscopic model to determine the impacts during construction and mitigations that will be necessary to minimize delay.

08/18 – 12/19	**I-10 Widening Mesoscopic Model and TMP, LADOTD, East Baton Rouge Parish, LA**. *Principal Engineer*. Responsible for supervising development of mesoscopic traffic model used for this project. The object of the study was to develop an existing conditions model. Responsibilities included defining study area, assessing data needs, developing data collection plan, preparing calibration documentation, and preparing model documentation.
01/18 – Ongoing	**I-20 Mesoscopic Model and TMP Using Dynameq, LADOTD, Bossier Parish, LA**. *Principal Engineer*. Responsible for supervising development of mesoscopic traffic model to predict queueing, delay and alternate travel patterns due to planned construction on I-20 to replace pavement. The project is anticipated to disrupt traffic in this critical portion of I-20. The project scope includes development and calibration of mesoscopic model, analysis of alternative routes, safety analysis, operational analysis, assistance with public outreach, development of a Level 4 TMP, and development of work zone mitigation strategies.
12/13 – 06/15	**LA 3235 Stage 0 Feasibility Study, LADOTD, Lafourche Parish, LA**. *Project Manager*. Responsible in the preparation of a formal traffic and access management Stage 0 study, in accordance with DOTD Stage 0 Manual of Standard Practice, that analyzed alternatives and enhanced mobility and safety on LA 3235. Main tasks included traffic data collection, warrant studies, traffic analysis, safety analysis, development of conceptual layouts, and public outreach. Intersections found to warrant signalization were also modeled in unconventional designs including U-turns, J-turns, and RCUTs. A preliminary cost estimate and conceptual layout drawings were also produced. During the study, it was found that crash modification factors (CMFs) for many access management principles are not found in the HSM's Part C predictive methods. Therefore, proposed a corridor-based approach in which Part D CMFs were applied at the corridor level after using Part C to predict future no-build crashes. This approach predicted changes to crash frequency, crash type, and severity type for the two build alternatives. The predicted crashes provided the opportunity to perform a cost/benefit analysis based on safety.
05/19 - Ongoing	**I-20 / I-220 Interchange Improvements and BAFB Access Design-Build, LADOTD, Bossier Parish, LA**. *Principal Engineer*. Responsible for overseeing the development of addendum to Interchange Modification Report, Transportation Management Plan, Temporary Traffic Control Plans, and Permanent Signing Plans to accommodate the design and construction of the project. The design build project includes the modification of the existing interchange at I-20 / I-220 with additional ramps and extension of I-220 to provide access to Barksdale Air Force Base.
01/14 – 02/17	**Traffic Engineering Retainer - US 71 Corridor Traffic and Safety Study – Phase 1, LADOTD, Rapides Parish, LA.** *Project Manager*. Responsible in the preparation of a corridor study for the purpose of enhancing mobility and safety on US 71 in Alexandria, LA. Main tasks included traffic data collection, warrant studies, traffic analysis, safety data analysis, and development of conceptual layouts. Data collection effort included automated one-week counts, manual turning movement counts and spot speed studies. A preliminary cost estimate and conceptual layout drawings were also produced during the study.
04/16 – Ongoing	**Florida Avenue EA, LADOTD, Orleans Parish, LA** *Principal Traffic Engineer*. Responsible for QA/QC and documentation for the project that includes traffic, environmental, line and grade, and public outreach and involvement services for one of the last projects funded by Louisiana's TIMED program. The project traverses post-Katrina re-development areas in both Orleans and St. Bernard Parishes. Key considerations include the type and height of the bridge and controlling truck traffic diversion through neighborhoods. Using the New Orleans Regional Planning Commission's SELATRAM travel demand model (TDM), Arcadis coded alternatives for a comparative analysis of partial and full build scenarios.

Firm employed by. Arcadis					
Name	Ari Deitch, PE, PTOE, PTP, RSP		Years of relevant experience with this employer	7	
Title	Traffic Engineer		Years of relevant experience with other employer(s)	2	
Degree(s) / Years / Specialization			BS / 2012 / Biological Engineering, Louisiana State University		
Active registration number / state / expiration date			PE.0041842 / LA / Exp. 03/2022; PTOE #4346 / USA / Exp. 11/2023; PTP #690 / USA / Exp. 07/2022; RSP #37 / USA / Exp. 12/2021; ATSSA TCT / TCS		
Year registered	2018	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities	Traffic / Mr. Deitch is a Transportation Engineer specializing in traffic engineering and design, safety, transportation management, and conceptual roadway design. Mr. Deitch has had experience managing and working on projects for LADOTD and the City of Baton Rouge, as well as other DOTs across the country, pertaining to Stage 0 feasibility studies, transportation management plans, traffic, and safety studies, NEPA studies, pedestrian and bicycle improvements, access management, signal design, and signing and marking design. He has experience and proficiency in IHSDM, SYNCHRO, VISTRO, VISSIM, SIDRA, GuidSIGN, HCS and MicroStation software. Ari is ATSSA TCT and TCS certified.				

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/19 – Ongoing	**I-20 / I-220 Interchange Imp. And BAFB Access TMP and IMR, LADOTD, LA** *Traffic Engineer*. Responsible for development of addendum to Interchange Modification Report, Transportation Management Plan, Temporary Traffic Control Plans, and Permanent Signing Plans to accommodate the design and construction of the project. The design build project includes the modification of the existing interchange at I-20 / I-220 with additional ramps and extension of I-220 to provide access to Barksdale Air Force Base.
08/14 – 10/18	**US 71 Corridor Traffic and Safety Study – Phase 1-3, LADOTD, Rapides Parish, LA**. *Traffic Engineer*. Responsible for providing traffic data collection, warrant studies, traffic analysis, safety data analysis, and development of conceptual layouts. Data collection effort included automated one-week counts, manual turning movement counts and spot speed studies. Collected crash data for the most recent three years from LADOTD crash database, analysed crash summaries and identify historical high-crash locations and over-representative crashes, determined crash types, frequencies and crash rates, reviewed individual crash reports to determine type and location of each crash, identified crash "hot-spot" locations, contributing factors for high-crash rates, and determined potential improvements.
11/20 - Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA**. *Traffic Engineer.* Responsible for wide range of traffic engineering tasks including development of permanent signing plans, Interchange Modification Reports, and Transportation Management Plans for the widening of Interstate-10 from LA 415 to Essen Lane and improvements to interchanges along this segment.
10/19 – Ongoing	**I-10 New Orleans to Slidell Hard Shoulder Running, LADOTD, Orleans Parish, LA**. *Traffic Engineer.* Responsible for the development of conceptual drawings and typical sections for proposed Hard Shoulder Running (HSR) alternatives on I-10 between New Orleans and Slidell. Purpose of the project is to evaluate the feasibility of implementing HSR lanes along I-10 to alleviate existing bottlenecks and congestion along critical segments of the corridor.
10/15-Ongoing	**US-90 Business Signing Upgrades and TMP, LADOTD, Orleans and Jefferson Parishes, LA**. *Assistant Project Manager*. Responsibilities include taking inventory of existing signs and structures, developing a signing layout plan for the project area in accordance with the latest state and federal policy guidance, developing signing plans through 100% final design stage, developing a Transportation Management Plan to be used during construction of the project, and coordinating reviews and submittals with LADOTD Traffic Engineering Design Section. The purpose of the project is to replace all existing signs within the project area, which includes sections of Interstate-10 and US-90 Business in and around New Orleans' Central Business District. This requires careful planning in the

	placement of signs and structures to accommodate the complex roadway network in this area. Arcadis completed the design plans and TMP in 2019, and is currently providing engineering support during construction of the project.
04/19 – 12/19	**East Baton Rouge Parish Signal Detection Upgrades, LADOTD, East Baton Rouge Parish, LA**. *Traffic Engineer.* Technical lead of project tasks involving field signal inventory and the creation of updated signal plans and quantities. The project includes 39 intersections identified in East Baton Rouge Parish to be upgraded from video detection to magnetometer detection.
04/19 – 12/19	**US 90 Traffic Signal Timing Upgrades, LADOTD, Lafayette Parish, LA**. *Traffic Engineer.* Technical lead of project tasks involving traffic data collection and analysis, signal inventory, peak period determination and observations, warrant analysis, travel time runs, traffic signal analysis using Synchro 10 software, and development of updated TSI forms following latest LADOTD standards.
08/14 – 06/15	**LA 3235 Stage 0 Feasibility Study, LADOTD, Lafourche Parish, LA**. *Traffic Safety Analyst.* Responsible for review of existing crash data and traffic operations analysis, development of safety countermeasures, conceptual drawings, and Stage 0 documentation. LADOTD Stage 0 Safety Study to develop access management strategies and roadway improvements that will maintain and improve mobility, improve safety, support existing and future development along the LA 3235 corridor. The LA 3235 corridor was initially constructed as a high-speed roadway to facilitate truck traffic to and from Port Fourchon. Since its construction, numerous commercial and residential developments have created unsafe conditions along the corridor.
02/15 – 11/17	**Intersection Feasibility Study. Evangeline Thwy, Johnston St, & Louisiana Ave, LADOTD, Lafayette Parish, LA**. *Traffic and Safety Analyst*. Responsible for review of existing crash data, traffic operations analysis, and development of design alternatives. Objective is to develop alternatives for the intersection of Evangeline Thruway (US167/90) and Johnston Street (US167) / Louisiana Avenue (LA 94) that will improve safety and mobility. Evangeline Thruway consists of two one-way roadways with three lanes in each direction. Three alternatives for each intersection at Johnston Street / Louisiana Avenue were developed based on the results traffic and safety analysis.
01/17 – Ongoing	**Tunnel Flood Barrier Systems Design-Build Project, MTA-TBTA, NY**. *Traffic Engineer*. Responsible for the development of a comprehensive Transportation Management Plan (TMP) and Maintenance and Protection of Traffic (MPT) Plans for the design and construction of permanent and deployable flood protection systems at the Hugh L. Carey Tunnel and the Queens Mid-Town Tunnel in New York City, New York. Specific tasks include selection and application of state and federal policy guidance to develop temporary traffic control plans and sequencing for various construction phases of the project, coordinating with state and local agencies to satisfy MPT notification requirements, and developing procedures for the implementation and removal of temporary traffic control devices and equipment.

Firm employed by. Arcadis					
Name	Kester Hollier, PE, PTOE		Years of relevant experience with this employer	1	
Title	Senior Traffic Engineer		Years of relevant experience with other employer(s)	16	
Degree(s) / Years / Specialization			BS / 2004 / Civil Engineering, Louisiana Tech University		
Active registration number / state / expiration date			PE.034304 / LA / Exp. 03/2023; PTOE #3928 / USA / Exp. 11/2021		
Year registered	2009	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities	Traffic / Mr. Hollier possesses a wide breadth of experience in the field of transportation engineering including traffic engineering, roadway design, complete street improvement projects, roadway safety analysis and design, and construction management and inspection. Working on a wide variety of projects from the planning and conceptual phases to the design and construction phases, has given him the experience to help identify the needs and requirements for projects. This experience allows him to understand stakeholders ranging from local public agencies to state DOTs and help provide expertise in achieving successful solutions for a variety of projects.				

