DOTD FORM: 24-102

(Revised June 1, 2021)

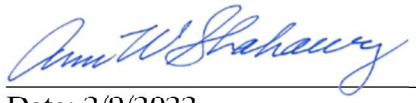
PROPOSAL TO PROVIDE CONSULTANT SERVICES

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	CONTRACT FOR US 190: UPRR OVERPASS NEAR OPELOUSAS
2. Contract number(s) as shown in the advertisement	4400023434
3. State Project Number(s), if shown in the advertisement	H.000445
4. Prime consultant name (as registered with the Louisiana Secretary of State where such registration is required by law)	**SDR Engineering Consultants, 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)	EF0003263 DUNS Number: 968522367
6. Prime consultant mailing address	2820 Continental Drive, Suite 100, Baton Rouge, LA 70808
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	2820 Continental Drive, Suite 100, Baton Rouge, LA 70808
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Mohsen Shahawy, PhD, PE Principal & COO (850) 222-2737, Ext. 226 shahawy@sdrengineering.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Ann Shahawy CEO (850) 222-2737, Ext. 222 ashahawy@sdrengineering.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: 2/9/2022
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): Urban System, Inc. Firm(s)' %: 3%

12. Past Performance Evaluation Discipline Table:

As indicated in the advertisement, insert the completed table here. The percentages for the prime and sub-consultants must total 100% for **each past performance evaluation discipline**, as well as the overall total percent of the contract.

Sub-consultants are allowed to be used for this proposal. Fill in the table by identifying only those evaluation disciplines consistent with the approach and methodology proposed in Section 19 of the DOTD Form 24-102*, the name of each firm that is part of the proposal, and the percentage of work in each past performance evaluation discipline to be performed by that firm. The percentage estimated for each evaluation discipline is for evaluation purposes only and will not control the actual performance or payment of the work. The percentages for the prime and sub-consultants must total 100% for each past performance evaluation discipline, as well as the overall total percent of the contract.						
Evaluation Disciplines	**% of Overall Contract**	**SDR (Prime)**	**VOL**	**F&T**	**MCI**	**USI**
Bridge	75%	96%	0%	0%	4%	0%
Road	15%	0%	100%	0%	0%	0%
Survey	7%	0%	0%	100%	0%	0%
Traffic	3%	0%	0%	0%	0%	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%**	**72%**	**15%**	**7%**	**3%**	**3%**

Consultants

F&T: Fort & Tablada, Inc.

SDR: SDR Engineering Consultants, Inc.

Volkert, Inc.

Monroe & Corie, Inc.

Urban Systems, Inc.

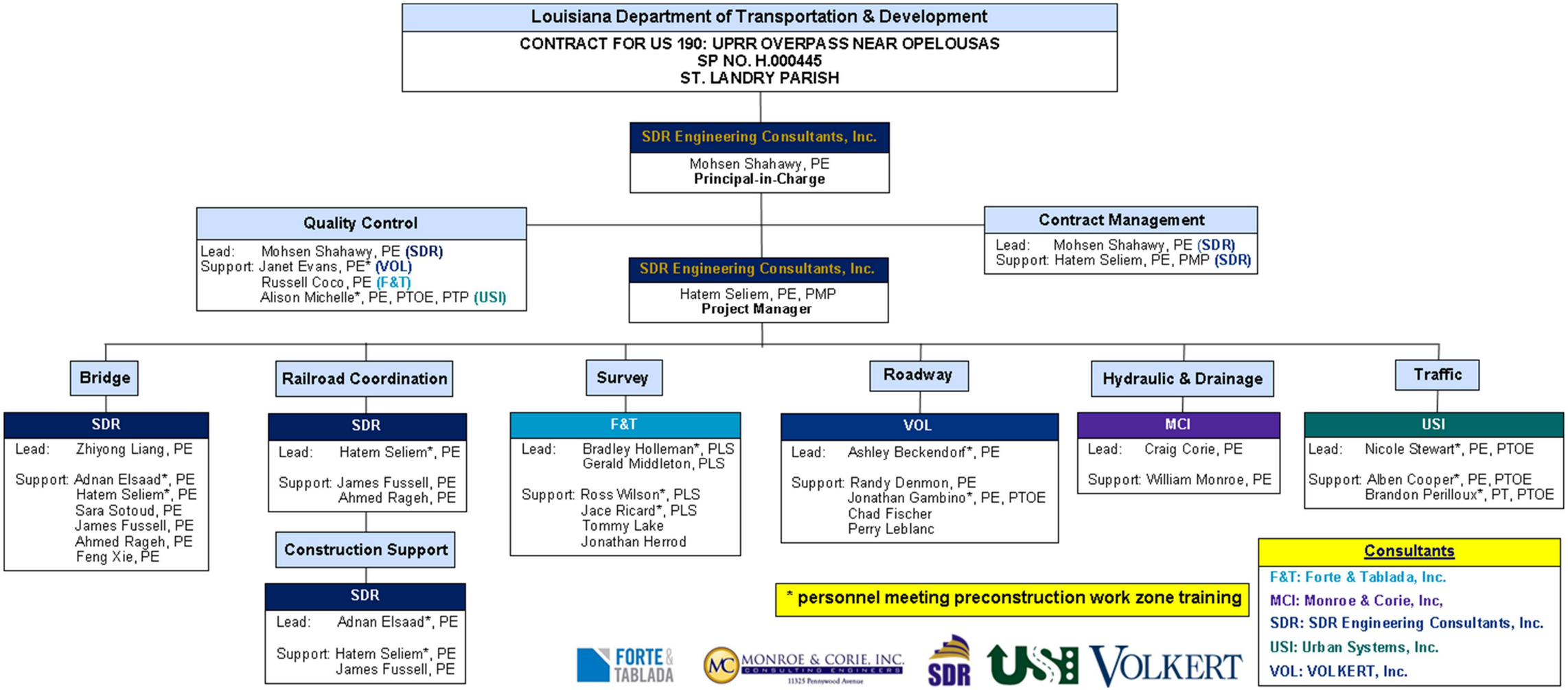
13. Firm Size:

For all firms that are part of this team, indicate the approximate number of personnel to be committed to this contract, by DOTD Job Classification and the total number of personnel within the firm that could provide support, if needed. If a specialized job classification is required and not included on the DOTD job classification list, specify "Other (xxxx)" and include the classification title inside the parentheses. The DOTD Job Classification(s) to be used can be found at the following link: http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/Job_Qualification/Job%20Classifications%20with%20Descriptions.pdf

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
SDR Engineering Consultants, Inc.	Principal	1	2
	Supervisor Engineer	2	3
	Engineer	2	7
	Engineer Intern	6	10
	Inspector-Bridge	2	6
	CADD Drafter	1	2
	Computer Analyst	1	2
	Administrative	1	2
Volkert, Inc.	Civil Engineer	4	21
	CADD Technician	3	5
Monroe & Corie, Inc.	Engineer	2	2
	CADD Operator	1	1
	Clerical	1	1
Urban Systems, Inc.	Supervisor – Eng.	1	2
	Engineer	1	6
	Engineer Intern	2	2
	CAD Technician	1	1
	Technician	2	3

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
Forte and Tablada, Inc.	Administrative	-	3
	CADD Technician	8	8
	Clerical	-	4
	Engineer	-	4
	Inspector	-	3
	Instrument Man	1	1
	Party Chief	6	6
	Engineer Intern	-	8
	Principal	1	3
	Rodman	11	11
	Senior Technician	3	3
	Supervisor Eng	-	4
	Supervisor Other	-	2
	Surveyor	4	5

14. Organizational Chart:



15. Minimum Personnel Requirements:

Use the table below to identify both prime consultant and sub-consultant staff designated to work on this contract meeting the Minimum Personnel Requirements (MPRs) specified in the advertisement. Ensure the résumé reflects the required experience stated in the MPR.

MPR No.	Personnel being used to meet the MPR	Firm employed by		Type of license / certification & number	State of license	License / certification expiration date
1	Mohsen Shahawy, PhD, PE	SDR Engineering Consultants, Inc.	SDR	PE.31465	LA	03/31/2023
2						
3	Zhiyong Liang, PhD, PE			PE.34873	LA	03/21/2022
	Hatem Seliem, PhD, PE, PMP			PE.39759	LA	09/30/2023
4	Gerald Middleton, PLS	Forte and Tablada, Inc.	FORTE & TABLADA	PLS.4856	LA	09/30/2023
5	Bradley Holleman, PLS			PLS.5082	LA	09/30/2022
6	Janet Evans, PE	Volkert, Inc.	VOLKERT	PE.21307	LA	09/30/2022
	Ashley Beckendorf, PE			PE.37334	LA	03/31/2023

16. Staff Experience:

Firm employed by: SDR Engineering Consultants, Inc.					
Name	**Mohsen Shahawy, PhD, PE**		Years of relevant experience with this employer	25	
Title	Principal and COO		Years of relevant experience with other employer(s)	15	
Degree(s) / Years / Specialization			PhD / 1984 / Civil Engineering MS / 1981 / Civil Engineering BS / 1976 / Civil Engineering		
Active registration number / state / expiration date			PE.31465 / Louisiana / 03-31-2023		
Year registered	2004	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities			Principal in charge, design, management, QC/QA		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "Bridge Inspection", "condition assessment", "steel and concrete rehabilitation, "Non-destructive Testing", "Project Management".
Dr. Shahawy is the managing principal of SDR. He has 40 years of experience and has published over 180 papers in the areas of prestressed/reinforced concrete performance, LRFD Code issues related to shear performance, structural testing, evaluation, load testing and load rating of bridges, dynamic behavior of bridges, and bridge rehabilitation. He is a Co-author of the Prestressed Concrete Institute (PCI) Bridge Design Manual. He has led the SDR team in the development of the **LADOTD Bridge Design and Evaluation Manual** and in the development of the **LG Girder Details and Design Standards**. He has been responsible for the design of more than 90 bridges with spans ranging up to 280 feet, the production of conceptual reports for 40 bridges, and design peer reviews of more than 300 bridges for various authorities.	
08/19 – Present	**H.011309: MacArthur Interchange Completion, Phase II, Jefferson Parish, LA** Scope of work is to provide two new on-ramp and off-ramp connection between the eastbound of West Bank Expressway (US 90-Z) and Frontage road, demolish the existing off-ramp, and widen the US 90-Z bridge to accommodate the new ramps. The project consisted of providing all necessary engineering design services (Stage 3) required to construct the two separate ramp structures and the relocation of Frontage road. To accommodate the new structures for the two ramps, Frontage road required relocation along with utilities while maintaining all business access. Dr. Shahawy's Role(s): performed independent QC/QA of all structure elements and provided guidance to the project team to address review comments at every stage.
10/16 – 04/21	**H.002980: I-10 over US 165 and MP RR, Jefferson Davis Parish, LA** replacement of the two I-10 bridges overpass US 165 and MP Railroad. Each bound total bridge length is 765 ft. comprising seven (7) spans. Four (4) spans were made one continuous unit, and the other three (3) spans were continuous unit. Design included all elements of bridge structure along with required slope and embankment work. The replacement of the bridge involved complex construction phasing to maintain traffic on the interstate

	while removing the old structure and constructing the new bridge. To ensure design economy and accelerated construction, DOTD standard precast prestressed concrete girders (LG Girders) were used for the superstructure. Role: Lead the development of the construction phasing and carry out QC/QA review of design.
11/17 – 10/20	**H.011484: US-80 Texas Street Bridge Rehabilitation, Shreveport, LA** The bridge consists of a main truss span comprised of two 182 ft. anchor spans and one 520 ft. steel cantilever span, six 102.75 ft. steel deck truss spans, one 91 ft. steel girder span, and 35 reinforced concrete deck girder approach spans of varying span lengths. The scope of work consisted of conducting NBIS element level inspection of the entire bridge, 3-D computer modeling and analysis of existing deficiencies, load rating based on existing conditions, developing scope of rehabilitation including cleaning and painting of steel trusses, design of epoxy-urethane overlay system on deck, CFRP repair of concrete spall for columns, caps and concrete beams, strengthening of steel truss spans members, floor beams and gusset plates, repair of steel plate girder spans, sealing of joints and pin replacement. **Role(s):** performed independent QC/QA of all above listed work elements and provided guidance to the project team to address review comments at every stage.
10/18 – 02/21	**H.011487: LA 182 Over Atchafalaya River (Berwick Bay) Bridge Rehabilitation, Lafayette, LA** The Bridge, built in 1933, is a through truss carrying LA-182 over Atchafalaya River. The bridge consists of three main trusses with span length of 608 ft. each, two deck trusses with span length of 126 ft. each, and 40 concrete T-beam spans with span length of 40 ft. each. The work included performing in-depth inspection of the truss and concrete spans, NDT of the concrete T-beams, load rating the bridge based on observed deficiencies, 3-D modeling of computer models of the truss spans, analysis including design and developing repair details for the steel truss members, gusset plates, reinforced concrete T-beam and deck slab, prepare rehabilitation plans and technical special provisions and construction cost estimate. **Role(s)**: independent QC/QA of all above listed work elements and provided guidance to the project team to address review comments at every stage.
07/15 – 06/17	**Evaluation and Load Rating of Three Major Truss Bridges, Statewide, LA** The scope of work included in-depth inspection and 3-D computer modeling of the truss spans to access existing deficiencies and performing load rating of three major truss bridges including the approach spans. 1. Mississippi River Bridge at Vicksburg (4,210 ft) 2. Sunshine Bridge at Donaldsonville (3,327 ft) 3. I-10 Calcasieu River Bridge at Lake Charles (6,617 ft) **Role (s)** Project Manager, lead engineer, Responsibilities included: QC review of all inspection reports, structural assessment of found deficiencies and determining effect of steel section loss for both members and gusset plates on load rating; developing structural modeling parameters and supervising the team developing the 3-D finite element model for the main truss using LUSAS; and load rating all elements of the truss spans.