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/20 – Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA**. *Project Manager*. Responsible for traffic engineering tasks including development of permanent signing plans and Interchange Modification Reports for the widening of Interstate-10 from LA 415 to Essen Lane and improvements to interchanges along this segment. One critical component of the project is maintaining traffic during the construction of new bridge structures. Multiple scenarios are being evaluated using a calibrated mesoscopic model to determine the impacts during construction and mitigations that will be necessary to minimize delay.
09/12 – 02/16	**Replace Belle Chasse Tunnel and Bridge Stage 0 Feasibility Study and Stage 1 EA, LADOTD, Plaquemines Parish, LA**. *Traffic Engineer*. Responsible for the traffic analysis along LA 23 (Belle Chasse Highway) between LA 428 (Behrman Highway) and LA 406 (Woodland Highway) for multiple 6-lane bridge alternatives that would be proposed to replace the existing Belle Chasse Tunnel and lift bridge over the Intercoastal Waterway. These alternatives included 3%, 4%, and 5% bridge grades that modified roadway geometry and intersection location. Responsible for the review of the roadway portion and costs for the Line and Grade Study along with the review of the construction sequencing and traffic maintenance of the constructability review.
05/14 – 08/20	**Causeway Blvd. at Earhart Expwy. Interchange, LADOTD, Jefferson Parish, LA**. *Traffic/Civil Engineer*. Responsible for the design of traffic control and construction sequencing, pavement marking layout, quantity analysis, and quality control for a new interchange at LA 3139 (Earhart Expwy.) and LA 3046 (Causeway Blvd.) in Jefferson Parish, LA. Provided review for the interchange traffic sign and traffic signal layouts. Identified all necessary design waivers and design exceptions required for LADOTD approval. Provided geometric layout design, typical section design and review, and joint layout design for several interchange ramps and underpasses.
06/11 – 02/13	**LA 1 Toll Facilities, LADOTD, Lafourche Parish, LA**. *Traffic Engineer*. Responsible for the new toll signage, pavement marking layout and queue analyses for the LA 1 Toll facility modifications at the new bridge in Leeville, LA.

11/17 – 07/20	**LA 466 (5th Street) Improvements Traffic Study, City of Gretna, Je, LA**. *Project Manager / Traffic Engineer*. Responsible for the traffic study and impacts for the proposed complete streets improvements along the LA 466 corridor between LA 23 and Richard St. in Gretna, Louisiana. Tasks included data collection along the corridor and at designated intersections, safety and crash analysis along the corridor, trip generation/land use and performing existing traffic analysis and future traffic analysis for proposed final alternative. The traffic study was prepared to follow the Louisiana Department of Transportation and Development's Traffic Engineering Process and Report Guidelines. The project also included a stand along pedestrian study along the corridor at designated intersection and the design of accessible pedestrian signals at signalized intersections.
12/17 – 11/19	**Causeway Boulevard Widening Traffic Study, Jefferson Parish, LA**. *Project Manager / Traffic Engineer.* Responsible for the traffic study for the proposed widening of Causeway Boulevard between Metairie Rds. and West Esplanade Blvd. in Jefferson Parish, LA. Tasks included data collection, traffic volume redistribution, left-turn placement and turn bay storage length, and existing traffic analysis and future traffic analysis of a preferred alternative.
10/18 – 01/19	**LA 22 Traffic Circulation and Corridor Analysis, NORPC, St. Tammany Parish, LA**. *Traffic Engineer*. Responsible for the development of three future alternatives along Northshore Boulevard between I-12 and US-190 in Slidell, LA. Managed the data collection process and peak period observations to determine existing traffic patterns as well as the safety analysis along the corridor. Developed three alternatives that used a combination of traffic signal retiming, J-turns, and roundabouts to provide better access management along Northshore Boulevard as well as improve traffic flow in the corridor for current and proposed future conditions with consideration given to proposed future developments using trip generation and land use analysis.
01/10 – 04/11, 07/13 – 01/14	**Stumberg Lane Extension, City of Baton Rouge Green Light Plan, East Baton Rouge Parish, LA**. *Traffic Engineer*. Responsible for the design of new traffic signals at US 61 (Airline Highway) and LA 73 (Jefferson Highway) for the extension of Stumberg Lane in Baton Rouge, LA. Also, responsible for the design and layout of the fiber optic interconnect along the proposed extension.
05/09 – 07/13	**LA 23 Widening (Lapalco Blvd. – Engineers Rd.), LADOTD, Jefferson and Plaquemines Parishes, LA**. *Traffic/Civil Engineer*. Responsible for the road design and geometrics for the widening of LA 23 in Jefferson and Plaquemines Parish between Lapalco Blvd. (La 428) and Engineers Rd. (La 3017). Developed traffic analysis for the traffic signal timing and required turn bay lengths at intersections. Developed traffic signing plans, pavement marking layouts and temporary traffic control plans.
11/07 – 12/08	**Marathon Petroleum US-61 Access Improvements, LADOTD/Marathon Petroleum Company, John the Baptist Parish, LA**. *Traffic Engineer.* Responsible for the traffic forecasting and analysis for the Traffic Impact Study for the expansion plans for the Marathon Oil Refinery in Garyville, LA. Performed traffic analysis and signal design for the new main entrance to the refinery as well as the required turn lanes from US-61 to different points of entry to the refinery site.

16. Staff Experience:

Résumés shall be provided for all prime and sub-consultant personnel listed in Sections 14 and/or 15 of the proposal. Résumés of personnel not identified in Section 14 or Section 15 of the proposal should not be included and will not be evaluated. Résumés should be limited to 2 pages per person. Any certificates required by the advertisement are to be placed in Section 20.

Firm employed by: A P S Engineering and Testing, LLC					
Name	**Sergio Aviles, P.E.**		Years of experience with this firm/employer	9	
Title	PRESIDENT		Years of experience with other firm(s)/employer(s)	10	
Degree(s) / Years / Specialization			BS Civil Engineering/2001/Geotechnical		
Active registration number / state / expiration date			0033571/ LA / 03-31-2024		
Year registered	2007	Discipline	Civil		
Contract role(s) / brief description of responsibilities			**Project Manager/Design guidance/Field Crew and lab management**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/19-06/20	**Project No. H.004100: I-10 Widening LA 415 to Essen LN-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of 52 deep borings starting at the Washington Exit and ending at the LSU lakes. Along with this drillingand sampling APS will also test for strength and engineering characteristics of the soils with. A total of eight (8) over the waterborings and 44 land borings with approximate 1000 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits. Mr. Aviles was the project manager to the Geotechnical Investigations. CMAR project
08/16-10/19	**Project No. H.012422: I-10/I-110 Interchange Modification at Terrace Ave-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of six (6) deep borings for the design of the Terrace Ave exit. APS tested for strength and engineering characteristics of the soils with approximate 100 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits by A P S Laboratory. Mr. Aviles was the project manager to the Geotechnical Investigations.
11/17-2/18	**Project No. H.013193 US 61 Thompson Creek Bridge Replacement-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of eight (8) deep borings for the replacement bridge at US 61 over Thompson Creek. APS tested for strength and engineering characteristics of the soils. Mr. Aviles was the project manager to the Geotechnical Investigations.
11/19-Present	**Project No. H.001352 and H.002273 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge LA 67 and LA 19-** A P S was selected with the winning team for the design of the diversion CMAR project. A P S will be the Geotechnical designers for the project. Mr. Aviles is the project manager for the project design team. CMAR project
03/19-05/19	**Project No. H.001344 US 190 over Bogue Falaya River-** A P S was selected with the winning team for the Geotechnical Investigation and Design of the proposed new bridge. A total of 19 deep borings were drilled and tested for the foundation recommendation. Mr. Aviles is the project manager for the project design team.

12/19-3/20	**Project No. H.010155 US 90 Railroad Overpass SE of LA 85-** A P S was selected with the winning team for the GeotechnicalInvestigation and Design for the proposed new overpass. A total of six (6) deep borings were drilled and tested for Geotechnical recommendation. Mr. Aviles is the project manager for the project design team.
02/17-10/17	**Project No. H.002861 Earhart Expressway/Causeway Boulevard:** APS was tasked with developing the LRFD factors for both existing structures and the new elevated sections to connect to Causeway Blvd. Per the task order APS drill and tested 85 borings to 120 feet near the proposed and existing structures. APS engineering staff provides designer with pile tip elevations for five elevated ramps to connect Earhart to Causeway Blvd. Provided boring logs, information on site conditions, site preparation recommendations, and load- length curves. Mr. Aviles is the project manager to the Geotechnical investigations and analysis assigned to help calculating the resistance factors.
07/14-08/14	**Project No. 700-51-0110: US 90 elevated portion for the future I-49 corridor.** APS performed all the preliminary drilling, testing, and CPT for US 90 and Highway 318 Intersection. A total of 46 boring and 11 CPT along with all the testing required by LADOTD. Mr. Aviles was the project manager to the Geotechnical investigations and analysis as assigned for roads and bridges design.
2001-2005	The following lists consist of projects that Mr. Aviles did the design or assisted on the design while at LADOTD. These projects include pile design, slope stability, settlement analysis, and construction services (PDA, CAPWAP, and WEAP). **ONSYSTEM PROJECTS LIST:** Mr. Aviles served as the staff geotechnical engineer while at the Pavement and Geotechnical Section for the following projects below: Below projects varies from Embank Design, Pile Design, Drilled Shaft design, MSE wall design, and construction supervision. Major projects cost estimated over one million dollars: 015-04-0037 LA524-LA123 Route US165, 015-05-0035 LaSalle, 015-07-0044 (Route 165 Cadwell, 276-03-0016 Tangipahoa River Bridge, 3132 Innerloop 427-01-0029, 362-01-0009 Rat Bois, 452-01-0039 I-55 CrossOvers, 742-07- 0098 Susek Drive, Bayou Perrie and Sand Beach Bayou 103-01-0025, Broadway Ave.700-40-0127, Cameron Route La. 27 193-02-0042, Causeway Boulevard interchange Route I-10 450-15-0098,Clayton-Greenville 026-03-0025, Crescent City Connection 283-08-0143(46), Cross Bayou Bridge 090-01-0020, Flannery at Florida 742-17-0008.

Firm employed by: A P S Engineering and Testing, LLC					
Name	**Sairam Eddanapudi, M.E., P.E.**		Years of experience with this firm/employer	9	
Title	CHIEF ENGINEER		Years of experience with other firm(s)/employer(s)	8	
Degree(s) / Years / Specialization			ME, Civil Engineering, Lamar University, Dec. 2002 BE, Civil Engineering, Sri Venkateswara University, India Aug. 1999		
Active registration number / state / expiration date			0035129/ LA / 03-31-2022		
Year registered	2008	Discipline	Civil		
Contract role(s) / brief description of responsibilities			**Laboratory QA Manager- Will be in charge all daily operation of the project/QA/Design Engineer**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
	PROJECT NAME: Location, ST. *Role on Project:* Description of role
09/19-Present	**Project No. H.004100: I-10 Widening LA 415 to Essen LN-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of 52 deep borings starting at the Washington Exit and ending at the LSU lakes. Along with this drillingand sampling APS will also test for strength and engineering characteristics of the soils with. A total of eight (8) over the waterborings and 44 land borings with approximate 1000 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits. Mr. Sai was the project QA to the Geotechnical Investigations. CMAR project
08/16-10/19	**Project No. H.012422: I-110 Interchange Modification at Terrace Ave-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of six (6) deep borings for the design of the Terrace Ave exit. APS tested for strength and engineering characteristics of the soils with approximate 100 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits by A P S Laboratory. Mr. Sai was QA to the Geotechnical Investigations.
11/17-2/18	**Project No. H.013193: US 61 Thompson Creek Bridge Replacement-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of eight (8) deep borings for the replacement bridge at US 61 over Thompson Creek. APS tested for strength and engineering characteristics of the soils. Mr. Sai was QA to the Geotechnical Investigations.
11/19-Present	**Project No. H.001352 and H.002273: Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge LA 67 and LA 19-** A P S was selected with the winning team for the design of the diversion CMAR project. A P S will be theGeotechnical designers for the project. Mr. Sai is the Senior Design Engineer for the project design team.
03/19-05/19	**Project No. H.001344: US 190 over Bogue Falaya River-** A P S was selected with the winning team for the Geotechnical Investigation and Design of the proposed new bridge. A total of 19 deep borings were drilled and tested for the foundationrecommendation. Mr. Sai is the Senior Design Engineer for the project design.

Firm employed by: A P S Engineering and Testing, LLC					
Name	**Mr. Surendra Raj Pathak, M.S., P.E.**			Years of experience with this firm/employer	5
Title	STAFF ENGINEER			Years of experience with other firm(s)/employer(s)	10
Degree(s) / Years / Specialization			MSCE (Master of Science in Civil Engineering), Mississippi StateUniversity, Starkville, Mississippi, 2013 M. Sc. Master of Science in Civil Engineering, Norwegian University of Science and Technology,Trondheim, Norway, 2007 B.E. (Civil Engineering), Madan Mohan Malaviya University of Technology, India, 1998		
Active registration number / state / expiration date			0043487/ LA / 09-31-2021		
Year registered	2019	Discipline	Civil		
Contract role(s) / brief description of responsibilities			**Staff Engineer-Review field logs, lab data, and Design Engineer**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., “designed drainage”, “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).
09/19-Present	**Project No. H.004100: I-10 Widening LA 415 to Essen LN-** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of 52 deep borings starting at the Washington Exit and ending at the LSU lakes. Along with this drillingand sampling APS will also test for strength and engineering characteristics of the soils with. A total of eight (8) over the waterborings and 44 land borings with approximate 1000 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits. Mr. Surendra was the project QC to the Geotechnical Investigations.
08/16-10/19	**Project No. H.012422: I-110 Interchange Modification at Terrace Ave-** A P S was tasked thru our DOTD geotechnicalretainer to drill and sample a total of six (6) deep borings for the design of the Terrace Ave exit. APS tested for strength and engineering characteristics of the soils with approximate 100 Triaxial Compression, Unconsolidated Drained Or Undrained (UU)and Atterberg Limits by A P S Laboratory. Mr. Surendra was QC to the Geotechnical Investigations.
11/17-2/18	**Project No. H.013193: US 61 Thompson Creek Bridge Replacement-** A P S was tasked thru our DOTD geotechnicalretainer to drill and sample a total of eight (8) deep borings for the replacement bridge at US 61 over Thompson Creek. APS tested for strength and engineering characteristics of the soils. Mr. Surendra was QC to the Geotechnical Investigations.
11/17-2/18	**Project No. H.002273, H.000710, and H.001352 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge LA 67 and LA 19:** A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of 12 deep borings for the new and replacement bridges at Highway 19, 67, and 964. APS tested for strength and engineering characteristics of the soils. Mr. Surendra was QC to the Geotechnical Investigations.
11/19-Present	**Project No. H.001352 and H.002273: Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge LA 67 and LA 19-** A P S was selected with the winning team for the design of the diversion CMAR project. A P S will be theGeotechnical designers for the project. Mr. Surendra is a design Engineer for the project design team.

03/19-05/19	**Project No. H.001344: US 190 over Bogue Falaya River-** A P S was selected with the winning team for the Geotechnical Investigation and Design of the proposed new bridge. A total of 19 deep borings were drilled and tested for the foundation recommendation. Mr. Surendra is a design Engineer for the project design team.
12/19-3/20	**Project No. H.010155: US 90 Railroad Overpass SE of LA 85-** A P S was selected with the winning team for the GeotechnicalInvestigation and Design for the proposed new overpass. A total of six (6) deep borings were drilled and tested for Geotechnical recommendation. Mr. Surendra is a design Engineer for the project design team.

17. **Firm Experience:**

See Project Sheets on subsequent pages.

Project Name	Project Relevance
I-10: LA 415 to Essen Lane CMAR West & East Baton Rouge Parishes	CMAR Delivery for DOTD, Urban Road Design, Drainage Design, Maintenance of Traffic, Team Members with Arcadis & APS
I-10 Highland – LA 73 East Baton Rouge & Ascension Parishes	Alternative Delivery for DOTD, Urban Road Design, Drainage Design, Bridge Design, Maintenance of Traffic, Team Member with Arcadis
I-20/I-220 Barksdale Interchange Design Build Bossier Parish	Alternative Delivery for DOTD, Road Design, Drainage Design, Team Member with Arcadis
Hooper Road (LA408) Blackwater to Joor East Baton Rouge Parish	Urban Road Design with Roundabout Intersection Alternatives on a State Route. Adjacent to proposed Hooper Road CMAR project
Sullivan Road (Lovett – Wax) East Baton Rouge Parish	Urban Road Design, Drainage Design, Maintenance of Traffic. Adjacent to proposed Hooper Road CMAR project.
Lee Drive (Highland Rd to Perkins Rd) East Baton Rouge Parish	Traffic Studies, Urban Road Design, Drainage Design, Bridge Design
Alphonse Forbes Bridge over Sandy Bayou East Baton Rouge Parish	Road Design, Drainage Design, Bridge Design
LA 157 Corridor Study (Booker Rd to Fox Creek Rd) Bossier Parish, LA	Traffic Analysis, Urban Road Design, Roundabout Concept
I-10: LA 415 to Essen Lane CMAR West & East Baton Rouge Parishes	Geotechnical Explorations, Geotechnical Design, CMAR Delivery for DOTD
Comite River Diversion Bridge @ LA 67, LA 19 and LA 19 Railroad Bridge East Baton Rouge Parish	Geotechnical Explorations, Geotechnical Design, CMAR Delivery for DOTD
US-90 Railroad Overpass (S. East of LA 85) Iberia Parish	Geotechnical Explorations, Geotechnical Design, Deep Borings for Drainage Structures

17. **Firm Experience**

Firm Name	**SIGMA CONSULTING GROUP, INC.**		Past Performance Evaluation Discipline(s)	**Road**	
Project name	**I-10: LA 415 to Essen Lane CMAR**		Firm responsibility (prime or sub?)	**Sub**	
Project number	**H.004100**	Owner's name	**LA DOTD**		
Project location	**West & East Baton Rouge Parishes**		Owner's Project Manager	**Nick Olivier, PE**	
Owner's address, phone, email	**P.O. Box 94245, Baton Rouge, LA 70806 | (225) 379-1133 | Nicholas.Olivier@la.gov**				
Services commenced by this firm (mm/yy)	**10/20**	Total consultant contract cost ($1,000's)		**$22,060**	
Services completed by this firm (mm/yy)	**ongoing**	Cost of consultant services provided by this firm ($1,000's)		**$3,371**	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Sigma is a major subconsultant on the COREX10 CMAR design team for the replacement and widening of I-10 between LA 415 in West Baton Rouge Parish to Essen Lane (on I-10 and I-12) in East Baton Rouge Parish. The project includes widening the mainline to 4-lanes in each direction, redesigned interchanges and ramp access points, and service road / surface street improvements necessary to support the Interstate improvements.

The design is broken up into phases, with Phase 1 covering I-10 between the I-10/I-110 Interchange to Essen Lane. The initial task for this phase included preparation of Right-of-Way Corridor Preservation (RCP) plans. This task included enough design to establish the proposed right-of-way and control of access limits for Phase 1.

Sigma was responsible for horizontal and vertical geometric design for various I-10 segments, ramps, service roads, and surface streets. Design reports were prepared, and design waivers / exceptions were listed for incorporation during final design. Typical sections, plan profiles and geometric detail sheets were prepared.

Sigma also performed utility coordination with the COREX10 team and utility owners to design a utility relocation duct bank. The duct bank provided a single location for electrical, ITS, fiber optics, telecommunication utilities to relocate and minimize future construction conflicts.

Design plans are being prepared at 30%, 60%, 90% and Final Plan milestones.

Sigma recently completed 30% design plans for Segment 1 and Segment 1 Extension (I-10/I-110 Interchange to Acadian Thruway). The current design task includes 60% plans for GMP3, which includes all work for MOT Stage 1 in Segment 1. Sigma is preparing typical sections, plan profiles, drainage design, drainage plan profiles, geometric details, surface street sequencing plans, cross sections, quantities and cost estimates.

Sigma is actively participating in all major components of the CMAR process. This includes biweekly task force meetings with DOTD and the CMAR contractor, design and constructability reviews, value engineering assessments, cost estimating, and multi-discipline design team coordination.

Sigma Firm Members Involved:

In Charge: Miles Williams
Robbie Lear
Greg Sepeda
Alex Farr
Bryan Harmon
Joshua Olivier
Joshua Renard

17. **Firm Experience**

Firm Name	**SIGMA CONSULTING GROUP, INC.**		Past Performance Evaluation Discipline(s)	**Road / Bridge**	
Project name	**I-10: Highland to LA 73 Design-Build**		Firm responsibility (prime or sub?)	**Prime**	
Project number	**H.009250**	Owner's name	**LA DOTD**		
Project location	**East Baton Rouge & Ascension Parishes**		Owner's Project Manager	**Peggy Jo Paine, PE**	
Owner's address, phone, email	**P.O. Box 94245, Baton Rouge, LA 70806 | (225) 379-1065 | Peggy.Paine@la.gov**				
Services commenced by this firm (mm/yy)	**08/16**	Total consultant contract cost ($1,000's)		**$3,621**	
Services completed by this firm (mm/yy)	**ongoing**	Cost of consultant services provided by this firm ($1,000's)		**$1,818**	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Sigma was the lead design firm for this $72 million Design- Build Project to increase capacity on Interstate 10 in East Baton Rouge and Ascension Parishes. We led the design coordination for this project and performed all roadway design, maintenance of traffic design, transportation management planning, subsurface utility investigations and utility coordination. Sigma also assisted in the public and stakeholder information outreach which included 3 meetings and coordinated outreach.

The project consisted of six-laning I-10 for 6.8 miles between the Highland Road Interchange and LA 73. The first 3.6 miles is an urban section with a concrete median barrier, a portion of which has permanent lighting included. The last 3.2 miles is a rural widening section with a 12' travel lane and 12' shoulder added to the inside of the existing travel lanes. The Highland Road Overpass was completely replaced with a new steel main span bridge, the Bayou Manchac Bridges were widened to 3 lanes in each direction and the LA 948 Bridge of I-10 was repaired and raised.

Sigma coordinated all design activities for the Builder, James Construction Group, in a very compressed time frame. The time from contract execution to the beginning of construction activities was 5 months and all design activities were substantially complete in the first 9 months of the project.

The road design components include typical sections, horizontal and vertical geometrics with existing bridge structures constraining the design parameters, geometric details, and a detailed analysis of the sequence of construction that will maintain two-lanes of traffic in each direction. A Level 4 Transportation Management Plan was also developed by Sigma.

SUE QL-B and QL-A locates were performed by Sigma for a large diameter water line and multiple fiber optic lines at Highland Road.

Sigma Firm Members Involved:
In Charge: Miles Williams
Robbie Lear
Greg Sepeda
Alex Farr
Bryan Harmon
Joshua Olivier
Joshua Renard

17. **Firm Experience**

Firm Name	**SIGMA CONSULTING GROUP, INC.**		Past Performance Evaluation Discipline(s)	**Road**	
Project name	**I-220/I-20 Interchange Imp. & BAFB Access Design-Build**		Firm responsibility (prime or sub?)	**Sub**	
Project number	**H.003370**	Owner's name	**LA DOTD**		
Project location	**Bossier Parish**		Owner's Project Manager	**Corey Landry, PE**	
Owner's address, phone, email	**P.O. Box 94245, Baton Rouge, LA 70806 | (225) 379-1889 | Corey.Landry@la.gov**				
Services commenced by this firm (mm/yy)	**04/19**	Total consultant contract cost ($1,000's)		**$3,041**	
Services completed by this firm (mm/yy)	**ongoing**	Cost of consultant services provided by this firm ($1,000's)		**$1,220**	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Sigma is a sub-consultant for this $71 million Design- Build Project to provide full access from the I-20/I-220 interchange directly to the Barskdale Air Force Base (BAFB). We performed all roadway design including design reports, geometrics, hydraulic analysis and design for open channels and subsurface drainage, permanent striping, cross sections, clearing and grubbing plans, and quantities. The drainage design included analyzing existing cross drains and designing new cross drains for Musselshell Bayou, which required a 10x10 RCB and bridge scour analysis at a second crossing. Sigma also is responsible for preparing the Storm Water Pollution Prevention Plan (SWPPP) and temporary erosion control plans. Sigma is providing independent reviews of the transportation management plan, traffic control plans, and the Interchange Modification Report (IMR) re-evaluation.