Firm employed by: SDR Engineering Consultants, Inc.					
Name	**Zhiyong Liang, PhD, PE**		Years of relevant experience with this employer	13	
Title	Vice President		Years of relevant experience with other employer(s)	12	
Degree(s) / Years / Specialization			PhD / 2008 / Civil Engineering MS / 2004-2005 / Civil Engineering-Computer Science BS / 1996 / Civil Engineering		
Active registration number / state / expiration date			PE.34873 / Louisiana / 3-31-2022		
Year registered	2009	Discipline	Civil Engineering-Structures		
Contract role(s) / brief description of responsibilities			bridge design lead		

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).
Dr. Liang experience focuses on bridge design, load rating, conditions evaluation of steel and concrete bridges. He has been a project manager and Engineer of Records on many successfully competed bridge designs, testing, and rehabilitation projects. He served as a lead engineer in the development of the LADOTD Bridge Design and Evaluation Manual.	
08/19 – Present	**H.011309: MacArthur Interchange Completion, Phase II, Jefferson Parish, LA** Scope of work is to provide two new on-ramp and off-ramp connection between the eastbound of West Bank Expressway (US 90-Z) and Frontage road, demolish the existing off-ramp, and widen the US 90-Z bridge to accommodate the new ramps. The project consisted of providing all necessary engineering design services (Stage 3) required to construct the two separate ramp structures and the relocation of Frontage road. To accommodate the new structures for the two ramps, Frontage road required relocation along with utilities while maintaining all business access. SDR is the prime consultant and Dr. Liang responsibilities are as follows: • Lead the design and plans development of the superstructure. • QCQA review of substructure design and plans production. • Lead construction cost estimate
10/16 – 04/21	**H.002980: I-10 over US 165 and MP RR, Jefferson Davis Parish, LA** replacement of the two I-10 bridges overpass US 165 and MP Railroad. Each bound total bridge length is 765 ft. comprising seven (7) spans. Four (4) spans were made one continuous unit, and the other three (3) spans were continuous unit. Design included all elements of bridge structure along with required slope and embankment work. The replacement of the bridge involved complex construction phasing to maintain traffic on the interstate while removing the old structure and constructing the new bridge. To ensure design economy and accelerated construction, DOTD standard precast prestressed concrete girders (LG Girders) were used for the superstructure. Dr. Liang responsibilities were as follows:

	• Engineer of Record overseeing the bridge structural design of the superstructure and substructure, deck drainage design, and construction cost estimate. • Project manager coordinating with LADOTD Project Manager and roadway design group.
09/18 – 08/19	**H.012009: US 71 (LA-1) S Market Street over ICG RR, Caddo Parish, LA** This project was to provide Stage 0 Design (Feasibility Study) on the twin two-lane bridge structures on US 71 (LA-1) Market Street viaduct Southbound over ICR railroad through downtown Shreveport. Two alternates were designed to satisfy the railroad minimum clearance requirements. Several stakeholders were identified and were approached for solicitate of views (SOV) about the two selected alternates. Dr. Liang served as the Project manager overseeing the different tasks and leading the structural design of the two alternates.
10/19 – 10/20	**H.012028: I-20 over Lakeshore Drive and KCS RR, Caddo Parish, LA** This project was to provide Stage 0 Design (Feasibility Study) for four (4) bridge structures of I-20 crossing over Lakeshore Drive and KCS Railroad in Shreveport, LA. Design of rehabilitation to improve the bridges conditions, service life, and load rating was carried out by SDR. Different rehabilitation options were designed and detailed. Cost estimate and rehabilitation plans were provided to assist DOTD in selecting the best cost-benefit option. Dr. Liang served as the Project manager overseeing the different tasks and leading the structural design of the rehabilitation and development of the cost estimate.
06/16 – 10/17	**H.012302: I-10 WB on-Ramp From US-61, Ascension Parish, LA** Interstate I-10 westbound on-ramp from US-61 is a fracture critical, curved steel plate girder bridge was struck by an over-height vehicle causing severe damage to the exterior girder of four continuous spans. SDR tasks included inspection, design the repair, develop construction plans involving staged demolition and construction, load testing, and provide construction supports. The repair technique developed was building the entire damaged span and to slide in place using SPMT to provide minimal closure of I-10. Dr. Liang responsibilities were as follows: • Lead the bridge strcutural design team and plans development. • IN charge of the field load testing.
09/16 – 11/16	**H.012699: LA 10 Beaver Creek Bridge Replacement, St. Helena Parish, LA** This project was an emergency design task for the replacement of the bridge that was damaged in flood, which was completed in less than two months. The superstructure consists of six (6), simply supported LG-36 girders in each span, acting in composite action with an 8.5 in. continuous concrete deck. The substructure consists of cast-in-place concrete caps and precast concrete piles. SDR engineering services incluced construciton support besides design and final plans preparation. Dr. Liang responsiblities were as follows: • Lead the structure desing of the superstructure • In charge of the consturction palns development as well as construction cost esimtate.

Firm employed by: SDR Engineering Consultants, Inc.					
Name	**Hatem Seliem, PhD, PE, PMP**		Years of relevant experience with this employer	8	
Title	Project Manager & Senior Structural Engineer		Years of relevant experience with other employer(s)	14	
Degree(s) / Years / Specialization			PhD / 2007 / Civil Engineering (Structural) MS / 2002 / Civil Engineering (Structural) BS / 2000/ Civil Engineering		
Active registration number / state / expiration date			PE.39759 / Louisiana / 09-30-2023		
Year registered	2014	Discipline	Civil Engineering-Structures		
Contract role(s) / brief description of responsibilities			Project Manager & senior structural 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).
Dr. Seliem is a certified Project Management Professional (PMP)® and served as project manager on large-scale projects. Further, he is a senior structural engineer with 20 years of design experience. He will be the point-of-contact for this contract and will coordinate directly with the DOTD Project Manager.	
08/19 – Present	**H.011309: MacArthur Interchange Completion, Phase II, Jefferson Parish, LA** Scope of work is to provide two new on-ramp and off-ramp connection between the eastbound of West Bank Expressway (US 90-Z) and Frontage Road, demolish the existing off-ramp, and widen the US 90-Z bridge to accommodate the new ramps. The project consisted of providing all necessary engineering design services (Stage 3) required to construct the two separate ramp structures and the relocation of Frontage Road. SDR is the prime consultant and Dr. Seliem responsibilities are as follows: • Project Manager coordinating between SDR, subconsultants, and DOTD Project Manager. • Bridge Engineer of Record overseeing the bridge structural design of the superstructure and substructure, deck drainage design, and construction cost estimate.
10/16 – 04/21	**H.002980: I-10 over US 165 and MP RR, Jefferson Davis Parish, LA** replacement of the two I-10 bridges overpass US 165 and MP Railroad. Each bound total bridge length is 765 ft. comprising seven spans. Four spans were made one continuous unit, and the other three spans were continuous unit. Design included all elements of bridge structure along with required slope and embankment work. The replacement of the bridge involved complex construction phasing to maintain traffic on the interstate while removing the old structure and constructing the new bridge. Dr. Seliem responsibilities were as follows: • Lead the structural design of the column bents substructure supported by drilled shafts. • Review of the construction staging and develop construction plans of column bents and the drilled shafts. • QCQA review of the construction plans of the superstructure.

09/18 – 08/19	**H.012009: US 71 (LA-1) S. Market Street over ICG RR, Caddo Parish, LA** This project was to provide Stage 0 Design (Feasibility Study) on the twin two-lane bridge structures on US 71 (LA-1) Market Street viaduct Southbound over ICR railroad through downtown Shreveport. Two alternates were designed to satisfy the railroad minimum clearance requirements. Several stakeholders were approached for solicitate of views (SOV) about the two selected alternates. Dr. Seliem responsibilities were as follows: • Review of existing documents including as-built plans, load rating reports, and inspection findings. • QCQA review of the structural analysis and design of the two alternates. • lead the construction cost estimate.
10/19 – 10/20	**H.012028: I-20 over Lakeshore Drive and KCS RR, Caddo Parish, LA** This project was to provide Stage 0 Design (Feasibility Study) for four (4) bridge structures of I-20 crossing over Lakeshore Drive and KCS Railroad in Shreveport, LA. Design of rehabilitation to improve the bridges conditions, service life, and load rating was carried out by SDR. Different rehabilitation options were designed and detailed. Cost estimate and rehabilitation plans were provided to assist DOTD in selecting the best cost-benefit option. Dr. Seliem responsibilities were as follows: • Review of existing documents including as-built plans, load rating reports, and inspection findings. • QCQA review of the structural analysis and design of the two alternates. • lead the construction cost estimate.
06/16 – 10/17	**H.012302: I-10: WB on-Ramp From US-61, Ascension Parish, LA** Interstate I-10 westbound on-ramp from US-61 is a fracture critical, curved steel plate girder bridge was struck by an over-height vehicle causing severe damage to the exterior girder of four continuous spans. The repair technique developed was building the entire damaged span and to slide in place using SPMT to provide minimal closure of I-10. Dr. Seliem responsibilities were as follows: • Develop detailed 3D FE model of the birdge utlizing staged construction of demolition and erection. • Review the design of the new structure and QCQA review of the construction plans. • Evalute the completed structure based on the results on the load testing results.
09/16 – 11/16	**H.012699: LA 10 Beaver Creek Bridge Replacement, St. Helena Parish, LA** This project was an emergency design task for the replacement of the bridge that was damaged in flood, which was completed in less than two months. The superstructure consists of LG-36 girders and the substructure consists of cast-in-place concrete caps and precast concrete piles. SDR engineering services incluced construciton support besides design and final plans preparation. Dr. Seliem responsiblities were as follows: • Lead the structure desing and palns development of the substructure. • In charge of the construction support services.

Firm employed by: SDR Engineering Consultants, Inc.					
Name	**Adnan Elsaad, PE**		Years of relevant experience with this employer	13	
Title	Senior Bridge Engineer & Bridge Inspector		Years of relevant experience with other employer(s)	20	
Degree(s) / Years / Specialization			BS /1981/ Civil Engineering FHWA-NHI-13055 Safety Inspection of In-Service Bridges		
Active registration number / state / expiration date			PE.34533/ Louisiana / 9-30-2023		
Year registered	2009	Discipline	Civil Engineering-Structures		
Contract role(s) / brief description of responsibilities			Senior Bridge Engineer and Bridge Inspection Leader		

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).
Mr. El-Saad has over 30 years of experience in bridge design, inspection, evaluation, and non-destructive testing. Mr. El-Saad has planned, instrumented, and executed over 120 bridge tests. He has strong experience in numerous activities for construction engineering inspection and design of AASHTO bridges and precast concrete segmental bridges. He has extensive experience and specialization in bridge design. Detailed knowledge of both steel and concrete bridge design including concrete box culverts, mast arms, sign structures, foundation analysis, and retaining wall structures. He served as a lead bridge engineer for FDOT and TXDOT for 11) and nine (9) years, respectively.	
10/18 – 02/21	**H.011487: LA 182 Over Atchafalaya River (Berwick Bay) Bridge Rehabilitation, Lafayette, LA** The major through truss bridge carries LA 182 over the Atchafalaya River (Berwick Bay). The bridge consists of 47 spans with a total length of 3,746 ft. The approach spans consist of two (2) reinforced concrete slab spans, 40 reinforced concrete T-beam spans, and two (2) deck truss spans. The navigational spans consist of three (3) identical through truss spans. The substructure is comprised of concrete pile bents, two-column concrete bents, and concrete piers. Mr. Elsaad responsibilities are as follows: • Inspection lead engineer, my major tasks included gathering all pertinent structure related information, review of all existing records, developing in-depth inspection plans, performing NBIS element-level inspection of the entire bridge, instrumentation and load testing of the approach concrete T-beam spans. • Lead designer of the substructure rehabilitation, bridge deck, concrete approach spans, and QC/QA of the superstructure rehabilitation.
08/19 – Present	**H.011309: MacArthur Interchange Completion, Phase II, Jefferson Parish, LA** Scope of work is to provide two new on-ramp and off-ramp connection between the eastbound of West Bank Expressway (US 90-Z) and Frontage Road, demolish the existing off-ramp, and widen the US 90-Z bridge to accommodate the new ramps. The project consisted of providing all necessary engineering design services (Stage 3) required to construct the two separate ramp structures and the relocation of Frontage road. To accommodate the

	new structures for the two ramps, Frontage Road required relocation along with utilities while maintaining all business access. SDR is the prime consultant and Mr. Elsaad responsibilities are as follows: • Independent constructability review of construction plans • Verification and review of construction cost estimate
05/16 – Present	**H.011484: US 80 Texas Street Bridge over Red River Rehabilitation, Caddo Parish, LA** The bridge consists of a main truss span, six deck truss spans, one steel girder span, and 35 reinforced concrete deck girder spans. Mr. Elsaad responsibilities are as follows: • Serving as Inspection lead engineer collecting all pertinent structure related information, performing NBIS element-level inspection of the entire bridge, performing NDT of the pins, coordinating traffic control and all required inspection equipment including snooper truck, boat access and manlifts, • Preparing a comprehensive report containing all inspection results, • Support the rehabilitation design of the concrete and steel members repairs. • Lead construction support including attending construction meetings, responding to RFIs, reviewing of shop drawings.
10/16 – 08/20	**H.002980: I-10 over US 165 and MP RR, Jefferson Davis Parish, LA** replacement of the two I-10 bridges overpass US 165 and MP Railroad. Each bound total bridge length is 765 ft. comprising seven (7) spans. Four (4) spans were made one continuous unit, and the other three (3) spans were continuous unit. Design included all elements of bridge structure along with required slope and embankment work. The replacement of the bridge involved complex construction phasing to maintain traffic on the interstate while removing the old structure and constructing the new bridge. To ensure design economy and accelerated construction, DOTD standard precast prestressed concrete girders (LG Girders) were used for the superstructure. Mr. Elsaad responsibilities were as follows: • Independent constructability review of construction plans • Verification and review of construction cost estimate
09/18 – 08/19	**H.012009: US 71 (LA-1) S Market Street over ICG RR, Caddo Parish, LA** This project was to provide Stage 0 Design (Feasibility Study) on the twin two-lane bridge structures on US 71 (LA-1) Market Street viaduct Southbound over ICR railroad through downtown Shreveport. Two alternates were designed to satisfy the railroad minimum clearance requirements. Several stakeholders were identified and were approached for solicitate of views (SOV) about the two selected alternates. Mr. Elsaad roles: • lead bridge inspector • developing evaluation report in light of inspection findings.