The project consists of constructing a new 4-lane rural arterial (LA 1267) extending from the existing I-220 terminus north of I-20 southward to a terminus within the Barksdale Air Force Base. This includes an elevated section crossing over the Kansas City Southern Railway (KCS RR) and Musselshell Bayou. Access from I-20 eastbound and westbound to this new route will be provided via at grade ramps and loop ramps. I-20 westbound will also be widened to add acceleration lanes from the SB-WB ramp and a new C-D road connecting the loop ramps.

Sigma coordinated the above-mentioned design activities for the Builder James Construction Group, in a very compressed time frame.

The scheduled time from contract execution to the beginning of construction activities is 5 months, and all design activities are scheduled for completion in the first 11 months of the project. Sigma is currently providing construction support for roadway and drainage.

Sigma is also performing Subsurface Utility Engineering for the project. Several major fiber optic lines and pipelines cross the project. SUE responsibilities include QL-B and QL-A investigations on all utility conflict points and construction related coordination services. A total of 18 QL-A testholes were performed on multiple fiber optic and gas lines ranging from 2" to 10" in size. Approximately 1600' of QL-B locating services were also performed on these lines.

Sigma Firm Members Involved:

In Charge: Miles Williams
Robbie Lear
Greg Sepeda
Alex Farr
Bryan Harmon
Joshua Renard
Joshua Olivier

17. **Firm Experience**

Firm Name	**SIGMA CONSULTING GROUP, INC.**		Past Performance Evaluation Discipline(s)	**Road**	
Project name	**Hooper Rd. Widening (LA 408) Blackwater - Joor**		Firm responsibility (prime or sub?)	**Prime**	
Project number	**H.002316 / H.002317**	Owner's name	**EBR Dept. of Transportation and Drainage**		
Project location	**East Baton Rouge Parish**		Owner's Project Manager	**Tom Stephens, PE**	
Owner's address, phone, email	**P.O. Box 1471, Baton Rouge, LA 70821 | (225) 389-3186 | TStephens@brla.gov**				
Services commenced by this firm (mm/yy)	**10/12**	Total consultant contract cost ($1,000's)		**$1,818.0**	
Services completed by this firm (mm/yy)	**ongoing**	Cost of consultant services provided by this firm ($1,000's)		**$1,111.4**	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Sigma was contracted by East Baton Rouge Parish DTD, in cooperation with the FHWA and LADOTD, to provide NEPA environmental documentation, planning, and preliminary engineering for the improvements to the Hooper Road existing 2-lane rural roadway from Blackwater Road to Sullivan Road in Central, LA. DTD is proposing capacity and safety upgrades to the corridor using a 4-lane urban boulevard, subsurface drainage and pedestrian accessibility.

As part of the NEPA Environmental Assessment, Sigma performed the roadway planning, natural and human environment data assimilation, determining cumulative impacts, conceptual relocation plans, alternative development, public involvement, and NEPA document preparation. Sigma ran public meetings to gather community input on the project. A Finding of No Significant Impacts (FONSI) was issued for this project in December 2018. Sigma performed preliminary, conceptual design for roundabouts at several intersections along the corridor: Blackwater Road, Lovett Road, and Joor Road.

Sigma is now developing final design and construction plans for the segment from Blackwater Bayou to Joor Road, including the final geometrics of a new roundabout at Lovett Road. With a dynamic DTM of the proposed corridor, Sigma can make adjustments to minimize impacts. **Full roadway plans for the 4-lane boulevard with a raised median are being developed using LA DOTD design criteria**.

Construction Cost = $18.3M (est)

Environmental Assessment (NEPA Compliant)

- Lead Environmental Consultant
- Alternative Alignments / Line & Grade
- Alternative Conceptual Sections
- Right-of-Way, Environmental & Residential Impacts
- Public Involvement

Surveying

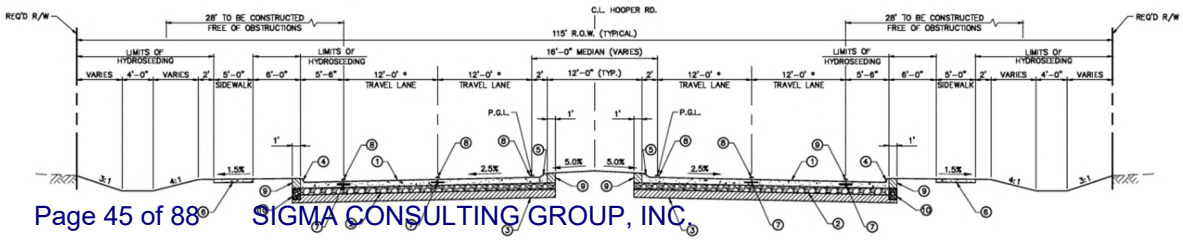
- Topographic Survey
- Property Survey
- Right of Way Maps

Plan Development

- Roundabout Design
- Road Design
- Drainage Design
- Utility Relocation
- MOT
- Signing & Striping

Sigma Firm Members Involved:

In Charge: Greg Sepeda
Bryan Harmon
Miles Williams
Robbie Lear
Josh Renard



17. **Firm Experience**

Firm Name	**SIGMA CONSULTING GROUP, INC.**	Past Performance Evaluation Discipline(s)	**Road**
Project name	**Sullivan Road Improvements (Central Thruway to Wax Rd)**	Firm responsibility (prime or sub?)	**Prime**
Project number	**03-CS-CI-0020**	Owner's name	**EBR Parish Dept. of Public Works**
Project location	**East Baton Rouge Parish**	Owner's Project Manager	**Tom Stephens, PE**
Owner's address, phone, email	**P.O. Box 1470, Baton Rouge, LA 70821 | (225) 389-3186 | TStephens@brla.gov**		
Services commenced by this firm (mm/yy)	**12/03**	Total consultant contract cost ($1,000's)	**$1,312**
Services completed by this firm (mm/yy)	**01/12**	Cost of consultant services provided by this firm ($1,000's)	**$1,212**

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Sigma was contracted by the East Baton Rouge Parish Department of Public Works to provide planning, engineering, surveying and right-of-way mapping for the improvements of Sullivan Road from Central Thruway to Wax Road. This project included upgrading an existing 2.5 mile 2-lane suburban road to a 4-lane boulevard with a raised median with a short section of 5-lane highway.

This project required a design study to determine design criteria, horizontal and vertical geometry, and typical sections. The surveying scope included establishing survey control, performing topographic and property surveys, as well as utility mapping utilizing SUE Quality Levels A through C. Drainage design included both open ditch roadside channel and subsurface drainage systems. A portion of a sanitary sewer force main upgrade was included into the roadway project for ease of construction.

Sigma was responsible for all roadway and drainage design and plan development. The suggested sequence of construction was used by the contractor and the project was successfully constructed. Minimizing impacts to traffic and existing businesses within the corridor was a primary goal of the construction sequencing.

Sigma Firm Members Involved - In Charge: Robbie Lear, PE
Miles Williams, Greg Sepeda, Lance Amedee, Donnie Thymes, Jamal Yarbrough

100% of Sigma's effort was performed in Louisiana

Construction Cost: $15,2M

Design Study
- Design Criteria
- Alternative Analysis
- Cost Estimate
- Impact Assessment
- Drainage Review

Surveying
- Control Survey
- Topographic Survey
- Property Survey
- Utility Survey & Mapping (SUE Quality Levels A thru C)

Suburban Road Design
- Horizontal & Vertical Geometry
- Geometric Details
- Open ditch and subsurface drainage design
- Sequence of Construction
- Min. Construction Signing
- Utility Relocation Plans

Right of Way Maps
- Base mapping
- Acquisition plans

17. Firm Experience.

Firm name	Arcadis	Past Performance Evaluation Discipline(s)*	Bridge, Road, Env
Project name	Lee drive (Highland Road-Perkins Road)	Firm responsibility (prime or sub?)	Prime
Project number	City-Parish Project No. 20-CP-HC-0044	Owner's name	City of Baton Rouge/Parish of East Baton Rouge
Project location	East Baton Rouge Parish, Louisiana	Owner's Project Manager	Justin Schexnayder
Owner's address, phone, email	8555 United Plaza Blvd., Baton Rouge, LA 70809, (225) 761-3628, justin.schexnayder@csrsinc.com		
Services commenced by this firm (mm/yy)	02/21	Total consultant contract cost ($1,000's)	$2,568
Services completed by this firm (mm/yy)	09/22	Cost of consultant services provided by this firm ($1,000's)	$1536

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm's Role: Topographic survey, hydraulic and drainage analysis, traffic study and report, preliminary and final plans preparation, bridge design, construction cost estimate, right of way maps

Firm Members Involved: Akhil Chauhan, Ari Deitch, Buddy Porta, Jose M. Rodriguez, Gabriel Arias,

Design Study Report

Arcadis provided traffic engineering studies, preliminary drainage design, and evaluated alignment alternatives to improve the Lee Drive corridor. The work was prepared in coordination with the City of Baton Rouge and the MOVEBR Program. A preferred alternative was presented to the City of Baton Rouge based on findings from our traffic analysis, impacts to existing right-of-way, and a detailed construction cost analysis. Arcadis also assisted the City of Baton Rouge in obtaining public input by participating in public meetings and preparing exhibits for public display. Comments and input from the public meetings were then evaluated and implemented in the design.

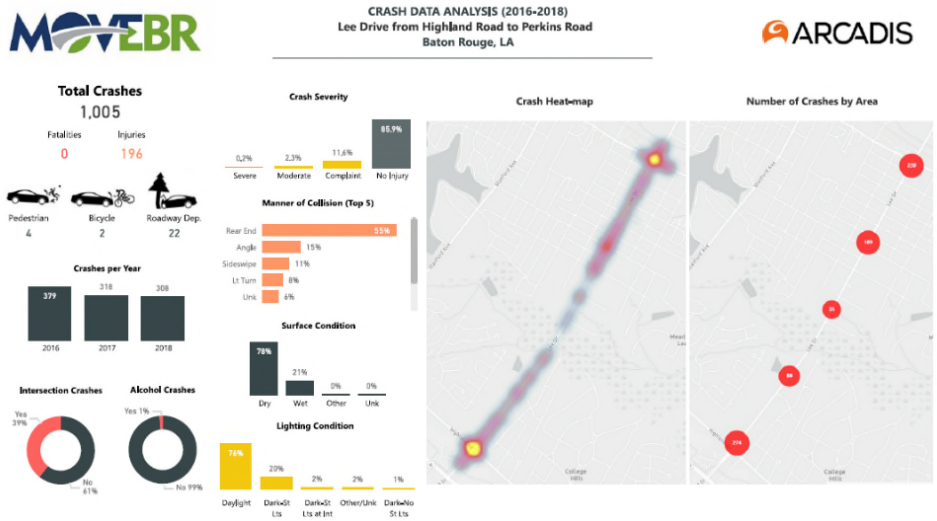
Relevant Services

- Traffic Studies
- Roadway Plan Preparation
- Drainage Design
- Green Infrastructure
- Bridge Design

Final Design Plans and Cost Estimate

For the Final Design Phase, Arcadis was tasked with preparing construction roadway plans, right-of-way maps, and construction cost estimates. The Lee Drive project involves the complete reconstruction of Lee Drive from Highland Road to Perkins Road. The proposed typical section extends approximately 1.7 miles and is a three-lane urban section with a left-turn center lane. The project goal was to improve vehicular traffic capacity and connectivity to all corridor users by delivering safe and efficient pedestrian/bicycle facilities while maintaining neighborhood integrity.