Firm employed by: SDR Engineering Consultants, Inc.					
Name	**James Fussell, ME, PE**		Years of relevant experience with this employer	8	
Title	Bridge Engineer & Bridge Inspector		Years of relevant experience with other employer(s)	0	
Degree(s) / Years / Specialization			ME / 2014 / Structural Engineering BS / 2013 / Civil Engineering FHWA-NHI-13055 Safety Inspection of In-Service Bridges		
Active registration number / state / expiration date			PE.43706 / Louisiana / 03-31-2022		
Year registered	2019	Discipline	Civil Engineering-Structures		
Contract role(s) / brief description of responsibilities			load rating lead and bridge inspection leader		

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).
08/19 – Present	**H.011309: MacArthur Interchange Completion, Phase II, Jefferson Parish, LA** Scope of work is to provide two new on-ramp and off-ramp connection between the eastbound of West Bank Expressway (US 90-Z) and Frontage Road, demolish the existing off-ramp, and widen the US 90-Z bridge to accommodate the new ramps. The project consisted of providing all necessary engineering design services (Stage 3) required to construct the two separate ramp structures and the relocation of Frontage Road. Mr. Fussell responsibilities are as follows: • Task manager for the substructure design • Leading plans development of the substructure • Coordinating with the substructure team.
10/16 – 04/21	**H.002980: I-10 over US 165 and MP RR, Jefferson Davis Parish, LA** replacement of the two I-10 bridges overpass US 165 and MP Railroad. Each bound total bridge length is 765 ft. comprising seven spans. Four spans were made one continuous unit, and the other three spans were continuous unit. Design included all elements of bridge structure along with required slope and embankment work. The replacement of the bridge involved complex construction phasing to maintain traffic on the interstate while removing the old structure and constructing the new bridge. Mr. Fussell responsibilities were as follows: • Analysis and design of the column bents substructure supported by drilled shafts. • Preparation of construction plans of column bents and the drilled shafts. • QCQA review of the construction plans of the superstructure.
10/18 – 02/21	**H.011487: LA 182 Berwick Bay Bridge Rehabilitation, St. Mary, LA** The major through truss bridge carries LA 182 over the Atchafalaya River (Berwick Bay). The bridge consists of 47 spans with a total length of 3,746 ft. The approach spans consist of two (2) reinforced concrete slab spans, 40

	reinforced concrete T-beam spans, and two (2) deck truss spans. The navigational spans consist of three (3) identical through truss spans. The substructure is comprised of concrete pile bents, two-column concrete bents, and concrete piers. Mr. Fussell responsibilities included: • preparing the inspection report and rehabilitation recommendations • rehabilitation design of the approach deck truss spans, and main truss spans. • Lead construction plans development
05/16 – 04/18	**H.011484.5: US 80 Red River Bridge Inspection, Load Rating, and Rehabilitation, Shreveport, LA** The US 80 Texas St. Bridge is a historic truss bridge in Shreveport, LA that has undergone inspection, load rating, and rehabilitation design. The complex structure consists of two 182' anchor spans and one 520' steel cantilever span, six 102'-9" steel deck truss spans, one 81' steel girder span, and 35 reinforced concrete deck girder approach spans of various lengths. Considering the inspection, the load rating was performed using AASHTOWARE Bridge Rating for the approach spans, deck truss spans, main truss spans, truss members, and gusset plates. Mr. Fussell responsibilities were as follows: • In-depth field investigation of the truss and approach spans, as well as the various column bents and piers. The entire structure was inspected by the SDR team to determine current conditions and critical members. • Preparation of the inspection report and organization of the inspection figures and tables. • The load rating was performed using AASHTOWARE Bridge Rating for the approach spans, deck truss spans, main truss spans, truss members, and gusset plates. • Considering the inspection and load rating findings, investigation of repair procedures such as heat straightening and paint containment systems for truss configurations. • Extensive drawings were developed using Microstation for repair procedures of the superstructure and substructure, along with re-producing shop drawings of members to be repaired.

Firm employed by: SDR Engineering Consultants, Inc.					
Name	**Sara Sotoud, PhD, PE**		Years of relevant experience with this employer	6	
Title	Bridge Engineer		Years of relevant experience with other employer(s)	5	
Degree(s) / Years / Specialization			PhD / 2016 / Civil Engineering MS / 2008 / Structural Engineering BS /2004 / Civil Engineering		
Active registration number / state / expiration date			PE.46133 / Louisiana / 03-31-2022		
Year registered	2021	Discipline	Civil Engineering-Structures		
Contract role(s) / brief description of responsibilities			Bridge & Structural Engineer		

Dr. Sotoud is a bridge engineer with 10 years of experience in structural engineering. Her current work is primarily in bridge design, load rating, detailing, and quantity/cost estimate preparation. She has encompassed concrete, prestressed concrete, steel, and timber bridges, etc. in her professional career.

04/21 – 09/21	**H.009859.5: Load Rating of 176 On-System bridges, Statewide LA** This project consisted of the analysis and load rating of 176 bridges located in Louisiana State. Most of them are culverts. The culverts were rated using the improved rating method developed by SDR. Others are continuous voided slab bridges, concrete deck girder bridges, and a pontoon bridge. Dr. Sotoud responsibilities are as follows: • Reviewed documents and plans and prepared the load rating report for the concrete voided slab bridges. • Quality control of the load rating work done by other engineers.
08/19 – Present	**H.011309: MacArthur Interchange Completion, Phase II, Jefferson Parish, LA** Scope of work is to provide two new on-ramp and off-ramp connection between the eastbound of West Bank Expressway (US 90-Z) and Frontage Road, demolish the existing off-ramp, and widen the US 90-Z bridge to accommodate the new ramps. The project consisted of providing all necessary engineering design services (Stage 3) required to construct the two separate ramp structures and the relocation of Frontage Road. Dr. Sotoud responsibilities are as follows: • Task manager for the substructure design • Analysis and design of pier caps, pier columns, walls, and drilled shafts. • Coordinating with the substructure team to make sure the design was reflected on plans correctly. • Developing the comb book.
07/19 – 06/21	**H.012485.5: Load Rating Of 617 Off-System Bridges, Statewide, LA** This project consisted of the analysis and load rating of 617 different types of off-system bridges statewide. Bridge structures include all types of timber spans, steel spans, and concrete spans. Dr. Sotoud responsibilities were: • Reviewed documents and plans of the bridges.

	• Prepared the load rating reports for the bridges. • Quality control of the load rating work done by other engineers.
10/18 – 02/21	**H.011487: LA 182 Berwick Bay Bridge Rehabilitation, St. Mary, LA** The major through truss bridge carries LA 182 over the Atchafalaya River (Berwick Bay). The bridge consists of 47 spans with a total length of 3,746 ft. The approach spans consist of two (2) reinforced concrete slab spans, 40 reinforced concrete T-beam spans, and two (2) deck truss spans. The navigational spans consist of three (3) identical through truss spans. The substructure is comprised of concrete pile bents, two-column concrete bents, and concrete piers. Dr. Sotoud responsibilities included: • Load rating of approach spans with reinforced concrete tee beams, deck truss, and main truss spans with floor-beams and stringer systems and gusset plates. • Preparing the inspection report and rehabilitation recommendations • Rehabilitation design of the approach deck truss spans, and main truss spans. • Developing construction plans
02/19 – 08/19	**H.009859.5: Load Rating of 27 Complex Bridges, Statewide, LA** This project consisted of the analysis and load rating of 27 complex bridges including continuous steel spans, prestressed concrete spans, moveable spans, etc. located in Louisiana. Dr. Sotoud responsibilities and tasks were: • Reviewed documents and plans of the bridges. • Prepared the load rating reports for the bridges. • Quality control of the load rating work done by other engineers.
05/16 – 04/18	**H.011484.5: US 80 Red River Bridge Inspection, Load Rating, and Rehabilitation, Shreveport, LA** The US 80 Texas St. Bridge is a historic truss bridge in Shreveport, LA that has undergone inspection, load rating, and rehabilitation design. The complex structure consists of two 182’ anchor spans and one 520’ steel cantilever span, six 102’-9” steel deck truss spans, one 81’ steel girder span, and 35 reinforced concrete deck girder approach spans of various lengths. Considering the inspection, the load rating was performed using AASHTOWARE Bridge Rating for the approach spans, deck truss spans, main truss spans, truss members, and gusset plates. Dr. Sotoud responsibilities were as follows: • The load rating of approach spans, deck truss spans, main truss spans, truss members, and gusset plates. • Develop rehab plans of the superstructure and substructure.

Firm employed by: SDR Engineering Consultants, Inc.					
Name	**Ahmed Rageh, PhD, PE**		Years of relevant experience with this employer	2	
Title	Bridge Engineer and Bridge Inspector		Years of relevant experience with other employer(s)	9	
Degree(s) / Years / Specialization			PhD / 2020 / Civil Engineering – Structures MS / 2018 / Civil Engineering – Structures MS / 2012 / Civil Engineering – Structures BS /2006 / Civil Engineering – Structures FHWA-NHI-13055 Safety Inspection of In-Service Bridges		
Active registration number / state / expiration date			PE. 93229 / Florida / 02-28-2023		
Year registered	2022	Discipline	Civil Engineering – Structures		
Contract role(s) / brief description of responsibilities			Bridge Engineer & Inspection Team Leader		

Dr. Rageh is a bridge engineer with 11 years of experience in bridge design and evaluation. He has extensive experience and specialization in bridge design with detailed knowledge of complex steel and concrete bridge, as well as bridge load rating, inspection, and full-scale testing.

03/21 – Present	**H.011309: MacArthur Interchange Completion, Phase II, Jefferson Parish, LA** Scope of work is to provide new on-ramp and off-ramp connection between the eastbound of West Bank Expressway (US 90-Z) and Frontage Road, demolish the existing off-ramp, and widen the US 90-Z bridge to accommodate the new ramps. All necessary engineering design services (Stage 3) are included to construct the two separate ramp structures and the relocation of Frontage Road. Dr. Rageh responsibilities includes: • Analysis, Design and detailing of overhead sign cantilever trusses. • Perform QCQA on the reinforced concrete deck design calculations and detailed plans.
03/21 – Present	**H.009859.5: Load Rating of 176 On-System bridges, Statewide LA** This project consists of the load rating of 176 bridges located in Louisiana State. Most of them are culverts. The culverts were rated using the improved rating method developed by SDR. Dr. Rageh responsibilities includes: • Performing load rating of reinforced concrete box culverts. • Performing QCQA on box culverts rated by other engineers.
08/21 – 01/22	**Bridge No. 879092: Pedestrian Truss Bridge Over Florida Turnpike Access Road, Hard Rock Stadium, Miami Gardens, Florida** The bridge is a single span steel prefabricated truss-type bridge with a total as-built length of 206'-7". SDR responsibility was to perform independent peer review of the bridge components and mounted sign structures. Dr. Rageh responsibilities included: • Performing 3D finite element and buckling analyses of the truss bridge.

	• Perform design verification of the truss bridge superstructure elements and connections.
07/14 – 07/15	**Egyptian Railway System Riveted Steel Bridges Assessment and Testing, Egypt, Countrywide** The project involved full-scale testing and fatigue assessment of the major riveted steel truss bridges crossing the River Nile in Egypt. Bridges have total lengths between 296 and 1610 ft. with spans up to 295 ft. and height up to 30 ft. Dr. Rageh responsibilities included: • Managing the full-scale live load field testing. • Performing 3D finite element analyses for the tested bridges. • Performing fatigue assessment for critical bridge elements and connections.
02/08 – 11/08	**El Maryoutya Roadway Steel Bridges, Giza, Egypt** The bridge consists of cast-in-place concrete box and composite steel twin box girders with span length of 175 ft. Dr. Rageh responsibilities included: • Performing 3D finite element analyses for the steel twin box girders. • Designing the steel elements and connections of box girders. • Developing detailed plans for the bridge superstructure including connections. • Construction support.
05/08 – 04/09	**Skyway TB1 Pedestrian Station Bridge, Cairo International Airport, Cairo, Egypt** The bridge is a single span steel prefabricated truss-type bridge with a span length of 145'. The bridge designed to carry pedestrian and the moving walkway within the new airport expansion. Dr. Rageh responsibilities included: • Performing 3D finite element analysis of the truss bridge. • Designing the steel elements and connections of truss bridge. • Developing detailed plans for the bridge superstructure including connections.
07/08 – 12/08	**El Gamalya Roadway Bridge, Dakahlia, Egypt** The bridge consists of multi-steel plate girder of 130 ft. span with a composite cast-in-place concrete deck. Dr. Rageh responsibilities included: • Performing analysis of the steel girders. • Designing the steel elements and connections of steel girders. • Developing detailed plans for the bridge superstructure including connections. • Reviewing the shop drawings submitted by the contractor.

Firm employed by: SDR Engineering Consultants, Inc.					
Name	**Feng Xie, MS, PE**		Years of relevant experience with this employer	7	
Title	Bridge Engineer		Years of relevant experience with other employer(s)	1	
Degree(s) / Years / Specialization			MS / 2014 / Civil Engineering BS / 2012 / Civil Engineering FHWA-NHI-130056 Safety Inspection of In-Service Bridges for Professional Engineers		
Active registration number / state / expiration date			PE.43987/ Louisiana / 03-31-2022		
Year registered	2019	Discipline	Civil Engineering-Structures		
Contract role(s) / brief description of responsibilities			Bridge Engineer and Load Rating Lead		

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).
Mr. Xie is a seasoned bridge engineer with eight (8) years of experience in bridge engineering. His current work is primarily in the area of bridge inspections, bridge design, load testing, structural analysis, load rating, and plan development. He has encompassed the design, analysis, and plans development of reinforced, prestressed concrete, and steel members in past work.	
05/21 – Present	**H.014288.5-2: LA 82 Mermentau River MB (G Chenier) Bridge Rehabilitation, Cameron Parish, LA** This 1049-feet movable bridge was built in 1959 and has been identified as a Preservation Priority Bridge. The main span of this bridge is a 204 feet swing steel low truss span. Its approaches comprise (26) concrete slab spans of 20 ft. span length and (8) steel I-beam spans of 40 feet span length. Feng's responsibilities included: • In-depth field inspection and identifying structural deficiencies • Structural analysis and design of structural member strengthening details • Task manager for the development of rehabilitation plan
08/19–Present	**H.011309 Macarthur Interchange Completion Phase II, Jefferson Parish, LA** This project aims at providing connections between the eastbound direction of the Westbank Expressway and the eastbound frontage road near Peters Road and the East Bound Harvey Tunnel. Feng's responsibilities include: • Reviewing documents and plans for the bridge • Load rating of the existing superstructure and design of new girders • Development of girder details for the new ramps
10/18 – 02/20	**H.011487 LA 182 Berwick Bay Bridge Rehab, Lafayette Parish, LA** This project consisted of the development of the rehabilitation plan of deficient structural components for the Long-Allen Bridge. Feng's responsibilities included: • Identification of the deficient structural components during inspections

	• Load testing of the reinforced concrete approach spans • Reviewing bridge plans and conducting load rating analysis of the structures • Development of rehabilitation plans for the deficient members
01/17-07/17	**H.002980 I-10 Overpass Over US 165 & MP RR, Jefferson Davis Parish, LA** This project consisted of structural design and plan development for the replacement of EB and WB of I-10 overpass over US 165 and MP Railroad bridges. The total length of each bridge is 765 feet with a unit of four continuous spans and a unit of three continuous spans. Feng's responsibilities were as follows: • Structural analysis and design of the substructures • Development of substructure construction plans
06/16-07/17	**I-10: WB on-Ramp From US-61, Ascension Parish, LA** A curved steel girder in a bridge on US-61, ramp K over I-10 interstate, which is located in Ascension Parish was struck by an over-height truck. As a result, the girder was damaged. This project consisted of the evaluation of the damage and the development of a rehabilitation plan. Feng's responsibilities were as follows: • Reviewing incident related documents, site visits, and damage assessment • Structural analysis and development of the repair plan • Instrumentation and monitoring of the bridge before the removal of the damaged portion and after installation of the replacement segment
01/16-07/17	**US 80 Texas Street over Red River Bridge Rehab, Shreveport, LA** This project consisted of the in-depth inspection, load rating, and rehabilitation of the US 80 Texas Street Bridge located in Shreveport, Louisiana. The bridge consists of a main truss span comprised of (2) 182' anchor spans and one 520' steel cantilever span, (6) 102'-9" steel deck truss spans, (1) 91' steel girder span, and (35) reinforced concrete deck girder approach spans of varying span lengths. Feng's responsibilities included: • Performing in-depth field investigations of the bridge members using articulating lifts • Reviewing the truss spans as well as approach spans' models while considering deterioration • Development of inspection reports and bridge rehabilitation plan
07/14 -03/15	**H.010498 Luling Bridge Deck Overlay & Repair, St. Charles Parish, LA** This project consisted of the design of traffic control plans, developing deck overlay repair plans, and analyzing the impact on cable stress and stability using the 3D-Finite element method while replacing the deck overlay on a 5-span 2745ft. long cable-stayed bridge built in 1983. Feng's responsibilities included: • Modeling and analyzing the impact on both superstructure and substructure when replacing the cables • Investigating result accuracy of different analytical models • Preparing the analysis report explaining the methodology and assumptions

Firm employed by: Volkert, Inc. VOLKERT			
Name	**Janet Evans, PE, MBA**	Years of relevant experience with this employer	13
Title	Principal-in-Charge	Years of relevant experience with other employer(s)	26

Degree(s) / Years / Specialization	BS / 1980 / Civil Engineering MBA / 1986 / Business Administration
Active registration number / state / expiration date	21307 / LA / 09-30-2022
Year registered 1984 Discipline	Civil
Contract role(s) / brief description of responsibilities	Project Principal (Roadway Expert)

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).
Ms. Evans joined Volkert in 2008 and has over 39 years' experience in roadway design, bridge project management, and construction of transportation projects. This includes urban freeway design, stage 0 studies, capacity improvements, (lane additions), environmental justice and interchange modifications and development of construction sequencing for the high average daily traffic volume interstates. Her combination of construction and design experience has been utilized by the department in various alternative delivery projects including the development of draft CMAR guidelines and the development of a design build construction manual.	
06/20 – 08/24 est.	**LA 23: Belle Chasse Bridge and Tunnel (HBI) Improvements, Plaquemine Parish (LADOTD)** Ms. Evans is serving as ProjectPrincipal for the Belle Chasse Bridge and Tunnel Improvements. Volkert will be responsible for providing all Engineering Design and Construction Support services including implementation of the Construction Quality Assurance Plan for the Belle Chasse Bridge & Tunnel Public Private Partnership (P3) Project which provides for the replacement of the Belle ChasseTunnel and Judge Perez Lift Bridge with a new toll bridge. This includes the development of construction plans, bridge replacement plans, decommissioning of the Tunnel and development of O&M plans. As the OVT, Volkert will provide guidance and support to the LDOTD Project Manager prior to and during reviews to ensure that the P3 team adheres to their contract.
12/17 – 12/20	**Causeway Shoulder Bay Design, Jefferson and St. Tammany Parishes, LA (Greater New Orleans Expressway Commission)** Volkert was selected to design essential and long-awaited shoulder additions. The bridge shoulders, comprising 12 "shoulder bays," will provide a safe space for disabled vehicles to pull over out of traffic. They will also increase safety for motorists and emergency personnel in the event of a crash. This project was executed using the CMAR alternative delivery method, a first for the State of Louisiana. Mrs. Evans served as Project Principal and Project Manager for this project.

04/18 – 04/19	**I-220 to Barksdale AFB Connector Design-Build Procurement, Bossier Parish, LA (LADOTD)** Ms. Evans is serving as Principal-in-Charge for Volkert's team as they completed preliminary construction cost estimates and reviewed preliminary engineering layouts from LA DOTD to help assess impacts, constructability design issues. She also helped produce the Performance Specifications, worked with LA DOTD staff in each category for project specific design issues to be addressed. She also assisted in the preparation of the Public Information Meetings and the One-on-One meetings with the shortlisted Design-Build teams for this $71.8 M Design-Build project. | **State Contract No. 4400004915 TO 5, S.P. No. H.003370**
09/20 – 11/22 est.	**Owner Verification Services for College Drive Flyover Ramp (I-10/I-12 west) in East Baton Rouge Parish for theLouisiana Department of Transportation and Development (LADOTD)** Ms. Evans served as Principal-in-Charge for this project that consists of modifying the I-10 West/College Drive exit into separate I-12 West and I-10 West exits. Volkert will provide all necessary engineering services as part of this Design-Build/Owner Verification project. This includes design reviews for bridges, roads, hydraulics, electrical and ROW Acquisition efforts as well as contract administration, scheduling, document control, and construction phase services. | **SP No. 4400019680, S.P. No H.013897**
08/17 – 02/20	**I-10: Highland Road to LA 73 Design-Build, East Baton Rouge and Ascension Parishes, LA (LADOTD)** Ms. Evans is serving as Principal-in-Charge for the Owner Verification Team (OVT) on Task Orders 3 & 4 which allows Volkert to provide procurement and project oversight and acceptance for both design and construction for the I-10 Design-Build project from Highland Road in East Baton Rouge Parish to LA 73 in Ascension Parish. She is responsible for all project oversight for the Design and Construction on this $72M Design-Build project. This project consists of upgrading a portion of I-10 inEast Baton Rouge and Ascension Parish to a six-lane controlled access facility including construction of a new six-lane I- 10 overpass at Highland Road. This was the fastest procured design-build today in DOTD History. | **State Contract No. 4400004915 TO 3 & 4, S.P. No. H.009250**
09/18 – 12/18	**Chalmette Slip Design, St. Bernard Parish, LA** Ms. Evans served as Principal-in-Charge for this project. Volkert providedthe design and construction phase services for the reconstruction of Chalmette Slip in accordance with the Tiger Grant obtained by the Port. As part of this project, Section A and F the last two original wharf sections will be reconstructed. Section A has already partially collapsed. Section F is in extremely poor condition and in need of replacement as well. Section A will require a rebuild and Section F will require stabilization and improvements to keep it from failing. The slip must remain functional as a single terminal composed of six wharves that maximize operational safety, cargo handling efficiency and capacity as well as on-dock rail capacity.

Firm employed by: Volkert, Inc.					
Name	**Ashley Beckendorf, PE**			Years of relevant experience with this employer	7
Title	Project Engineer			Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization			BS / 2008 / Civil Engineering		
Active registration number / state / expiration date			37334 / LA / 03-21-2023		
Year registered	2012	Discipline	Civil		
Contract role(s) / brief description of responsibilities			Roadway Expert		

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).
Ms. Beckendorf has over 12 years of design and engineering experience and expertise in delivering complex drainage, roadway, open space, and other capital projects for government clients. Over her career she has specialized in roadway engineering, sewer infrastructure design and drainage design. For the past six plus years, she has managed and assistedwith managing several projects of complex nature and succeeded in keeping on schedule and maintaining great project outcomes. Before her management experience she worked on the East Baton Rouge Greenlight Program and East BatonRouge Parish Sanitary Sewer Overflow Program, beginning from the preliminary stages to design, on through construction. With her experience working with EBR through these projects, combined with her knowledge of engineering and managerial experience give her the ability to make a very effective manager. She has managed every aspect of projects including geotechnical engineering, surveying & mapping, environmental studies and permitting, subsurface utility engineering, utility coordination, lighting, traffic studies and design, Right of Way Acquisition, drainage, and roadway design.	
10/15 – 09/16	**I-10: Highland Road to LA 73 Supplemental Agreement No. 2, East Baton Rouge and Ascension Parishes, LA (LADOTD)** Volkert was contracted to perform and prepare an Interstate Modification Report (IMR) to analyze the existing roadwaynetworks and identify the best alternatives to improve capacity the interchange at I-10 and LA 42. As one of the Project Engineers, Ms. Beckendorf assisted in managing the project tasks. She performed 15-minute queue length analyses. She performed a crash study, including a crash analysis of all the intersections, segments, and spots using LA DOTD manual for Crash Data Analysis and crash1b software, pulling crash reports, analyzing the overrepresentation, and drawing crashdiagrams. Lastly, she has assisted in the time travel study. | **State Contract No. 4400004915 SA 2, S.P. No. H.009250**
05/19 – 12/21 est.	**I-220/I-20 Interchange Improvements to BAFB Access Design-Build, Bossier Parish, LA (LADOTD)** Ms. Beckendorf is providing roadway design submittal review for Volkert's team. The I-220/I-20 Interchange Improvement and BAFB Access project in Bossier Parish consists of the extension of I-220 to the south over I-20 as a limited access 4-lane arterial to a new terminus on Barksdale Air Force Base (BAFB) and includes

	construction of four interchange ramps providing interchange connectivity for the new access road. The project includes the construction of two sets of bridge structures,one set for the I-20 over pass and the second set for the over- pass of the KCS RR. The project terminus will tie to a BAFB roadway project creating a new access location for the base. | **State Contract No. 4400016173, S.P. No. H.003370.6**
05/18 – 05/19	**LA 929 at LA 930 Roundabout, Ascension Parish, LA (Ascension Parish Government)** As project manager and lead engineer, Ms. Beckendorf coordinated all sub-consultants and supervised all work done on the project. This a new roundabout at LA 929 and LA 930. It consists of a one lane roundabout with a combination of ditch drainage and subsurface drainage.
04/14 – 12/14	**St. Landry Road – Edenborne Connector, Ascension Parish, LA (Ascension Parish Government)** As Project Engineer, Ms. Beckendorf provided roadway design engineering including plan profiles, specifications, geometrics, typical cross sections, and striping and signing plans. For the sewer work, she designed gravity and force main lines and assisted withthe design of the pump station and site layouts. The project consists of providing provide an environmental impact study, right away analysis, full roadway and utility design, and bid services for a divided facility that will connect St Landry Ave.and Edenborne Connector. Volkert is responsible for the initial preliminary information submittal through the 100% final design plan submittal.
05/18 – 05/19	**Plank Road, East Baton Rouge Parish, LA (Baton Rouge Metropolitan Airport)** As project manager, Ms. Beckendorf coordinates between sub-consultants, between the airport, the FAA, and LA DOTD. She is responsible for the design of Plank Road (the new alignment), QA/QC of all components and supervision of all PE's, EI's, and technicians working on the project's design. This is project is to relocate Plank Road along a new alignment. The project includes ROW acquisition and all the design for a new 4 lane highway with J-turns. It also includes ROW acquisition and all the design for additionallanes along Harding and Hooper Road. It also includes a new lighting system and new signalized intersection. This project is an Airport project, funded by FAA, but the road will be transferred to LA DOTD.

Firm employed by: Volkert, Inc.					
Name	**Jonathan Gambino, PE, PTOE, RSP1**			Years of relevant experience with this employer	1
Title	Civil/Traffic Engineer			Years of relevant experience with other employer(s)	9
Degree(s) / Years / Specialization			BS / 2012 / Civil Engineering		
Active registration number / state / expiration date			41496 / LA / 09-30-2021 PTOE / LA #4433 / 03-18-2024		
Year registered	2017	Discipline	Civil		
Contract role(s) / brief description of responsibilities			Traffic 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).
Mr. Gambino joined Volkert in 2020 and has 9 years of experience developing civil and traffic engineering plans,specifications and studies. This includes identifying and adhering to applicable state policies and procedures for project plan development. His experience includes the use of MicroStation, InRoads, AASHTOWare Project, VISSIM, Vistro, Synchro plus SimTraffic, Sidra Intersection, HCS, Tru-Traffic, AutoCAD, ACAD Civil 3D, CORSIM, TEAPAC, and TS/PP Draft programs. He is an ITE PTOE (#4433) and has obtained his ATSSA Flagger certification. LADOTD Traffic Training Complete.	
02/20 – 11/21	**Joe Sevario Road at LA 933 Roundabout, Ascension Parish, LA (sub to SJB Group, LLC for Ascension Parish)** Mr. Gambinois serving as Traffic Engineer for this project. SJB provided civil engineering, survey, SUE services and Volkert provided engineering support including development of a traffic study and geometric layouts for this roundabout to alleviate congestion and delays along this corridor.
10/15 – 09/20 Est.	**Macarthur Interchange Completion Phase II, Jefferson Parish, LA (LA DOTD)** Mr. Gambino is serving as Traffic Engineer for this project. This project includes the removal of one-off ramp and the addition of another on and off ramp eastbound of the West Bank Expressway in New Orleans. He also has served as the QA/QC manager of the plans and design which has encompassed the review of the constructability of various design and detail options. An example is to recommend drilled shafts instead of driving piles to minimize interference with the ground traffic and problems with the vibration during pile driving and overrun pile pay quantities. The project presents several challenges to its designers given it requires the strategic removal of a portion of the existing bridge made of the prestressed concrete box girders and transitioning to its two new bridge ramps. Working within the existing right of way and managing the movement of traffic during construction is among other requirements and challenges. | **S.P. No. H.011309**
08/19 – 08/20	**Design Engineer for Louisiana DOTD** Mr. Gambino identified and adhered to applicable state policies and procedures in the development and

	design of project plan sets in a timely manner. These projects included developing preliminary and final estimated quantities and cost estimates as well as development of plan sets for roadway improvement projects.
12/18 – 08/19	**Transportation Engineer** Mr. Gambino reviewed and compared historic and recent traffic data and conducted signalwarrant analysis, traffic signal design warrants and traffic capacity analyses for both current and proposed conditions for a Houma based engineering firm.
03/17 – 10/18	**Transportation Engineer** Mr. Gambino coded and calibrated microscopic simulation models using VISSIM for freeways, corridors and unconventional intersection analysis at a New Orleans engineering firm. He conducted multiple traffic impact studies and developed recommendations for improvements using Synchro, Vistro, Sidra and HCS software programs. In this role he also attended and presented at community meetings and developed traffic control plans in accordance with MUTCD, and state standards. He also performed safety studies and traffic signal warrant studies while developing alternative intersection design elements as J-turn installations and roundabouts.
08/12 – 03/17	**Transportation Engineer** Mr. Gambino coded and calibrated microscopic simulation models using VISSIM for freeways, corridors and unconventional intersection analysis at a New Orleans engineering firm. He conducted multiple traffic impact studies and developed recommendations for improvements using Synchro, Vistro, Sidra and HCS software programs. In this role he also attended and presented at community meetings and developed traffic control plans in accordance with MUTCD, and state standards. He also performed safety studies and traffic signal warrant studies while developing alternative intersection design elements such as J-turn installations and roundabouts.
06/12 – 08/12	**Engineering Internship** Mr. Gambino worked on various projects developing schedules and handling day to day clientinteractions for wastewater, landfill development, traffic control and development, structural analysis and geotechnical analysis for projects at a Baton Rouge engineering firm.