The design team gave special considerations to traffic and access maintenance, constructability, utility coordination and right-of- way requirements. Ensuring proper drainage during construction and overall drainage improvements was another major factor considered for the project.



Firm name	Arcadis	Past Performance Evaluation Discipline(s)*	Bridge, Road, Env
Project name	Alphonse Forbes Bridge over Sandy Bayou	Firm responsibility (prime or sub?)	Prime
Project number	City-Parish Project No. 18-Br-Pt-0017	Owner's name	City of Baton Rouge/Parish of East Baton Rouge
Project location	East Baton Rouge Parish, Louisiana	Owner's Project Manager	Tom Stephens
Owner's address, phone, email	P.O. Box 1471, Baton Rouge, Louisiana 70821, 225 389 3186, TStephens@brla.gov		
Services commenced by this firm (mm/yy)	10/19	Total consultant contract cost ($1,000's)	$285
Services completed by this firm (mm/yy)	11/20	Cost of consultant services provided by this firm ($1,000's)	$285

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm's Role: Topographic survey, hydraulic analysis and report, preliminary and final plans preparation, bridge design, geotechnical investigation and report, environmental services, construction cost estimate

Firm Members Involved: Akhil Chauhan

Relevant Services

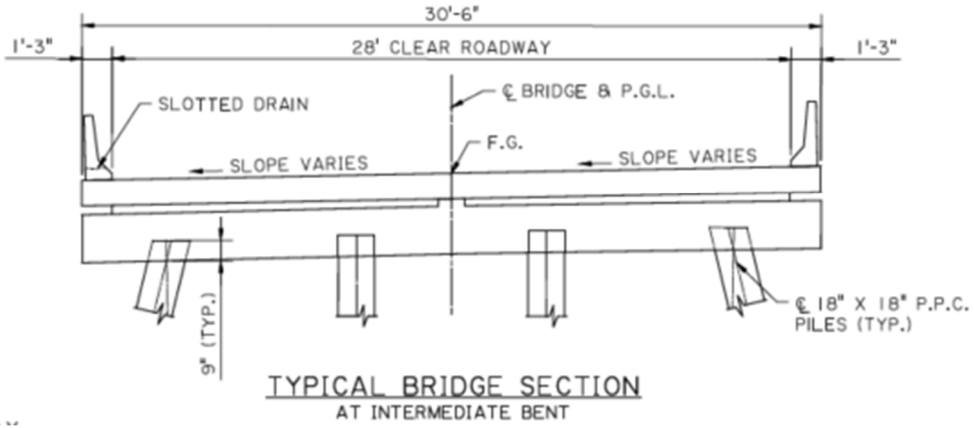
- Preliminary and Final Bridge and Roadway Design
- Bridge Hydraulics Report
- HEC-RAS Analysis
- Scour Analysis

Preliminary Design Plans and Report

Arcadis provided all environmental and engineering services for the replacement of this existing two-lane bridge in East Baton Rouge Parish under the LADOTD Off System Bridge Rehabilitation and Replacement Program. Within three months of the contract notice to proceed, Arcadis provided a final preliminary design report to the City of Baton Rouge/Parish of East Baton Rouge, complete with a detailed Hydrologic Engineering Center's River Analysis System (HEC-RAS) analysis, preliminary bridge and road design, and a bridge hydraulics report.

Final Design Plans and Cost Estimate

Arcadis then prepared final bridge and roadway design plans and a construction cost estimate. The replacement bridge is located in a tangent section of roadway between two super-elevated curves. Site conditions required close coordination between the roadway and bridge teams to design a safe, constructable facility that fit within the existing right-of-way while meeting hydraulic opening requirements.



TYPICAL BRIDGE SECTION
AT INTERMEDIATE BENT

Environmental Services

Arcadis delineated and GPS located wetlands and other waters of the U.S. (WOTUS) with the proposed bridge right-of-way and prepared a Wetland and Waterbody Delineation Report per LADOTD standards. Environmental staff worked with Design to identify the full extent of impacts to WOTUS, including temporary construction impacts. Arcadis then coordinated with U.S. Army Corps of Engineers staff regarding permitting requirements for the proposed bridge replacement. Based on this coordination, Arcadis developed plans that avoided the need to submit a Section 404 Clean Water Act permit application, allowing construction to proceed on a faster schedule without waiting for USACE permit authorization.

Firm name	Arcadis	Past Performance Evaluation Discipline(s)*	Traffic
Project name	LA 157 Corridor Study	Firm responsibility (prime or sub?)	Prime
Project number	H.011424.1	Owner's name	Louisiana Department of Transportation and Development
Project location	Bossier Parish, LA	Owner's Project Manager	Jody Colvin
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225 242 4635, jody.colvin@la.gov		
Services commenced by this firm (mm/yy)	02/15	Total consultant contract cost ($1,000's)	$334
Services completed by this firm (mm/yy)	06/17	Cost of consultant services provided by this firm ($1,000's)	$364

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm's Role: The purpose of the study was to evaluate existing and no-build conditions along LA 157 from Booker Road to Fox Creek Road (approximately 3 miles) and develop corridor improvement alternatives that seek to address identified operational and safety needs for the project. ***Similar to Hooper Road, the LA 157 corridor is a two-lane undivided roadway that experiences moderate congestion and delay during peak periods***.

Relevant Services

- Data Collection
- Traffic Analysis
- Roundabout Analysis / Design
- Safety Analysis
- Signal Warrant Analysis
- Alternative Development
- Access Management
- Construction Cost Estimates
- Benefit-Cost Analysis

Firm Members Involved: Ari Deitch, Akhil Chauhan

Traffic and Safety Analysis: The corridor study required the collection of a range of ***traffic and safety data*** including classification tube counts, peak period turning movement counts (TMCs), spot speed study, signal timings, peak period observations, growth rate, historical crash reports, etc. Traffic operations was analyzed using ***Highway Capacity Manual*** analysis methods, and safety analysis was performed using historical crash data to evaluate existing issues and ***Highway Safety Manual*** methods (CMFs) to estimate the safety performance of proposed improvements.

Alternative Development: Three alternatives were developed to addressed identified safety and operational needs. All alternatives included converting the corridor into a ***4-lane divided section with formalized U-turns*** to accommodate restricted movements. These ***access management improvements*** would significantly reduce conflict points and improve traffic flow along the corridor. A ***roundabout concept*** was developed for the intersection of LA 327 and a future planned connector road. Several alternates were developed for the interchange at I-20 including diverging diamond and traditional diamond interchanges. Conceptual design drawings were developed for all alternatives to demonstrate the impacts and feasibility of the project.

Benefit-Cost Analysis: Estimated project benefits were monetized using FHWA guidelines for values of travel delay and crash severity. The reduction in delays and crash severities were summarized over a 30 year period. Construction costs were estimating using LADOTD cost estimating tools. Construction costs ranged from approximately $35M to $60M and ***project benefits ranged from $183M to $485M over a 30-year design-life*** depending on the alternative.

Proposed access management, safety, and capacity improvements on LA 157.

17. Firm Experience:

Identify the team's project experience most relevant to the scope in the advertisement. The projects should be limited to a total of 20, with more than 3 projects represented by each sub-consultant on the team. If more than 3 projects are identified for a single sub-consultant, all projects identified after the first 3 from that sub-consultant will not be evaluated. Include no more than one page per project. Projects identified shall only include work performed by firms on the team. The projects identified do not necessarily need to have been DOTD projects.

Firm name	**A P S Engineering and Testing, LLC**			Past Performance Evaluation Discipline(s)*	GEOTECH
Project name	**I-10 Widening LA 415 to Essen LN**			Firm responsibility (prime or sub?)	Sub
Project number	H.004100	Owner's name	DOTD		
Project location	Baton Rouge		Owner's Project Manager	Kristy Smith, P.E.	
Owner's address, phone, email	1201Capitol Access Rd., Baton Rouge, La. 70802-4438 225-379-1016 Kristy.Smith2@la.gov				
Services commenced by this firm (mm/yy)	09/19	Total consultant contract cost ($1,000's)		N/A	
Services completed by this firm (mm/yy)	On-going	Cost of consultant services provided by this firm ($1,000's)		$400	

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

GEOTECHNICAL INVESTIGATION TO PROVIDE CLIE NT WITH THE NECE SSARY INFORMATION FOR PLANNING AND DE SIGN I - 10 WIDENING. A P S WAS T ASKE D THRU O UR DOT D GE OTECHNICAL RET AINER TO DRILL AND SAMPLE A TOTAL OF 52 DEEP BORINGS STARTING AT THE WASHINGTON EXIT AND ENDING AT THE LSU LAKE S. ALONG WITH THIS DRILLING AND SAMPLINGA P S WILL AL SO TEST FOR STRE NGTH AND E NGINEERING CHARACTERISTICS OF THE SOIL S. A TOT AL OF EIGHT (8) OVER THE WATER BORINGS AND 44 L AND BORINGS WITH APPROXIMATE 1000 TRIAXIAL COMPRESSIO N, UNCO NSOLIDATE D DRAINE D OR UNDRAINE D (UU) AND ATTERBERG LIMIT S.

MEMBERS INVOLVED:

ENGINEERING

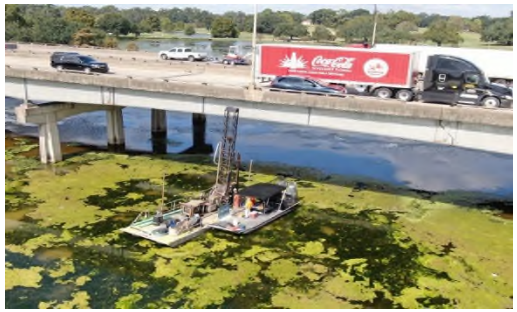
SERGIO AVILE S, P. E.- PROJECT MANAGE R
SAI E DDANAPUDI, M. E., P. E.- PROJECT ENGINEE R
SURENDRA RAJ PATHAK, M. S., P. E.- STAFF ENGINEE R

LABORATORY TESTING

SERGIO AVILE S, PE- QA/ QC
SAI E DDANAPUDI, M. E., P. E.- QA/ QC

DRILLING

MELVIN VASQUEZ - DRILLER TECH
VAN GEORGE - DRILLE R
ERIC BATEASTE - DRILLER



SIMILAR ITIES TO PROFESSIONAL GEOT ECHNICAL SE RVICES IDIQ

X	Geotechnical Explorations (GE)
X	Geotechnical Design (GD)
X	Geotechnical Construction (GC)
X	Topographic Survey (LC)
X	CMAR
X	Contract Management (CM)

Firm name	**A P S Engineering and Testing, LLC**			Past Performance Evaluation Discipline(s)*	GEOTECH
Project name	**Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge**			Firm responsibility (prime or sub?)	Sub
Project number	H.001352 and H.002273	Owner's name	Huval & Associates, Inc.		
Project location	East Baton Rouge Parish		Owner's Project Manager	Thomas M. Gattle, III, P.E.	
Owner's address, phone, email	Huval & Associates, Inc. 922 West Pont Des Mouton Road Lafayette, LA 70507 Wk: (337) 234-3798 Fax: (337) 234-2475 tgattle@huvalassoc.com				
Services commenced by this firm (mm/yy)	05/20		Total consultant contract cost ($1,000's)	N/A	
Services completed by this firm (mm/yy)	On-going		Cost of consultant services provided by this firm ($1,000's)	$115k	

GEOTECHNICAL ENGINEERING TO PROVIDE CLIE NT WITH THE NECESSARY INFO RMATION FOR PLANNING AND BUILD O F LA 19 RR BRIDGE - SLOPE ST ABIL ITY (EMBANKMENT), L A 19 RR BRIDGE - EMBANKME NT/ MSE WALL SETTLE MENT/ RETAINING WALL, LA 19 TWIN BRIDGE S - PPC PILES, L A 67 BRIDGE - DRILLED SHAFT S. ALL THE NECESSARY DE SIGN WILL BE DONE A P S. NO TO ISSUE AS OF TODAY. A P S ALSO DRILLED AND SAMPLED ALL THE BORINGS FOR DOT D THRU THE GEOTECHNICAL RETAINER AND TE STED IN HOUSE BY A P S LABORATORY.