Firm employed by: Volkert, Inc. VOLKERT			
Name	**Chad Fisher**	Years of relevant experience with this employer	26
Title	CADD Technician	Years of relevant experience with other employer(s)	26

Degree(s) / Years / Specialization			Certificate, Drafting & Design Technology / 1995
Active registration number / state / expiration date			N/A
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities			CADD Technician

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).
For 26 years, Mr. Fisher has been actively engaged in the field of civil design, cost estimates, manhour analysis, construction administration, construction inspection & drafting, especially as it relates to civil design projects. Mr.Fisher has used several Cad platforms and various design packages, such as Microstation V8i, Autocad 2018, Inroads V8i, Softdesk & Civil 3D. Mr. Fisher's responsibilities include preparation of preliminary and final cost estimates, manhour analysis, design drawings including plan & profile sheets, typical sections, geometrics and special details, cross-sections, drainage maps, and right-of-maps. Additional Training includes: MicroStation Technician, Applying Inroads Training Cert., Advanced Inroads Training Cert, and Advanced Inroads II Training Cert.	
2021 – 2022	**Bossier Parish Proposed Street Improvements – Disaster Relief – 2016 Flood Event; Bossier Parish, LA** Worked directly with the Project Engineer to prepare preliminary and final drawings including plan & profile sheets, typical sections, using Microstation V8I, Autocad 2018 & Civil Packages. Prepared Preliminary & Final Cost estimates.
	Jct. US 80 - Jct. LA 150; Routes LA 818 & LA 150; Lincoln Parish (LADOTD) Work directly with the Project Engineer to prepare preliminary and final drawings including plan & profile sheets, typical sections, geometrics and special details,cross-sections, drainage maps, and right-of-maps using Microstation 95, Autocad R12 & Civil Packages. |**SPN 700-31-0110**
2006 – 2008	**Jct. US 84 - Jct. LA 126; Route LA 34; Winn Parish (LADOTD)** Worked directly with the Project Engineer to prepare preliminary and final drawings including plan & profile sheets, typical sections, geometrics and special details,cross-sections, drainage maps, and right-of-maps using Microstation 95, Autocad R12 & Civil Packages.
2004 – 2005	**Fink's Hide A-Way Road (US 165 - Raymond Drive); Ouachita Parish Work directly with (LADOTD)** Work directly with the Project Engineer to prepare preliminary and final drawings including plan & profile sheets, typical sections, geometrics and special details, cross-sections, drainage maps, and right-of-

	maps using Microstation J & CivilPackages. | **SPN 700-64-0102; FAP No. STP-591-1(008)**
	US. 167 - Dubach to Bernice (LADOTD) Worked directly with the Project Engineer to prepare preliminary and final drawings including plan & profile sheets, typical sections, geometrics and special details, cross-sections, drainage maps,and right-of-maps using Microstation J & Civil Packages.
05/18 – 05/19	**Plank Road, East Baton Rouge Parish, LA (Baton Rouge Metropolitan Airport)** As project manager, Ms. Beckendorf coordinates between sub-consultants, between the airport, the FAA, and LA DOTD. She is responsible for the design of Plank Road (the new alignment), QA/QC of all components and supervision of all PE's, EI's, and technicians working on the project's design. This is project is to relocate Plank Road along a new alignment. The projectincludes ROW acquisition and all the design for a new 4 lane highway with J-turns. It also includes ROW acquisition andall the design for additional lanes along Harding and Hooper Road. It also includes a new lighting system and new signalized intersection. This project is an Airport project, funded by FAA, but the road will be transferred to LA DOTD.
06/20 – 08/24 est.	**LA 23: Belle Chasse Bridge and Tunnel (HBI) Improvements, Plaquemine Parish (LADOTD)** Ms. Beckendorf is serving as Project Engineer for the Belle Chasse Bridge and Tunnel Improvements. Volkert will be responsible for providing all Engineering Design and Construction Support services including implementation of the Construction Quality Assurance Plan for the Belle Chasse Bridge & Tunnel Public Private Partnership (P3) Project which provides for the replacement of the Belle Chasse Tunnel and Judge Perez Lift Bridge with a new toll bridge. This includes the development of construction plans, bridge replacement plans, decommissioning of the Tunnel and development of O&M plans. As the OVT, Volkert will provide guidance and support to the LDOTD Project Manager prior to and during reviews, develop review comments,attend project meetings, ensure that the P3 team adheres to their contract, and address other assignments as directed.
	LA 23: Belle Chasse Bridge and Tunnel (HBI) Improvements, Plaquemine Parish (LADOTD) Ms. Beckendorf is serving as Project Engineer for the Belle Chasse Bridge and Tunnel Improvements. Volkert will be responsible for providing all Engineering Design and Construction Support services including implementation of the Construction Quality Assurance Plan for the Belle Chasse Bridge & Tunnel Public Private Partnership (P3) Project which provides for the replacement of the Belle Chasse Tunnel and Judge Perez Lift Bridge with a new toll bridge. This includes the development of construction plans, bridge replacement plans, decommissioning of the Tunnel and development of O&M plans. As the OVT, Volkert will provide guidance and support to the LDOTD Project Manager prior to and during reviews, develop review comments,attend project meetings, ensure that the P3 team adheres to their contract, and address other assignments as directed.

Firm employed by: Volkert, Inc.					
Name	**Perry Leblanc**			Years of relevant experience with this employer	5
Title	CADD Technician			Years of relevant experience with other employer(s)	23
Degree(s) / Years / Specialization			AS / Drafting & Design Technology / 1998		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities			CADD Technician		
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).				
Mr. LeBlanc joined Volkert's Baton Rouge office in 2016, after a twenty-year career working in design and as a CADD instructor at a local technical college. He is responsible for the CADD design of engineering projects for airports and other engineering projects. He has extensive experience in generating 3D models of projects. His experience includesthe following projects. Additional Training includes: MicroStation Technician and Autodesk Software.					
10/15 – 09/16	**I-10: Highland Road to LA 73 Supplemental Agreement No. 2, East Baton Rouge and Ascension Parishes, LA (LADOTD)** Worked directly with the Project Engineer to prepare preliminary and final drawings including plan & profile sheets, typical sections, using Microstation V8I, Autocad 2018 & Civil Packages. Prepared Preliminary & Final Cost estimates.				
06/20 – 08/24 est.	**LA 23: Belle Chasse Bridge and Tunnel (HBI) Improvements, Plaquemine Parish (LADOTD)** Mr. Leblanc is workingdirectly with the Project Engineer to prepare preliminary and final drawings including plan & profile sheets, typical sections, using Microstation V8I, Autocad 2018 & Civil Packages. Prepared Preliminary & Final Cost estimates.				
2006 – 2008	**Jct. US 84 - Jct. LA 126; Route LA 34; Winn Parish (LADOTD)** Worked directly with the Project Engineer to prepare preliminary and final drawings including plan & profile sheets, typical sections, geometrics and special details,cross-sections, drainage maps, and right-of-maps using Microstation 95, Autocad R12 & Civil Packages.				
05/18 – 05/19	**Plank Road, East Baton Rouge Parish, LA (Baton Rouge Metropolitan Airport)** Mr. Leblanc is working directly with the Project Engineer to prepare preliminary and final drawings including plan & profile sheets, typical sections, using Microstation V8I, Autocad 2018 & Civil Packages. Prepared Preliminary & Final Cost estimates.				
05/19 – 12/21 est.	**I-220/I-20 Interchange Improvements to BAFB Access Design-Build, Bossier Parish, LA (LADOTD)** Mr. Leblanc is working directly with the Project Engineer to prepare preliminary and final drawings including				

	plan & profile sheets, typical sections, using Microstation V8I, Autocad 2018 & Civil Packages. Prepared Preliminary & Final Cost estimates.|**State Contract No. 4400016173, S.P. No. H.003370.6**

16. Staff Experience:

Firm employed by: Volkert, Inc.					
Name	**Randy Denmon, PE, PLS**			Years of relevant experience with this employer	14
Title	Roadway Engineer			Years of relevant experience with other employer(s)	20
Degree(s) / Years / Specialization			BS / 1991 / Mathematics MS / 1996 / Civil Engineering		
Active registration number / state / expiration date			PE.29390 / LA / 03-31-2023 PLS.4798 / LA / 03/31/2023		
Year registered	2001	Discipline	Civil		
Contract role(s) / brief description of responsibilities			Mr. Denmon will be serving as roadway engineer for this project.		

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).
Mr. Denmon has over 25 years' experience in civil engineering/construction management and land surveying, primarily as a Public Works and Flood Control Engineer and is an active member of the Association of State Dam Safety Officials. Mr. Denmon is a registered Civil Engineer and Surveyor in the State of Louisiana. Mr. Denmon has vast experience working on Water Resource, Flood Control, and Transportation projects, and well as Surveying. His experience includes hydraulic design, construction management, analysis of water supply structures, watershed and stream modeling, and flood mapping. In his career, Mr. Denmon has been the lead engineer on over 30 major dams in Louisiana for such clients as: LA Department of Transportation, and other State Agencies, Watershed and Lake Districts, and many local governments. Mr. Denmon is certified LADOTD Project Manager. He Denmon has extensive experience with Microstation, AutoCAD, Intergraph, and Bentley computer aided design applications, and the US Army Corps of Engineers' HEC-RAS and HMS hydrologic modeling programs.	
2007 – 2010	**State Wide Dam Breach Analysis, LA (LADOTD)** Project Manager. Work included Dam Breach Analysis and Emergency Action Plans on 24 dams maintained by the LADOTD. Work included downstream creek, downstream bridge, and dam surveys; construction of a HEC-RAS computer model to model a dam breach on each site under maximum storage conditions, and a final report that: detailed all work completed, model analysis and results, inundation mapping with Microstation Software, and recommendations for hazard classifications of said dams. Design work included hydraulic and hydrologic modeling, surveying and mapping, and CAD. Engineering Fee: $1,050,697 | SPN 750-99-0128 & 750-99-132

2009 – 2013	**Bundick's Creek Lake Upgrades, Deridder, LA (LADOTD)** Project Manager. Final Design and permitting of new, 100' concrete crest gate spillway for the LADOTD. Design work included: civil, structural, geotechnical, hydraulic, hydrologic, mechanical and electrical engineering, surveying and mapping, CAD, and cost estimating is required. Design work completed with Bentley's Microstation software. Project Cost: $ 6,100,000 | **SPN 750-06-01**
2008 – 2010	**Drainage Improvements, Franklin Farm Megasite, SPN 05-252-06-14, Richland Parish, LA (LADOTD)** Project Manager. Work included 100- and 500-year flood determination and mapping, topographic surveying, environmental permitting, and design for the relocation of approximately 1.5 miles of loca bayous, utility relocations, and drainage structures for the Louisiana Dept. of Economic Development. Design work included: civil, structural, geotechnical, hydraulic, hydrologic, surveying and mapping, CAD, and cost estimating. Design work completed with Bentley's Microstation software. Project Cost: Approximately $1,100,000.
2006 – 2010	**Cross Lake Dam, Stability Analysis and EAP, Caddo Parish, LA** Project Manager. Emergency Action Plan and final design, bidding and award for the clearing and grubbing of the dam; detailed field surveys, analysis of the dam that included 26 boring, lab analysis, the installation of 6 piezometers, stability analysis, through seepage analysis, and under seepage analysis; and recommendations for corrective measures for the dam. Project Cost: $250,000.
2010 – 2010	**Washington St. Washington Parish, LA (LADOTD)** Project Manager for Construction Engineering and Inspection utilizing the LADOTD's Site Manager Program. Construction Cost: $950,000 Project included pavement patching and curb replacement of approximately 2000' of concrete, four lane, divided, Urban Roadway in the City of Monroe | **SPN 742-37-0026, ARR-3709(512)**
3/2009 – 12/2011	**Oliver Road Widening and Overlay (LADOTD)** Project Manager. Construction Cost: $2,200,000. Mr. Denmon completed all surveying, drainage and geometric design for this project, and oversaw the completion of all final plans, as well as Construction Engineering and Inspection utilizing the LADOTD's Site Manager Program | **SPN 742-37-0019, F.A.P.N ARR-3709(504)**

Firm employed by: Forte & Tablada, Inc.					
Name	**Russell "Joey" Coco, PE, MBA**			Years of relevant experience with this employer	7
Title	President/CEO			Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization				BSCE / 2000 / LSU MBA / 2006 / LSU Coastal Engineering Certificate / 2008 / Old Dominion University	
Active registration number / state / expiration date				PE.31337 / LA / 09-30-2022	
Year registered	2004	Discipline		Civil Engineering	
Contract role(s) / brief description of responsibilities				Principal-in-Charge	

08/20 – Present	**4400017598 Rural Bridge Replacement Initiative, Statewide** Principal overseeing topographic survey for state bridges in accordance with LADOTD's Location and Survey Manual. Property surveys and right of way mapping will be provided as need arises.
01/20 – 10/20	**H.012588, H.012169, H.012587, I-10** Catch Basin Br-W. Baton Rouge P/L, I-10: Iberville P/L-W End Miss Br, I-10: W End of Br 290-W End of LA 415- West Baton Rouge & Iberville Parishes- Principal overseeing complete topographic survey, approximately 18.3 miles, from the East end of the Atchafalaya Bridge to the West end of the I-10/LA 415 Interchange.
05/19 – 09/19	**H.000303.6- Danziger Bridge Rehabilitation, Orleans Parish, LA** Principal overseeing survey investigation of Danziger Bridge. Included laser scanning and comparison of actual conditions to original plans.
10/18 – 12/18	**4400010587- Sunshine Bridge Repair- St. James Parish, LA** LADOTD- Principal overseeing topographic surveying and terrestrial LIDAR services for the LADOTD Sunshine Bridge Emergency Repair project following the severe impact of a barge mounted crane with the lowest horizontal bridge chord.
11/19 – 11/20	**S.P. No. H.012083.5- Calcasieu River Bridge Investigation- Calcasieu Parish, LA** LADOTD- Principal overseeing laser scanning services for the I-10/Lake Calcasieu bridge in Lake Charles, LA.
01/18 – 06/19	**H.004100- I-10 (LA 415 to Essen Lane on I-10 and I-12)- East and West Baton Rouge Parishes** LADOTD- Principal overseeing topographic survey of the work between LSU lakes and Essen Lane.
05/17 – 10/18	**H.004791.5- Belle Chasse Bridge and Tunnel Replacement Hydrographic Survey- Plaquemines Parish, LA** Principal-in-charge for comprehensive topographic surveying services for the Belle Chase Bridge and Tunnel Replacement project for LADOTD. Included in this work was a survey performed utilizing traditional methods, terrestrial laser scanning of roadway surfaces, and multi-beam 3-D hydrographic surveying.
06/17 – 02/19	**Amite River Basin Model- Hydrographic Survey- Livingston Parish, LA** Principal-in-Charge to provide hydrographic surveying of the Amite River and Comite River. Tasks included typical cross-sections of these rivers, as well as detailed 3-D bathymetric data collected with sonar equipment, ground control for LIDAR

	of the Amite River Basin, and a high-resolution survey of the Amite River Diversion Weir utilizing a variety of techniques including multi-beam sonar and traditional survey methods.
10/18 – Present	**East Baton Rouge Stormwater Masterplan- East Baton Rouge Parish, LA** Principal-in-Charge for hydrographic surveying of bayous and creeks located within East Baton Rouge Parish for the EBR Stormwater Masterplan. The work consists of establishing cross-sections and stream bed profiles along their length.
05/17 – 10/17	**S.P. No. H.013052- LA 442 Tangipahoa River Bridge Replacement- Tangipahoa Parish, LA** LADOTD- Principal overseeing topographic surveying for the LA 442 bridge over the Tangipahoa River. The survey included numerous cross-section surveys upstream and downstream of the bridge, as well as the along the bridge fascia.
08/19 – Present	**H.011670-I-10/Loyola Interchange Improvements - Kenner, LA** Principal-in-Charge overseeing Topographic Survey, Right-of- Way Survey, and Drainage Survey. The project stretches from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd.
11/18 – 04/19	**H.011684.5-LA 327 Spur: Staring Lane Extension – East Baton Rouge Parish** Principal-in-Charge for comprehensive topographic surveying services and developing a drainage map for the Staring Lane Extension project for LADOTD. Included in this work was a survey performed utilizing traditional methods and terrestrial laser scanning of roadway surfaces.
09/17 – 12/19	**S.P. No. H.011808.5- Palmetto Co. Canal Bridge - St. Landry Parish, LA** Principal-in-Charge to provide property surveys, title take-offs, and right-of-way map services for the removal and replacement of a timber trestle bridge that spans Bayou Des Glaises, located along La. Hwy. 10 in St. Landry Parish.
06/18 – 12/19	**LA 98: Roundabout at Mills St - Lafayette Parish, LA** Principal-in-Charge for right of way surveys for this project that requires construction of new roundabout at the intersection of Mills Street and W. Gloria Switch Road (LA Hwy 98) in Lafayette Parish, Louisiana.
02/17 – 03/18	**H.010753.5 – US 90 / I-310 Interchange – St. Charles Parish, LA** LADOTD – Principal-in-Charge responsible for topographic surveying and 3-D laser scanning at the intersection of US90 and I-310 in St. Charles Parish. The complete topographic survey includes all utilities with depths and all drainage required along with finish floor elevations of all buildings that fall within the survey limits.
08/14 – Present	**H.004273.5 – I-49 Connector – Lafayette Parish, LA** LADOTD – Principal-in-Charge responsible for providing topographic surveying services for the I-49 Connector. The project is in a dense urban area and is approximately 5 miles long. Forte and Tablada, Inc. completed laser scanning services for much of the congested corridor as a means to obtaining topographic data without endangering surveyors.
05/17 – Present	**S.P. No. H. 009859.5- Load Rating of Bridges – Statewide, LA** LADOTD – Served as a review engineer for load rating of statewide bridges.
01/10 – 12/12	**S.P. No. 450-10-0159- I-10: Siegen Lane to Highland Road Design Build ITR — East Baton Rouge Parish, LA** LADOTD – Served as leader of Independent Technical Review of all bridge structures.

Firm employed by: Forte & Tablada, Inc					
Name	**Gerald Middleton, PLS**			Years of relevant experience with this employer	8
Title	Surveyor			Years of relevant experience with other employer(s)	37
Degree(s) / Years / Specialization				N/A	
Active registration number / state / expiration date				PLS.4856 / LA / 09-30-2023	
Year registered	1999	Discipline		Land Surveying	
Contract role(s) / brief description of responsibilities				Surveyor	
01/12 – 12/20	**H.012308- Cook Road Improvements, Livingston Parish, LA** Surveyor for Right-of-Way surveys that designed improvements to existing section of two lane roadway with construction of a four lane boulevard section from LA Hwy 16 to LA Hwy 1026, along with several bridges.				
1/20 – 10/20	**H.012588, H.012169, H.012587, I-10 Catch Basin Br-W. Baton Rouge P/L, I-10: Iberville P/L-W End Miss Br, I-10: W End of Br 290-W End of LA 415- West Baton Rouge & Iberville Parishes, LA** Survey Manager for complete topographic survey, approximately 18.3 miles, from the East end of the Atchafalaya Bridge to the West end of the I-10/LA 415 Interchange.				
06/18 – 12/19	**H.012393- LA 98: Roundabout at Mills St., Lafayette Parish, LA** QC Reviewer to provide right of way surveys for this project that requires construction of new roundabout at the intersection of Mills Street and W. Gloria Switch Road (LA Hwy 98) in Lafayette Parish, Louisiana.				
11/16 – 01/18	**East Baton Rouge Computerized Traffic Signals-Phase VB, East Baton Rouge Parish, LA** Surveyor responsible for survey and mapping of eight intersections in Baton Rouge for the construction and installation of new computerized traffic synchronization equipment and components.				
08/18 – 11/18	**Bear Industries Survey, St. Gabriel, LA** Supervising professional for boundary and topographic surveys subdividing approx. 170 acres in Carville, La for Bear Industries including location and establishment of approx. 2,000 feet of Miss. River frontage boundary, levee and road right of way utilizing conventional and RTK GPS surveying methods.				
09/17 – 12/19	**S.P. No. H.011808.5- Palmetto Co. Canal Bridge- St. Landry Parish, LA** QC Reviewer to provide property surveys, title take- offs, and right-of-way map services for the removal and replacement of a timber trestle bridge that spans Bayou Des Glaises, located along La. Hwy. 10 in St. Landry Parish.				
8/19 – Present	**H.011670-I-10/Loyola Interchange Improvements- Kenner, LA** QC Reviewer for Topographic Survey, Right- of-Way Survey, and Drainage Survey. The project stretches from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd.				
05/17 – 10/18	**H.004791.5- Belle Chasse Bridge and Tunnel Replacement Hydrographic Survey- Plaquemines Parish, LA**				

	QC Reviewer for comprehensive topographic surveying services for the Belle Chase Bridge and Tunnel Replacement project for LADOTD.
01/18 – 06/19	**H.004100- I-10 (LA 415 to Essen Lane on I-10 and I-12)- East and West Baton Rouge Parishes, LA** DOTD- QC Reviewer for topographic survey of the work between LSU lakes and Essen Lane.
03/15 – 09/20	**Travis Street and George Mashon Road Off-System Bridge Replacement, Livingston Parish, LA** Right-of-Way Surveying for the replacement of George Mashon Road and Travis Street Bridges.
02/17 – 03/18	**H.010753.5- US 90 / I-310 Interchange, St. Charles Parish, LA** QC Reviewer responsible for topographic surveying and 3-D laser scanning at the intersection of US-90 and I-310.
08/14 – Present	**H.004273.5 – I-49 Connector – Lafayette Parish, LA** – LADOTD – QC Reviewer responsible for providing topographic surveying services for the I-49 Connector. The project is in a dense urban area and is approximately 5 miles long. Forte and Tablada, Inc. completed laser scanning services for much of the congested corridor as a means to obtaining topographic data without endangering surveyors.
03/13 – 07/15	**H.004698 – Almonaster Avenue Lift Bridge – Orleans Parish, LA** LADOTD – QC Reviewer responsible for performing topographic and property surveys, developing a drainage map, establishing existing right-of-way for the north line of I- 10, Almonaster Avenue, and CSX Railroad property, and establishing elevations to develop a Digital Terrain Model with widths matching the limits of the topographic survey.
01/16 – 05/18	**REG Geismar Land Acquisition- Alta, Geismar, LA** Supervising professional for boundary and topographic surveys subdividing Tract A-4 in Geismar, La for REG including location and establishment of approx. 1,300’ of Miss. River frontage boundary, levee and road right of way utilizing conventional and RTK GPS surveying methods.
05/17 – 10/17	**LA 442 Tangipahoa River Bridge Replacement, Tangipahoa Parish, LA** QC Reviewer to provide topographic surveying for the LA 442 bridge over the Tangipahoa River. The survey included numerous cross-section surveys upstream and downstream of the bridge, as well as the along the bridge fascia.
10/13 – 10/14	**H.002365.5 – LA 63: Bridges near Bluff Creek – East Feliciana Parish, LA** LADOTD – Provided topographic surveys in preparation for bridge replacements with drainage structures along three portions of the existing highway including utility location and depths. Finished floor elevations of all buildings that fall within the survey limits were determined.
1/12	**Derrick Road Bridge, Iberville Parish, LA** Survey manager responsible for right-of-way maps.
1/16	**Price Street Drainage Improvements, Iberville Parish, LA** Responsible for Right of way and topographic surveys to support engineering services for a drainage study of the major drainage watershed in the area. Once the study was completed, construction plans and specifications were developed for conversion of open channel to sub-surface drainage.

Firm employed by: Forte & Tablada, Inc.				
Name	**Bradley Holleman, PLS, EI**		Years of relevant experience with this employer	1
Title	Senior Vice President, Survey/Advanced Measurements & Modeling		Years of relevant experience with other employer	14.5
Degree(s) / Years / Specialization			BS / 2009 / Civil Engineering with a Minor in Land Surveying/LSU	
Active registration number / state / expiration date			PLS.5082 / LA / 09-30-2022	
Year registered	2012	Discipline	Land Surveying	
Contract role(s) / brief description of responsibilities			Surveyor-In-Charge	

01/18 – 04/20	**H.004100 I-10: LA 415 to Essen Lane** Surveyor-in-Charge for the topographic survey and 3D Mobile laser scanning. This project was for the widening design of Interstate 10 from LA 415 to Essen Lane in East Baton Rouge Parish.
04/20 – 11/20	**H.000688 US 11 Norfolk Southern RR Overpass** Surveyor-in-Charge for the topographic survey and 3D Mobile laser scanning. This project was for the design of a new US 11 overpass over Norfolk Southern Railroad. .
3/17 – 3/18	**H004987 US 190 Collins Blvd** Surveyor-in-Charge for the topographic survey, 3D laser scanning and existing drainage map. This project was for the design of capacity improvements on US 190 in Covington.
5/18 – 4/19	**H.012591 I-10 Paris Road Lake Pontchartrain** Surveyor-in-Charge for the topographic survey, 3D Mobile laser scanning and existing drainage map. This project was for the design of Interstate 10 improvements of an 8 mile stretch in New Orleans East.
12/19 – 11/20	**H.001344 US 190: LA 437 – US 190 (BUS)** Surveyor-in-Charge for the property survey and right of way map. This project was for the construction of improvements along US 190 form La 437 to US 190 (BUS).
4/18 – 9/18	**H.010601 I-10: La 328 to La 347** LADOTD -South Louisiana Survey Retainer – Surveyor-in-Charge for the property survey and right of way map. This project was for the construction of a improvements along Interstate 10 from LA 328 to La 347.
11/16 – 5/17	**H.002980 I-10 Overpass over US 165** LADOTD -South Louisiana Survey Retainer – Surveyor-in-Charge for the property survey and right of way map. This project was for the improvements to the I-10 US 165 interchange.
01/16-11/16	**H.009486 US 90 Bayou Bridge** LADOTD -South Louisiana Survey Retainer – Surveyor-in-Charge for the property survey and right of way map. This project was for the construction of a bridge replacement of US 90 over Bayou Bridge.

01/19 – 04/19	**H.001352 Comite River Diversion Bridge LA 67** LADOTD -South Louisiana Survey Retainer – Surveyor-in-Charge for the property survey and right of way map. This project was for the construction of a Comite Diversion River in East Baton Rouge Parish.
08/20 – 11/20	**H.004100 I-10 LA 415 to Essen Lane Property Survey** Surveyor-in-Charge for the property survey. This project was for the construction of Interstate 10 improvements from The Mississippi River to College Drive in East Baton Rouge Parish.
08/20- Present	**4400017598 Rural Bridge Replacement Initiative** Survey Manager for topographic and property survey for state bridges in accordance with LADOTD's Location and Survey Manual.
09/13– 03/14	**H.002375 Amite River Bridge Near French Settlement** Surveyor-in-Charge for the topographic survey, 3D laser scanning and existing drainage map. This project was for constructing a new bridge over Amite River in French Settlement Louisiana to the replace the existing swing bridge.
01/19- 04/19	**H.012735 La 182 Barrow Street Bridge** Surveyor-in-Charge for the topographic survey, 3D Mobile laser scanning and existing drainage map. This project was for the design of a new bridge on La 182 in Houma.
4/21 – 6/21	**H.014628 LA 397 Turn Lanes @ Rice Mill** Surveyor responsible for topographic survey at the intersection of LA 397 and Joe Spears Rd in Calcasieu Parish.