MEMBERS INVOLVED:

ENGINEERING

SERGIO AVILE S, P.E.- PROJECT MANAGE R
SAI EDDANAPUDI, M.E., P.E.- PROJECT ENGINEE R
SURENDRA RAJ PATHAK, M.S., P.E.- STAFF ENGINEE R

LABORATORY TESTING

SERGIO AVILE S, P.E.-QA/ QC
SAI EDDANAPUDI, M.E., P.E.-QA/ QC
DONNA EASTE RLY- LAB MANAGE R
CINDY FALKS-LAB TECH

DRILLING

MELVIN VASQUEZ -DRILLER TECH
VAN GEORGE-DRILLE R
ERIC BATEASTE-DRILLER
OSCAR JOHNSON-DRILLER TECH
TRE NTON ANDE RSON-DRILLER TECH

SIMILARITIES TO PROFESSIONAL GEOTECHNICAL SERVICES IDIQ

X	Geotechnical Explorations (GE)
X	Geotechnical Design (GD)
X	Geotechnical Construction (GC)
X	CMAR
X	Constructability
X	Contract Management (CM)

Firm name	**A P S Engineering and Testing, LLC**			Past Performance Evaluation Discipline(s)*	GEOTECH
Project name	**US-90 Railroad Overpass (S. East of LA-85)**			Firm responsibility (prime or sub?)	Sub
Project number	H.010155	Owner's name	SHREAD-KUYRKENDALL & ASSOCIATES, INC.		
Project location	Iberia Parish		Owner's Project Manager	Nicci D. Gill	
Owner's address, phone, email	13016 Justice Ave. Baton Rouge, LA 70816 (225) 296-1335 (225) 296-1338 (fax) ngill@skaengr.com				
Services commenced by this firm (mm/yy)	11/19	Total consultant contract cost ($1,000's)		N/A	
Services completed by this firm (mm/yy)	03/20	Cost of consultant services provided by this firm ($1,000's)		$105k	

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

GEOTECHNICAL INVESTIGATION TO PROVIDE CLIENT WITH THE NECESSARY INFORMATION FOR PLANNING AND DESIGN OF A 12 FT. X 10 FT. RCB, 412 FT. IN LENGTH. A TOTAL OF SIX (6) DEEP BORINGS WERE COMPLETED BY APS. OVER 60 ATTERBERGS AND UU WERE TESTED BY APS WITH 18 CONSOLIDATION TESTS. ALL THE NECESSARY TESTING DONE BY IN HOUSE BY A P S LABORATORY.

SIMILARITIES TO PROFESSIONAL GEOTECHNICAL SERVICES IDIQ	
X	Geotechnical Explorations (GE)
X	Geotechnical Design (GD)
X	Geotechnical Construction (GC)
X	Constructability
X	Contract Management (CM)

MEMBERS INVOLVED:

ENGINEERING

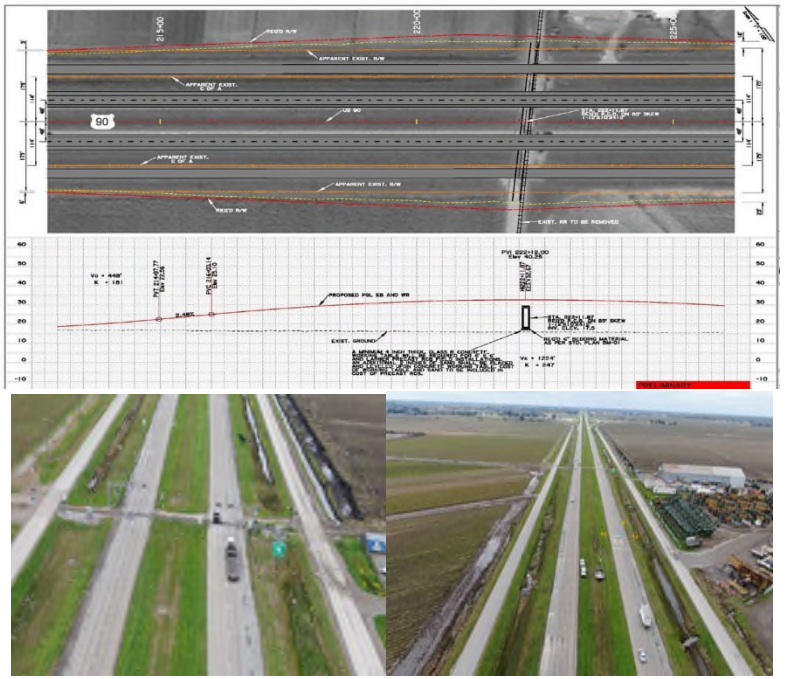
SERGIO AVILES, P.E.- PROJECT MANAGER
SAI EDDANAPUDI, M.E., P.E.-PROJECT ENGINEER
SURENDRA RAJ PATHAK, M.S., P.E.-STAFF ENGINEER

LABORATORY TESTING

SERGIO AVILES, P.E.-QA/QC
SAI EDDANAPUDI, M.E., P.E.-QA/QC
DONNA EASTERLY- LAB MANAGER
CINDY FALKS-LAB TECH

DRILLING

MELVIN VASQUEZ -DRILLER TECH
VAN GEORGE-DRILLER
ERIC BATEASTE-DRILLER
OSCAR JOHNSON-DRILLER TECH
TRENTON ANDERSON-DRILLER TECH



18. Approach and Methodology:

The CMAR Contract for **HOOPER ROAD WIDENING (LA3034 – LA37)** will be LADOTD's third project using the Construction Management at Risk (CMAR) delivery method. This project delivery approach when implemented properly will help accelerate the project delivery schedule while providing value through collaboration for this important suburban roadway project.

Sigma is excited to offer a design team with the expertise and experience in delivering the required highway and bridge design and plan development. Our approach is based on collaboratively coordinating with the LADOTD and CMAR contractor in a way that meets project goals and produces a project that optimizes a Guaranteed Maximum Price (GMP) and minimizes cost associated risks. Sigma, Arcadis and APS have direct relevant CMAR experience working on the I-10 (LA 415 to Essen Lane on I-10 and I-12) CMAR Project in Baton Rouge. Sigma and Arcadis have successfully completed several Design-Build projects for LADOTD and understand the alternative delivery process. Sigma has a wide breadth of design experience on urban roadways similar in scope to the Hooper Road CMAR project in the immediate project area including Hooper Road (Blackwater – Joor) and Sullivan Road (Lovett – Wax). We also prepared an Environmental Assessment for Hooper Road (Blackwater – Sullivan) for East Baton Rouge Parish.

We believe that we have assembled a team that can meet the demands of this project. We will be focused on close collaboration with the LADOTD and CMAR contractor to reap the benefits of early and regular coordination between the design team, the contractor, and the LADOTD. Our approach and methodology laid out below is similar to alternative delivery projects that we have successfully executed for LADOTD. Document sharing will be set up on both ProjectWise and SharePoint for effective communication between the Design Team, CMAR Contractor, and DOTD. A communication and responsibility matrix will be developed to identify all key players in the project and communication protocols will be established at the onset of the project.

Project Initiation (2-month duration) – Scoping, Fee Negotiations, Kickoff Meeting, Design Report Development

1. Upon design team contract execution, Sigma will begin gathering and reviewing existing project data. This includes the topographic survey, utility information, any environmental mitigation, commitments and permits, EA purpose and need, and other potential project constraints and restrictions identified in the EA.
2. This is a schedule driven project. Partnering with LADOTD, we will generate the project design schedule, finalizing it at the design kick-off meeting. The critical path and deliverables will be identified in more detail and scheduling software will be utilized to develop and track the project schedule.
3. At the project kick-off meeting, Sigma will distribute a draft of the project road design report and bridge design criteria developed for the project. It is our understanding that the only bridge structure in the defined project limits is the replacement of the three 9'x10' box culverts at Beaver Bayou. These criteria will be based on the LADOTD "Minimum Design Guidelines" and Chapter 3 of the BDEM. This will help to ensure everyone is on the same page regarding the applicable project design criteria and allow for our team to move forward swiftly into the design once applicable design criteria are agreed to and approved.
4. Within one week following the meeting, Sigma will submit minutes of the kick-off meeting along with the project specific design report and bridge design criteria.

30% CMAR Plans (Definitive Design) (5-month duration) – Plan Development & Design Similar to 95% Preliminary Plans Level

5. After the project initiation stage, we will develop roadway typical sections, plan-profile sheets, preliminary details, and cross sections. In addition, preliminary drainage plans will be developed identifying all required drainage features. Preliminary required right-of-way lines will be set to identify any early acquisition opportunities and to assist in starting the right of way map preparation process.
6. Once the major drainage crossings are analyzed, we will develop the appropriate bridge GPE sheets, and prepare preliminary foundation plans & pile table, preliminary bent details, span layouts and framing plans if it is determined hydraulically that a bridge is required at the Beaver Bayou crossing.
7. We will develop a preliminary maintenance of traffic plan during the definitive design development. Appropriate coordination with LADOTD headquarters and district personnel, and East Baton Rouge Department of Transportation and Drainage will take place to ensure we are proceeding with an acceptable traffic maintenance plan.
8. We will prepare an engineer's cost estimate of construction, including material and product quantities, at the completion of the 30% design stage.
9. Our Team will submit the 30% plan for LADOTD review and will address all comments prior to finalization of the 30% Definitive Design Package.

CMAR Contractor Procurement (3-month duration) – Concurrent With 30% CMAR Plans

10. Our Team's 30% design submittal will be used as the basis for commencement of the open book cost estimation process with the CMAR Contractor. It is anticipated that the CMAR Contractor will be selected prior to completion of the 30% CMAR Plans.
11. To facilitate open communication and positive collaboration, Sigma will meet with the selected CMAR Contractor and LADOTD shortly after the execution of their contact. At this meeting, Sigma will work with the contractor to develop a process to guide collaboration between LADOTD, the designer and the CMAR contractor. The process guide will include a clear understanding and agreement between all parties of the formal and non-formal engagements that will need to take place between the CMAR contractor, the design team, and the LADOTD in order to drive the needed collaboration to deliver a successful project.

60% CMAR Plans (7-month duration) – Plan Development and Design to 60% Final Plans Level

12. At the start of 60% Plan development, Sigma will hold a design and constructability review meeting with the selected CMAR contractor, the LADOTD, and stakeholders, as necessary, to address any comments and/or suggestions the Contractor may have to the 30% plans.
13. Utilizing Design Review Forms, we will document all responses to comments received and actions taken. Upon LADOTD concurrence, we will revise the plans accordingly and continue plan development, expanding on the plan details and designs.
14. We intend to have design/production meetings bi-weekly with all team members, including the Contractor and LADOTD. In addition, we will have "continuous" communication processes in place intended to provide on-going design and constructability reviews in coordination with LADOTD and the CMAR Contractor
15. To expedite the project, Sigma will coordinate its engineering and design efforts with the CMAR Contractor and work with the CMAR Contractor to identify long lead-time items. The CMAR Contractor may also identify various elements that may require less than 100% design. These items will be considered for early construction design units (GMP's). In addition consideration will be given to developing other early works GMP's , such as roadway plan development for clearing and grubbing. This would have to be coordinated with the right-of-way acquisition and utility relocation schedules.