Firm employed by: Forte & Tablada, Inc					
Name	**Ross Wilson, PLS**			Years of relevant experience with this employer	10
Title	Surveyor			Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization				BS / 2010 / Geomatics	
Active registration number / state / expiration date				PLS.5148 / LA / 03-31-2022	
Year registered	2015	Discipline		Land Surveying	
Contract role(s) / brief description of responsibilities				Surveyor	

04/21 – 06/21	**H.014628- LA 397: Turn Lanes at Rice Mill** Surveyor responsible for topographic surveying at the intersection of LA 397 and Joe Spears Rd. in Calcasieu Parish.
8/19 – 01/20	**H.011670-I-10/Loyola Interchange Improvements- Kenner, LA** Project Manager providing Topographic Survey, Right- of-Way Survey, and Drainage Survey. The project stretches from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd.
6/20 – Present	**H.013979, H.013995, H.013992, H.013994, H.013985, H.013954, H.013990- Rural Bridge Replacement Initiative; 7 State Projects Numbers (22 Structures) in Districts 04, 05, 08 and 58** Surveyor for topographic and property surveying of 22 bridges in Louisiana.
1/20 – 10/20	**H.012588, H.012169, H.012587 I-10: Atch Basin Br-W. Baton Rouge P/L, I-10: Iberville P/L-W End Miss Br, I-10: W End of Br 290-W End of LA 415 West Baton Rouge & Iberville Parishes, LA** Project Manager for complete topographic survey, approximately 18.3 miles, from the East end of the Atchafalaya Bridge to the West end of the I-10/LA 415 Interchange.
11/19 – 12/20	**H.012083- Calcasieu River Bridge Investigation, Calcasieu Parish, LA** Surveyor to provide laser scanning services for the I-10/Lake Calcasieu bridge in Lake Charles, LA. Terrestrial scans were done underneath the bridge for 10 spans on the East and West side, on top the deck to capture the superstructure, as well as from the water below to capture the sub structure.
12/19 – 09/20	**H.011970- Bayou Terrebonne Bridges** Surveyor for the Bayou Terrebonne bridge along with the entire intersection and adjacentroads.
11/18 – 04/19	**LA 327 Spur: Staring Lane Ext. Route LA 327-S- East Baton Rouge Parish, LA** Project Manager for a topographic survey for this project, which is located in East Baton Rouge Parish, in between the intersections of La 42 (Burbank Dr.) and Staring Ln. and La 327 (Gardere Ln.) and La 30.
05/17 – 10/18	**H.004791.5- Belle Chasse Bridge and Tunnel Replacement Hydrographic Survey- Plaquemines Parish, LA** Surveyor for comprehensive topographic surveying services for the Belle Chase Bridge and Tunnel Replacement project for LA DOTD.

6/18 – 12/19	**H.012393- LA 98: Roundabout at Mills St., Lafayette Parish, LA** Project Manager to provide right of way surveys for this project that requires construction of new roundabout at the intersection of Mills Street and W. Gloria Switch Road (LA Hwy 98) in Lafayette Parish, Louisiana.
1/12 – 12/20	**H.012308- Cook Road Improvements, Livingston Parish, LA** Surveyor for Right-of-Way surveys for this project that designed improvements to an existing section of two lane roadway with the construction of a 4 lane boulevard section from LA Hwy 16 to LA Hwy 1026.
01/18 – 06/19	**H.004100- I-10 (LA 415 to Essen Lane on I-10 and I-12)- East and West Baton Rouge Parishes** LADOTD- Project Manager fortopographic survey of the work between LSU lakes and Essen Lane.
02/17 – 03/18	**H.010753.5- US 90 / I-310 Interchange, St. Charles Parish, LA** Surveyor responsible for topographic surveying and 3-D laser scanningat the intersection of US-90 and I-310 in St. Charles Parish.
8/14 – Present	**H.004273.5 – I-49 Connector – Lafayette Parish, LA** LADOTD – Survey Manager responsible for providing topographic surveying services for the I-49 Connector. The project is in a dense urban area and is approximately 5 miles long.
03/13 – 07/15	**H.004698 – Almonaster Avenue Lift Bridge – Orleans Parish, LA** LADOTD – Survey Manager responsible for performing topographic and property surveys, developing a drainage map, establishing existing right-of-way for the north line of I- 10, Almonaster Avenue, and CSX Railroad property, and establishing elevations to develop a Digital Terrain Model with widths matching the limits of thetopographic survey.
10/18 – 02/19	**H.012343 Sunshine Bridge Repair** Surveyor responsible for establishing control on and near the Sunshine Bridge to use survey andlaser scanning methods to monitor the damage on the bridge. This project included utilizing LiDAR data.
06/19 – 09/19	**H.000303.6- Danziger Bridge Repair, Orleans Parish, LA** Surveyor for Topographic and Monitoring survey and laser scanning of Danziger bridge. This survey is necessary due to damage of joints, deck, and girder ends of the fixed spans on both sides of the bridge.
5/17 – 10/17	**H.013052- LA 442 Tangipahoa River Bridge Replacement, Tangipahoa Parish, LA** Surveyor to provide topographic surveying for theLA 442 bridge over the Tangipahoa River. The survey included numerous cross-section surveys upstream and downstream of the bridge, as well as the along the bridge fascia.
9/17 – 12/19	**S.P. No. H.011808.5- Palmetto Co. Canal Bridge- St. Landry Parish, LA** Surveyor to provide property surveys, title take- offs, and right-of-way map services for the removal and replacement of a timber trestle bridge that spans Bayou Des Glaises, located along La. Hwy. 10 in St. Landry Parish.
06/21 – Present	**4400019336 Rural Bridge Replacement Initiative Phase II** Survey Manager for topographic and property survey for state bridges in accordance with LADOTD's Location and Survey Manual.

Firm employed by: Forte & Tablada, Inc					
Name	**Jace Ricard, PLS**			Years of relevant experience with this employer	4
Title	Surveyor			Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization			BS / 2014 / Geomatics		
Active registration number / state / expiration date			PLS.5205 / LA / 9-30-2021		
Year registered	2019	Discipline	Land Surveying		
Contract role(s) / brief description of responsibilities			Surveyor		

01/18 – 06/19	**H.004100- I-10 (LA 415 to Essen Lane on I-10 and I-12)- East and West Baton Rouge Parishes** LADOTD- Surveytechnician for topographic survey of the work between LSU lakes and Essen Lane.
06/20 – Present	**H.013979, H.013995, H.013992, H.013994, H.013985, H.013954, H.013990- Rural Bridge Replacement Initiative; 15** State Projects Numbers (47 Structures) in Districts 04, 05, 08 and 58 – Surveyor for topographic surveying of 22 bridges in Louisiana.
04/21 – 06/21	**H.014628 LA 397 Turn Lanes @ Rice Mill** Surveyor support for this project providing a topographic survey, inaccordance with LA DOTD Location and Survey, for the design of turn lanes in Calcasieu Parish.
05/17 – 10/18	**H.004791.5-Belle Chasse Bridge and Tunnel Replacement Hydrographic Survey- Plaquemines Parish, LA** Survey technician for comprehensive topographic surveying services for the Belle Chase Bridge and Tunnel Replacement projectfor LA DOTD. Included in this work was a survey performed utilizing traditional methods, terrestrial laser scanning of roadway surfaces, and multi-beam 3-D hydrographic surveying.
08/17 – Present	**H.004273.5 – I-49 Connector – Lafayette Parish, LA – LADOTD** Survey technician responsible for providing topographic surveying services for the I-49 Connector. The project is in a dense urban area and is approximately 5 miles long. Forte and Tablada, Inc. completed laser scanning services for much of the congested corridor as a means to obtainingtopographic data without endangering surveyors.
11/18 – 04/19	**H.011684.5- LA 327 Spur: Staring Lane Extension – East Baton Rouge Parish** CAD Technician for comprehensivetopographic surveying services and developing a drainage map for the Staring Lane Extension project for LADOTD. Included in this work was a survey performed utilizing traditional methods and terrestrial laser scanning of roadway surfaces.
08/19 – Present	**H.011670-I-10/Loyola Interchange Improvements- Kenner, LA** Topo management support for this project providing Topographic Survey, Right-of-Way Survey, and Drainage Survey. The project stretches from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd.

10/18 – Present	**East Baton Rouge Stormwater Masterplan- East Baton Rouge Parish, LA** Surveyor for hydrographic surveying of bayous and creeks located within East Baton Rouge Parish for the EBR Stormwater Masterplan. The work consists of establishing cross-sections and stream bed profiles along their length.
11/19 – 04/20	**Allen Parish Drainage Survey, Allen Parish, LA** Surveyor for survey of drainage structures located in Allen Parish.
08/19 – Present	**Amite/Blind River Survey, Livingston Parish, LA** Surveyor for hydrographic surveying of the mouth of the Amite andBlind River in Livingston Parish.
6/19 – Present	**Forrest Delatte Road (LA 16 to Juban Road), Livingston Parish, LA** Project Manager responsible for Right-of Way Maps and Services for this roadway improvement project for a connection between LA 16 and LA 1026. The scope of work includes right of way maps and property surveys, title work, abstracts, and appraisal and negotiations.

Firm employed by: Forte & Tablada, Inc.					
Name	**Tommy Lake**			Years of relevant experience with this employer	4
Title	Party Chief			Years of relevant experience with other employer(s)	30
Degree(s) / Years / Specialization			N/A		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities			Party Chief		

4/21 – 06/21	**H.014628 LA 397 Turn Lanes @ Rice Mill** Party Chief for this project providing a topographic survey, in accordance with LA DOTD Location and Survey, for the design of turn lanes in Calcasieu Parish.
1/20 – 10/20	**H.012588, H.012169, H.012587 I-10: Atch Basin Br-W. Baton Rouge P/L, I-10: Iberville P/L-W End Miss Br, I-10: W End of Br 290-W End of LA 415- West Baton Rouge & Iberville Parishes** Party Chief for complete topographic survey, approximately 18.3 miles, from the East end of the Atchafalaya Bridge to the West end of the I-10/LA 415 Interchange.
08/19 – 01/20	**H.011670-I-10/Loyola Interchange Improvements- Kenner, LA** Party chief for Topographic Survey, Right- of-Way Survey, and Drainage Survey. The project stretches from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd.
11/16 – 01/18	**East Baton Rouge Computerized Traffic Signals-Phase VB, East Baton Rouge Parish, LA** Party Chief for survey and mapping of eight intersections in Baton Rouge for the construction and installation of new computerized traffic synchronization equipment and components.
06/20 – Present	**LA DOTD Rural Bridge Replacement Initiative; 15 State Projects Numbers (47 Structures) in Districts 04, 05, 08 and 58** Party Chief for topographic surveying of 22 bridges in Louisiana.
01/18 – 06/19	**H.004100- I-10 (LA 415 to Essen Lane on I-10 and I-12)- East and West Baton Rouge Parishes- LADOTD** Party Chief for topographic survey of the work between LSU lakes and Essen Lane.
02/17 – 03/18	**H.010753.5- US 90 / I-310 Interchange, St. Charles Parish, LA** Party Chief for topographic surveying and 3-D laser scanning at the intersection of US-90 and I-310 in St. Charles Parish.
05/17 – 10/18	**H.004791.5- Belle Chasse Bridge and Tunnel Replacement Hydrographic Survey- Plaquemines Parish, LA** Party Chief for comprehensive topographic surveying services for the Belle Chase Bridge and Tunnel Replacement project for LA DOTD. Included in this work was a survey performed utilizing traditional methods, terrestrial laser scanning of roadway surfaces, and multi-beam 3-D hydrographic surveying.

10/18 – 02/19	**H.012343- Sunshine Bridge Damage Survey-** Party Chief responsible for establishing control on and near the Sunshine Bridge to use survey and laser scanning methods to monitor the damage on the bridge. This project included utilizing LiDAR data.
06/19 – 09/19	**H.000303.6- Danziger Bridge Repair, Orleans Parish, LA** Party Chief for Topographic and Monitoring survey and laser scanning of Danziger bridge. This survey is necessary due to damage of joints, deck, and girder ends of the fixed spans on both sides of the bridge. This project included utilizing LiDAR data.
11/19 – 12/20	**H.012083 -Calcasieu River Bridge Investigation, Calcasieu Parish, LA** Party Chief for services for the I-10/Lake Calcasieu bridge in Lake Charles, LA. Terrestrial scans were done underneath the bridge for 10 spans on the East and West side, on top the deck to capture the superstructure, as well as from the water below to capture the sub structure. In addition to the terrestrial scans, mobile Lidar was done for future planning.
05/17 – 10/17	**H.013052 -LA 442 Tangipahoa River Bridge Replacement, Tangipahoa Parish, LA** Party Chief to provide topographic surveying for the LA 442 bridge over the Tangipahoa River. The survey included numerous cross-section surveys upstream and downstream of the bridge, as well as the along the bridge fascia.