16. The 60% CMAR Plans submittal will include all plans and details to fully scope the project and serve as a basis for a Guaranteed Maximum Price (GMP) determination. This includes typical sections, plan-profiles, drainage plans and details, miscellaneous details, maintenance of traffic plans, permanent signing and striping plans, bridge plans and cross sections.
19. Upon submittal of the 60% plans, we will begin coordination with LADOTD for R/W maps and utility relocations. Sigma's experienced utility coordinator can assist LADOTD in the efforts to help expedite work effort related to URA's.
20. Independent of the CMAR Contractor, Sigma will update the plan quantities and develop an engineer's cost estimate. Then Sigma will participate in the 60% open-book cost estimating sessions at the request of LADOTD.

90% CMAR Plans (3-month duration) – Plan Development and Design to ACP Plans Level

21. Within 3 weeks of the submittal of the 60% CMAR plans, we will have a plan review meeting with LADOTD, the CMAR contractor and all stakeholders, as necessary, to discuss design, constructability, maintenance of traffic and other critical project components. Responses will be documented. Upon LADOTD concurrence, we will revise the plans accordingly.
22. Sigma, working with LADOTD and the contractor, will also help to finalize the development of the maintenance of traffic plan. We will also finalize the draft Transportation Management Plan for agency review and approval.
23. Independent of the CMAR Contractor, Sigma will update the plan quantities and develop an engineer's cost estimate. Then Sigma will participate in the 90% open-book cost estimating sessions at the request of LADOTD.

100% CMAR Plans (2-month duration) – Plan Development and Design to 98% Final Plans Level (Ready for Construction)

24. As determined by LADOTD and if necessary, Sigma will conduct a final design/ constructability review with LADOTD, the CMAR Contractor and Stakeholders
25. All final plan comments will be addressed with documented responses, and the plans will be stamped and signed and submitted for construction.

Project Management

Sigma offers a longstanding staff with a strong background in road design and alternative delivery projects. Most of our core engineering group has been with Sigma for over 15 years and has their primary experience in transportation related projects for LADOTD. Please refer to the resumes of Section 17 for specific personnel experience. The longevity of the core group helps facilitate the communication necessary for project success.

Robbie Lear, P.E., L.S.I. will serve as a Project Manager. He has over 24 years of road design experience with LADOTD projects. He has been lead project engineer on 2 separate design build projects and currently serves as lead engineer on the I-10 CMAR Project in Baton Rouge. He has designed several complex maintenance of traffic plans, diversions and detours for LADOTD projects similar to the HOOPER ROAD CMAR project. He also has experience in surveying and SUE services for LADOTD.

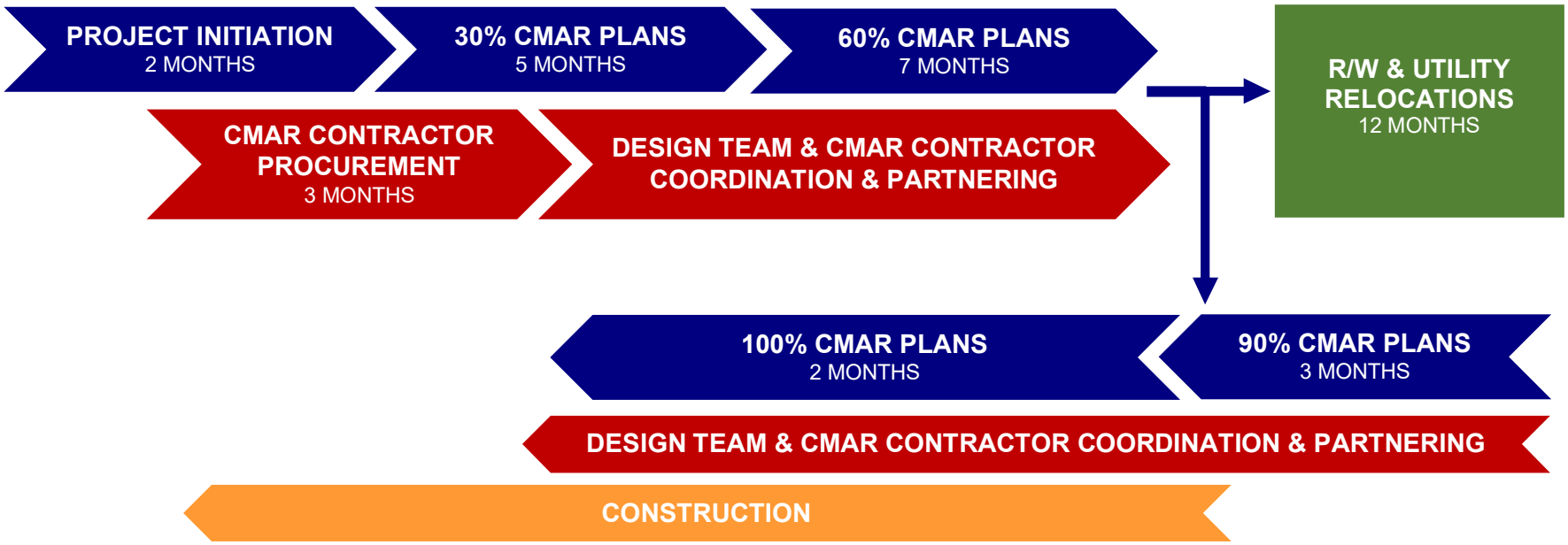
Design Reviews

In addition to on-going reviews, Sigma, along with LADOTD will coordinate design reviews at the 30%, 60%, 90%, and 100% design milestones. These reviews are to be attended by LADOTD, the Consultant, the CMAR Contractor, and, as necessary, stakeholders. The Consultant shall document all comments received and actions taken including justifications for not including suggested revisions.

1. Sigma will provide a Design Review Form DR along with the plans for each review prior to the Design Review Meeting.

2. Within two (2) weeks following a submittal, all stakeholders shall return comments to the design team.
3. The LADOTD will provide written comments to Sigma in a properly completed Form DR with as much information as possible to describe the concern and the urgency the reviewer places on the issue.
4. Sigma will distribute the comments to the Responsible Engineer(s) for Initial Disposition and Initial Response. The intent is that the Initial Disposition and response will be available for discussion at the Design Review Meeting. .
5. Design Review Comments are then discussed at the Design Review Meetings scheduled by Sigma and LADOTD. This is the opportunity for the Responsible Engineer to directly discuss the comment with the reviewer to ensure the concern or comment is properly understood and will be properly addressed. Other attendees at the DRM are invited to participate in the discussion. The intent is that the full collective experience of the persons attending the DRM be utilized in understanding the issue and the proposed resolution.
6. The Initial Disposition and Initial Response may be accepted by the Reviewer or may be revised by the Responsible Engineer after discussion. The Initial and/or Revised Disposition and Responses will be collected by Sigma and issued with the DRM minutes. Reviewers are to notify Sigma promptly if there is disagreement with the response provided.
7. The Responsible Engineer begins incorporating changes to the drawings/special provisions based on the initial responses provided. The Responsible Engineer also completes any evaluations required for comments with an initial disposition of “will evaluate”.
8. The Responsible Engineer shall finalize the Form DR Completing the 'Final Disposition' column.
9. Robbie Lear, as the team’s project manager, will verify that all comments have been completed, will put his initials in the “verified” column, and will submit the final Form DR with the following submittal.

Sigma will schedule and conduct a final Design Review when the plans and specification are 90% complete. Sigma will specifically highlight and bring to the attention of the LADOTD any changes to information presented at previous Design Reviews.



19. **Workload:**

Firm	Past Performance Evaluation Disciplines(s)*	State Project Number	Project Name	Remaining Unpaid Balance**
Sigma Consulting Group, Inc.	Survey		(we have no current survey work with DOTD)	$0
	Bridge	4400019338	Rural Bridge Replacement Initiative Phase II (South)	
		H.012061	LA 1	$83,661
		H.012565	LA 963	$96,772
		H.012891	LA 300	$46,976
		H.014213	LA 700	$90,881
		H.014215	LA 20	$125,094
		H.014216	LA 682	$187,146
		H.014241	LA 10	$64,804
		H.014251	LA 422	$79,125
		H.014252	LA 1054	$51,014
		H.014253	LA 421	$46,625
		H.014254	LA 955	$211,943
		H.014256	LA 952	$161,463
		H.014257	LA 68	$86,839
		H.014276	LA 975	$68,450
		H.014278	LA 85	$118,629
		H.014279	LA 35	$91,730
	Road, Bridge	H.002868	Ambassador Caffery & US 90 Interchange	$512
	Road	H.014415	LA 352 Drainage Improvements	$51,876
		H.004791	Belle Chasse Bridge & Tunnel Replacement	$5,307
		H.003370	I-220/I-20 Interchange IMP & BAFB Access	$65,000
		H.004100	I-10: LA 415 to Essen Lane on I-10 and I-12	$1,929,092
		H.013797	LA 30: EBR PL - I-10 (Environmental Assessment)	$92,955
		H.010652	LA 73: US 61 (Airline) – Essen Lane	$187,787
	Environmental	H.004526.5	Leeville - Golden Meadow (Ph. 2 Permits)	$107
	CE&I / OV	H.003003	I-10 (East Jct. I-49 to LA328) Construction Support	$4,312
		H.010601	I-10 (LA328 - LA347) Construction Support	$22,574
		H.013897	Owner Verification Services For College Drive Flyover Ramp I-10/I-12 West	$56,615

19. Workload.

Firm(s)	Past Performance Evaluation Discipline(s) *	State project number	Project name	Remaining Unpaid Balance**
Arcadis	Environmental	H.002397.2	LA 16 (Pete's Hwy) Interstate 12 Interchange Route	$20,109
Arcadis	Environmental	H.011328.2	I-49 South (Ricohoc to Berwick)	$828,788
Arcadis	Traffic	H.011328.2	I-49 South (Ricohoc to Berwick)	$176,056
Arcadis	Road	H.011328.2	I-49 South (Ricohoc to Berwick)	$353,273
Arcadis	ITS	H.013868.5	ITS Program Management and Operations (2021)	$171,274
Arcadis	ITS	H.013868.6 (A)	ITS Routine Maintenance Engineering and Inspection (ME&I) (2021)	$75,276
Arcadis	ITS	H.013868.6 (B)	ITS Responsive/Emergency Maintenance Engineering and Inspection (ME&I) (2021)	$49,298
Arcadis	ITS	H.013868.5	ITS Program Management and Operations (2022)	$668,651
Arcadis	ITS	H.013868.6 (A)	ITS Routine Maintenance Engineering and Inspection (ME&I) (2022)	$674,471
Arcadis	ITS	H.013868.6 (B)	ITS Responsive/Emergency Maintenance Engineering and Inspection (ME&I) (2022)	$154,105
Arcadis	ITS		PO No. 2000588785 Scott Tower Cable and Grounding Repair, PO No. 2000609725 I-10 @ Louisiana Ave CCTV & Elec Repair, PO No. 2000610683 I-110 @ US61 Mini-Split AC Install, PO No. 2000620009 LA 3040 @ Hollywood Rd Elec Serv. Install, PO No. 2000617303 I-10 @ Picardy CCTV Upgrade, PO No. 2000617304 US 61 @ Greenwell Springs Bluetoad Install, PO No. 2000634022 I-60 @ Canal CCTV Upgrade, PO No. 2000634027 I-20 @ I-220 CCTV Repair For The Site in Shreveport, LA, PO No. 2000635990 LaPlace Microwave Tower CCTV Install, PO No. 2000635996 I-10 @ Claiborne DMS Electrical Service Vandalism Repair, PO No. 2000644636 I-10 @ LA 22 DMS CCTV Install	$52,200
Arcadis	CE&I/OV	H.011220.6-1	I-10 CBD2 Carrollton-Lafitte Ave and Supplement No. 1	$120,499
Arcadis	CE&I/OV	H.012876.6	US 90Z (I-10 Magnolia Street) Supplement No. 1	$36,153
Arcadis	CE&I/OV	H.013710.6	I-10: US 61 to Laplace ITS Deployment	$542,651
Arcadis	Environmental	H.009932	US 80 Widening: Vancil Road to Well Road Environmental Assessment	$5,343
Arcadis	Traffic	H.003370	I-220/I-20 Interchange IMP & BAFP Access Design Build	$15,000
Arcadis	Traffic	H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	$774,686
Arcadis	Bridge	H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	$1,424,422
Arcadis	ITS	H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	$299,878
Arcadis	Traffic	H.005121	LA 1/LA 415 Connector	$108,947
Arcadis	Traffic	H.972419.1	SHSP Update and Regional SHSP Marketing/Advertising Support	$31,557
Arcadis	Road	H.012901.6, H.010634.6	US 90Z (Bodenger Blvd. – Stumpf Blvd.)	$339,654
Arcadis	Traffic	H.012018.6	Adaptive Traffic Signal Design and Implementation	$12,608
Arcadis	Traffic	H.014305.1	US 61: Cardinal Drive to Bert Street	$24,979
Arcadis	Traffic	H.013522.1	LA 3040 Feasibility Study	$80,000

Arcadis	Environmental	H.012891	LA 300 at Bayou LaLoutre	$12,825
Arcadis	Environmental	H.014215	LA 20 at 40 Arpent Canal and Drainage Canals	$50,048
Arcadis	Environmental	H.014213	LA 700 at Indian Bayou and Bayou Grand Marais	$40,179
Arcadis	Environmental	H.014279	LA 35: Drain Canal Near Lawtell	$32,759
Arcadis	Environmental	H.014278	LA 85: Patout and Drain Canal Bridges	$39,894
Arcadis	Environmental	H.014276	LA 975: Creek Bridges	$20,579
Arcadis	Environmental	H.014216	LA 682 at Norris Canal and Unnamed Tributaries	$48,600
Arcadis	Environmental	H.014241	LA 10 at Mill Creek	$32,741
Arcadis	Environmental	H.014251	LA 422: Bridge Over Unnamed Stream	$31,538
Arcadis	Environmental	H.012565	LA 963 at Redwood Creek and Little Redwood Creek	$14,378
Arcadis	Environmental	H.014257	LA 68 at Karrs Creek	$33,121
Arcadis	Environmental	H.014253	LA 421 at Thom Creek	$13,880
Arcadis	Environmental	H.014256	LA 952 at McKowen Creek and Beaver Creek	$38,383
Arcadis	Environmental	H.014254	LA 955 at Knighton Bayou, Trib. Olive Branch, White Branch, and Chapman Branch	$55,056
Arcadis	Environmental	H.012061	LA 1 at Lateral W15#7A and Bayou Moreau	$13,934
Arcadis	Environmental	H.014252	LA 1054 at Tyner Creek	$11,799

(Add rows as needed) DO NOT SUM

* The only past performance evaluation disciplines to be used are. Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other. If a firm has more than one past performance evaluation discipline for any single project, the firm can use multiple rows to express the remaining unpaid balance per evaluation discipline.

** Round to the nearest dollar. **Do not** round to the nearest thousands. If there are no active contracts with a remaining unpaid balance, place N/A in the Remaining Unpaid Balance column. LEAVING THE "REMAINING UNPAID BALANCE" COLUMN BLANK IS NOT ACCEPTABLE.

19. Workload:

For all contracts where a firm on the team is a prime consultant or sub-consultant and where a) the consultant selection was made by DOTD, and b) a contract was executed by the consultant and the contracting entity by the date the advertisement for this proposal was posted, list all work meeting the following criteria:

1) one of the team's firms is responsible for the performance of the work;
2) authorization to perform the work has been provided, as provided in the contract between the consultant and the contracting entity;
3) the work has not yet been performed and invoiced; and
4) the work is not currently suspended for an indefinite period of time.

For indefinite delivery/indefinite quantity (IDIQ) contracts, list open Task Orders individually.
List only the portion of the fees attributable to firms on the team.

Firm(s)	Past Performance Evaluation Discipline(s) *	State project number	Project name	Remaining Unpaid Balance**
A P S	GEOTECH	H.013127	Retainer Contract for Geotechnical Services	$53,996.00
A P S	GEOTECH	H.013144	Retainer Contract for Geotechnical Services	$45,457.00

(Add rows as needed) DO NOT SUM

* The only past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other. If a firm has more than one past performance evaluation discipline for any single project, the firm can use multiple rows to express the remaining unpaid balance per evaluation discipline.

** Round to the nearest dollar. **Do not** round to the nearest thousands. If there are no active contracts with a remaining unpaid balance, place N/A in the Remaining Unpaid Balance column. LEAVING THE "REMAINING UNPAID BALANCE" COLUMN BLANK IS NOT ACCEPTABLE.

20. Certifications/Licenses:

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.

Alex Farr, PE	Traffic Engineering Analysis Process & Report Modules 1, 2, & 3
Akhil Chauhan, PE, PTOE, PTP, PMP	Traffic Engineering Analysis Process & Report Modules 1, 2, & 3
Ari Deitch, PE, PTOE	Traffic Engineering Analysis Process & Report Modules 1, 2, & 3
Kester Hollier, PE, PTOE	Traffic Engineering Analysis Process & Report Modules 1, 2, & 3

Certificate of Completion

presented to

Alex Farr

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor

Authorized Instructor

Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Alex Farr

for completing the

Traffic Engineering Analysis Process & Report Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor

Authorized Instructor

Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Alex Farr

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 18, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | *Authorized Instructor* | *Authorized instructor*

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: June 4, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: June 11, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: September 10, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ari Deitch

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ari Deitch

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ari Deitch

for completing the

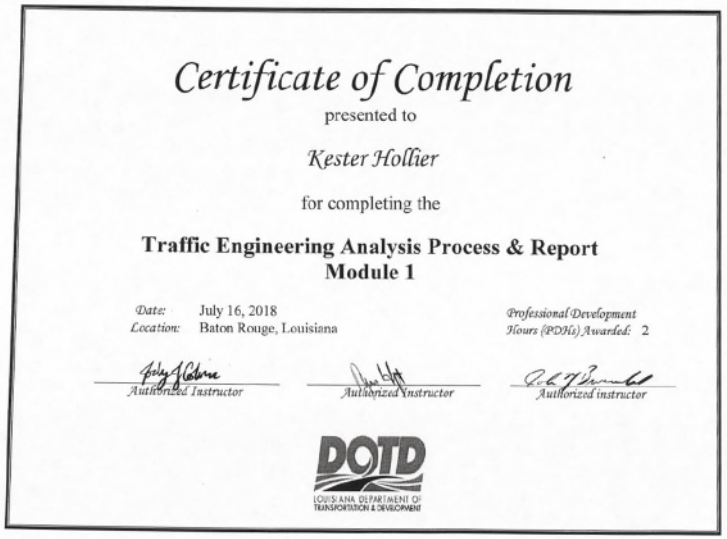
Traffic Engineering Analysis Process & Report
Module 3

Date: October 15, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Kester Hollier

for completing the

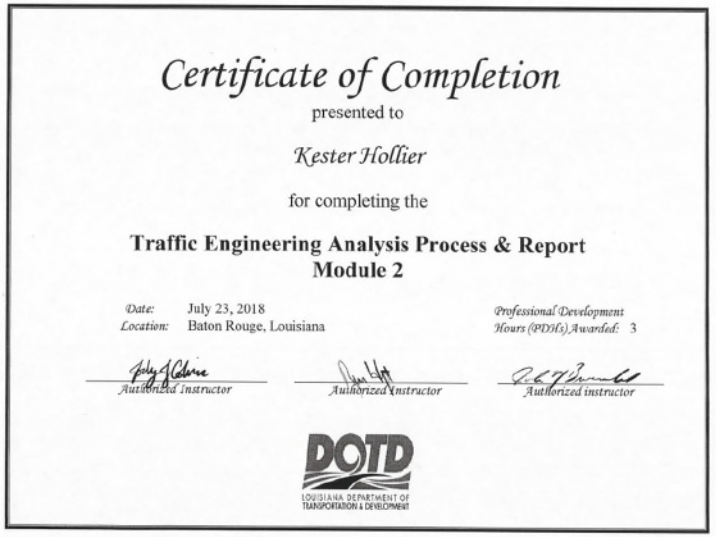
Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Kester Hollier

for completing the

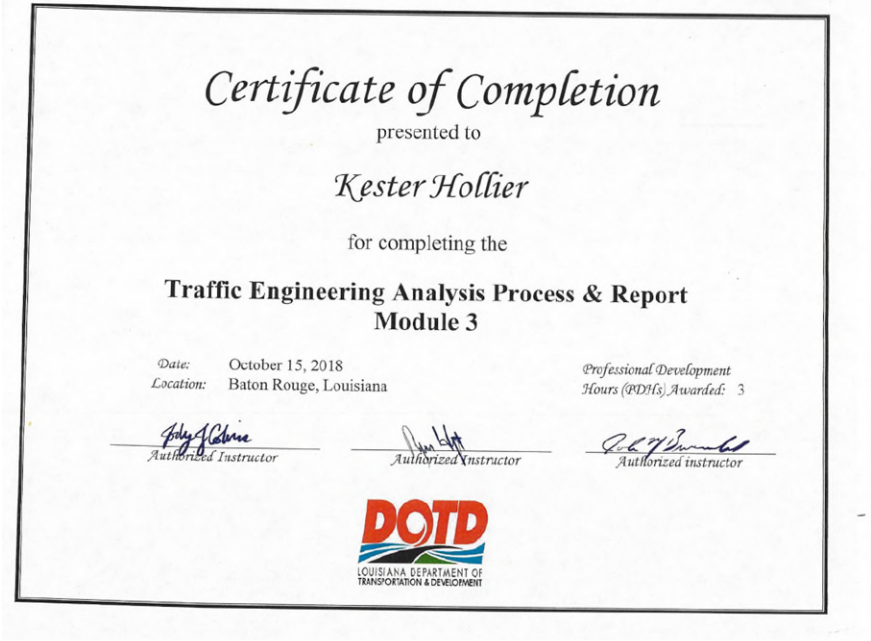
Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Kester Hollier

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 15, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

21. QA/QC Plan and/or Work Plan:

If the advertisement requires submission of a QA/QC plan or Work plan, include them here. Otherwise, leave this section blank.

22. **Sub-consultant information:**

Firm Name (as registered with Louisiana's Secretary of State)	Address	Point of Contact and email address	Phone Number
APS Engineering and Testing, LLC	1645 Nicholson Drive Baton Rouge, LA 70802	Sergio Aviles, PE sergio@aps-testing.com	(225) 456-5714
Arcadis U.S., Inc.	10352 Plaza Americana Drive Baton Rouge, LA 70816	Akhil Chauhan, PE akhil.chauhan@arcadis.com	(225) 368-6563

23. Location:

If location is an evaluation criterion for this advertisement and the prime consultant intends to establish a local presence, describe the plan for doing so. Otherwise, leave this section blank.

The Louisiana Professional Engineering and Land Surveying Board has the following information on file:

Name:	Public Address:
Sigma Consulting Group, Inc.	Mr. Miles B. Williams10305 Airline Highway Baton Rouge, Louisiana 70816

License/Certificate Information w/ Supervision

License	Status	First Issuance Date	Expiration Date	Supervisor(s)
EF.0001410	Active	08/21/1987	09/30/2023	Mr. Miles Bonner Williams # PE.0023094 - Active