Firm employed by: Forte & Tablada, Inc.					
Name	**Jonathan Herrod**			Years of relevant experience with this employer	1
Title	Party Chief			Years of relevant experience with other employer(s)	10
Degree(s) / Years / Specialization			Associates Degree / 2014 / Business Management		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities			Party Chief		

04/21 – 06/21	**H.014628 LA 397 Turn Lanes @ Rice Mill** Party Chief for this project providing a topographic survey, in accordance with LA DOTD Location and Survey, for the design of turn lanes in Calcasieu Parish.
06/20 – 08/20	**East Baton Rouge Stormwater Management Phase IV** Party Chief
02/20 – 04/20	**East Baton Rouge Stormwater Management Phase II** Party Chief
05/20 – 06/20	**H.012485.1** DOTD Culvert Load Ratings – Party Chief
01/20 – 10/20	**H.012588, H.012169, H.012587 - I-10: Atch Basin Br-W. Baton Rouge P-L, I-10 Iberville P/L** W End Miss Br, I-10: W End of Br 290 - W End of La 415 - Party Chief for this project providing a topographic survey, in accordance with LA DOTD Location and Survey, for grade raisings throughout the corridor.
04/20 – 05/20	**Amite Church Road Improvements** Party Chief

Firm employed by: Monroe & Corie, Inc.					
Name	Craig H. Corie, PE			Years of relevant experience with this employer	23
Title	Principal & President			Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization			Bachelor of Science- Louisiana State University/ 1992/ Civil Engineering		
Active registration number / state / expiration date			27447 / Louisiana / September 30, 2023		
Year registered	1997	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Drainage Maps and Hydraulics		

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).
09/99-11/01	LA DOTD Off System Bridge Replacement Project in Evangeline Parish SPN 713-20-0111 – Project Designer of the replacement of a four span timber bridge responsible for geometric design, quantities, drainage map and hydraulic analysis.
03/00-01/01	EBR Project No. 00-BR-PT-0055 – Project Designer of the replacement of a four span timber bridge responsible for geometric design, plan preparation, quantities and hydraulic analysis.
07/01-01/02	EBR Project No. 01-BR-PT-0012 – Project Designer of the replacement of a six span timber bridge responsible for geometric design, plan preparation, quantities and hydraulic analysis.
10/04-11/05	EBR Project No. 04-BR-CI-0023 – Project Designer of the replacement of a five span timber bridge responsible for geometric design, plan preparation, quantities, and hydraulic analysis
09/06-11/07	EBR Project No. 06-BR-PT-0046 – Project designer of the replacement of a six span timber bridge on Sharp Road. Responsible for geometric design, plan preparation, quantities and hydraulic analysis
11/06-10/10	LA DOTD Off System Bridge Replacement Project SPN H.010054, in Acadia Parish, five sites. Responsible for drainage maps, hydraulic analysis and bid quantities and constructability review.
10/12-09/14	LA DOTD Off System Bridge Replacement Project SPN H.010054, in LaSalle Parish, four sites. Responsible for drainage maps, hydraulic analysis and bid quantities and constructability review.
11/12-05/15	LA DOTD Off System Bridge Replacement Project SPN H.010054, in Allen Parish, four sites. Responsible for drainage maps, hydraulic analysis and bid quantities and constructability review.
09/13-02/15	LA DOTD Off System Bridge Replacement Project SPN H.010036, in Evangeline Parish, two sites. Responsible for drainage maps, hydraulic analysis and bid quantities and constructability review.
08/13-11/16	LA DOTD Off System Bridge Replacement Project SPN H.010608, in Jefferson Davis Parish, three sites. Responsible for drainage maps, hydraulic analysis and Quality Assurance/Quality Control (QA/QC) review.

06/13-12/16	LA DOTD Off System Bridge Replacement Project SPN H.010608, in Washington Parish, three sites. Responsible for drainage maps, hydraulic analysis and Quality Assurance/Quality Control (QA/QC) review.
10/13-10/15	LA DOTD Off System Bridge Replacement Project SPN H.010150, in Acadia Parish, two sites. Responsible for drainage maps, hydraulic analysis and Quality Assurance/Quality Control (QA/QC) review.
09/13-02/17	LA DOTD Off System Bridge Replacement Project SPN H.010596, in West Feliciana Parish, two sites. Responsible for drainage maps, hydraulic analysis and Quality Assurance/Quality Control (QA/QC) review.
10/13-02/17	LA DOTD Off System Bridge Replacement Project SPN H.010661, in East Baton Rouge Parish, three sites. Responsible for drainage maps, hydraulic analysis and Quality Assurance/Quality Control (QA/QC) review.
09/13-02/17	East Baton Rouge Project No. 13-BR-LA-0002,0004,0024 – Disaster Recovery Bridges, responsible for geometric design, Preliminary and Final plan preparation, drainage maps, hydraulic analysis and bid quantities.
06/15-05/19	LA DOTD Off System Bridge Replacement Project SPN H.011526, in Rapides Parish, three sites. Responsible for drainage maps, hydraulic analysis and Quality Assurance/Quality Control (QA/QC) review.
08/15-09/17	LA DOTD Off System Bridge Replacement Project SPN H.011527, in Tangipahoa Parish, three sites. Responsible for drainage maps, hydraulic analysis and Quality Assurance/Quality Control (QA/QC) review.
12/16-03/19	LA DOTD Off System Bridge Replacement Project SPN H.011087, in Red River Parish, one site. Responsible for drainage maps, hydraulic analysis and Quality Assurance/Quality Control (QA/QC) review.

Firm employed by: Monroe & Corie, Inc.				
Name	**William C. "Bill" Monroe, P. E. , P.L.S**		Years of relevant experience with this employer	43
Title	Principal & President		Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			Bachelor of Science- Louisiana State University/ 1968,1972/ Mechanical Engineering, Civil Engineering	
Active registration number / state / expiration date			13691/ Louisiana / 3-31-2022	
Year registered	1973/1974	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			**Lead Project Manager and 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).
Mr. Monroe worked on the very first group of Off System bridges in 1982. He was responsible for the topographic survey, hydraulic design, scour analysis, and drainage. Since that time, he has continued to work on every cycle since then to successfully complete a total of **268** Off System Bridge Replacement sites in thirty-two parishes around the state.	
01/06 -10/07	Surveyor and Lead Designer, **SPN 700-24-0107, Iberville Parish**, one Off System Bridge Replacement site
01/10 – 04/12	Surveyor and Lead Designer, **SPN 700-46-0107, St. Helena Parish**, one Off System Bridge Replacement site
01/13 -005/15	Surveyor and Lead Designer, **SPN H.010054, Allen Parish**, four Off System Bridge Replacement sites
01/99 – 08/02	Surveyor and Lead Designer, **SPN 700-20-0107, Evangeline Parish**, three Off System Bridge Replacement sites
02/02 - 06/05	Surveyor and Lead Designer, **SPN 700-37-0121, Ouachita Parish**, six Off System Bridge Replacement sites
03/11 -07/13	Surveyor and Lead Designer, **SPN H.003822, Beauregard Parish**, two Off System Bridge Replacement sites
03/97 – 10/99	Surveyor and Lead Designer, **SPN 700-35-0113, Natchitoches Parish**, five Off System Bridge Replacement sites
03/98 – 11/01	Surveyor and Lead Designer, **SPN 700-20-0106, Evangeline Parish**, eight Off System Bridge Replacement sites
04/99 – 02/01	Surveyor and Lead Designer, **SPN 700-53-0107, Tangipahoa Parish**, two Off System Bridge Replacement sites
05/92 - 04/96	Surveyor and Lead Designer, **SPN 700-30-39, Livingston Parish**, three Off System Bridge Replacement sites
06/02 -07/05	Surveyor and Lead Designer, **SPN 700-35-0132, Natchitoches Parish**, four Off System Bridge Replacement sites
06/09 -09/11	Surveyor and Lead Designer, **SPN 700-37-0132, Ouachita Parish**, one Off System Bridge Replacement site
06/13 -012/16	Surveyor and Lead Designer, **SPN H.010608, Washington Parish**, three Off System Bridge Replacement sites
06/15/ - 09/17	Survey and Lead Designer, **SPN H.011523, Avoyelles Parish**, two Off System Bridge Replacement sites
06/15/ - 09/17	Survey and Lead Designer, **SPN H.011523, Avoyelles Parish**, two Off System Bridge Replacement sites
07/02 – 09/05	Surveyor and Lead Designer, **SPN 700-30-0315, LaSalle Parish**, seven Off System Bridge Replacement sites
07/06 -12/09	Surveyor and Lead Designer, **SPN 700-30-0317, LaSalle Parish**, four Off System Bridge Replacement sites
07/91- 06/95	Surveyor and Lead Designer, **SPN 700-28-62, East Feliciana Parish**, two Off System Bridge Replacement sites

08/05 – 01/09	Surveyor and Lead Designer, **SPN 700-01-0113, Acadia Parish**, four Off System Bridge Replacement sites
08/06 - 4/10	Surveyor and Lead Designer, **SPN 700-42-0111, Richland Parish**, five Off System Bridge Replacement site
08/11 – 12/12	Surveyor and Lead Designer, **SPN H.009133, Natchitoches Parish**, one Off System Bridge Replacement site
08/11 -007/12	Surveyor and Lead Designer, **SPN H.009134, Vernon Parish**, one Off System Bridge Replacement site
08/13 -011/16	Surveyor and Lead Designer, **SPN H.010079, Jefferson Davis Parish**, 3 Off System Bridge Replacement sites
08/15 -10/17	Survey and Lead Designer, SPN H.011527**, Tangipahoa Parish**, three Off System Bridge Replacement sites
09/00 – 03/03	Surveyor and Lead Designer, **SPN 700-53-0115, Tangipahoa Parish**, five Off System Bridge Replacement sites
09/08 – 08/09	Surveyor and Lead Designer, **SPN 700-33-0110, Madison Parish**, one Off System Bridge Replacement site
09/13 -002/15	Surveyor and Lead Designer, **SPN H.010036, Evangeline Parish**, two Off System Bridge Replacement sites
09/13-10/17	Surveyor and Lead Designer, **SPN H.010596, West Feliciana Parish**, two Off System Bridge Replacement sites
09/90-06/94	Surveyor and Lead Designer, **SPN 700-29-12, LaSalle Parish**, two Off System Bridge Replacement sites
10/01 – 12/05	Surveyor and Lead Designer, **SPN 700-23-0209, Iberia Parish**, one Off System Bridge Replacement site
10/10 – 07/12	Surveyor and Lead Designer, **SPN H.016141, Jefferson Davis Parish**, one Off System Bridge Replacement site
10/13 -01/15	Surveyor and Lead Designer, **SPN H.010150, Acadia Parish**, two Off System Bridge Replacement sites
10/99 – 01/01	Surveyor and Lead Designer**, SPN 700-58-0112, Vernon Parish**, seven Off System Bridge Replacement sites
11/00 – 07/02	Surveyor and Lead Designer, **SPN 700-19-0106, East Feliciana Parish**, one Off System Bridge Replacement site
11/00 – 10/02	Surveyor and Lead Designer**, SPN 700-49-0113, St. Landry Parish**, two Off System Bridge Replacement sites
11/01 – 02/04	Surveyor and Lead Designer, **SPN 700-20-0108, St. Landry Parish**, four Off System Bridge Replacement sites
11/04 – 12/08	Surveyor and Lead Designer, **SPN 700-53-0121, Tangipahoa Parish**, four Off System Bridge Replacement sites
11/06 -10/10	Surveyor and Lead Designer, **SPN 700-01-0115, Acadia Parish**, five Off System Bridge Replacement sites
11/10 – 08/12	Surveyor and Lead Designer, **SPN H.006153, LaSalle Parish**, two Off System Bridge Replacement sites
11/10 -12/12	Surveyor and Lead Designer, **SPN H.005054, Union Parish**, one Off System Bridge Replacement site
11/12 -009/14	Surveyor and Lead Designer, **SPN H.009982, LaSalle Parish**, four Off System Bridge Replacement sites
11/95 - 07/97	Surveyor and Lead Designer, **SPN 700-30-41, Rapides Parish**, three Off System Bridge Replacement sites
12/00 – 08/01	Surveyor and Lead Designer, **SPN 700-19-0112, Jefferson Davis Parish**, 2 Off System Bridge Replacement sites
12/01- 05/04	Surveyor and Lead Designer, **SPN 700-22-0112, Grant Parish**, four Off System Bridge Replacement sites
12/02 – 04/06	Surveyor and Lead Designer, **SPN 700-49-0120, St Landry**, four Off System Bridge Replacement sites
12/05 – 11/09	Surveyor and Lead Designer, **SPN 700-35-0135, Natchitoches Parish**, 7 Off System Bridge Replacement sites
12/10 -09/12	Surveyor and Lead Designer, **SPN H.005148, Winn Parish**, two Off System Bridge Replacement sites
12/10 -10/12	Surveyor and Lead Designer, **SPN H.016062, Catahoula Parish**, one Off System Bridge Replacement site
12/16 – 03/19	Survey and Lead Designer, **SPN H.011087, Red River Parish**, one Off System Bridge Replacement site

Firm employed by: Urban Systems, Inc.					
Name	**Alben P. Cooper, PE, PTOE**			Years of relevant experience with this employer	15
Title	Associate / Transportation Engineer			Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			BS / 2006 / Civil Engineering		
Active registration number / state / expiration date			36291 / Louisiana / 09-30-2023		
Year registered	2002	Discipline	Professional Engineer: Civil Engineering		
Active registration number / state / expiration date			3206 / Louisiana / 05-02-2024		
Year registered	2002	Discipline	Professional Traffic Operations Engineer		
Contract role(s) / brief description of responsibilities			Traffic Engineering / TMP		

06/17 – 11/17	**LA 182 at Hollywood Rd Temporary Traffic Signals** Mr. Cooper was the lead design engineer for two (2) temporary traffic signals to be utilized to maintain vehicular traffic at the intersection of LA 182 at Hollywood Rd while the intersection was converted to a roundabout. Mr. Cooper coordinated with the roadway design team to ensure the temporary signal was able to accommodate traffic and did not restrict construction activities. He also performed QA/QC services on the construction cost estimate.
12/20 – Present	**US 190 at Northshore and Camp Villere Roundabouts** As the project manager for the Traffic Engineering portion of the project, Mr. Cooper, will be overseeing the design of permanent striping & signage plans. He will also manage the design of temporary traffic signalization that will be required during the multi-phases of roundabout construction. A level 2 Traffic Management Plan (TMP) will be prepared. Mr. Cooper will coordinate with the prime-consultant, St Tammany Parish, LADOTD and FHWA as needed.
03/20 – 12/20	**Harrah's Improvements** Mr. Cooper was the project manager for the preparation of a traffic impact study and a traffic phasing plan for modifications to the Harrah's Casino in New Orleans, LA. For the traffic study, he supervised the project team and performed QA/QC for the analysis for several temporary porte-cochere locations for the proposed hotel. Mr. Cooper also prepared a traffic phasing plan identifying the closures and detours of vehicular traffic and pedestrians required to accommodate the demolition/construction phasing plan.

Firm employed by: Urban Systems, Inc.				
Name	**Alison C. Michel, PE, PTOE, PTP, RSP$_1$**		Years of relevant experience with this employer	21
Title	President / Transportation Engineer		Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization	BS / 1997 / Civil Engineering			
Active registration number / state / expiration date	30261 / Louisiana / 03-31-2023			
Year registered	2002	Discipline	Professional Engineer: Civil Engineering	
Active registration number / state / expiration date	1023 / Louisiana / 11-06-2023			
Year registered	2002	Discipline	Professional Traffic Operations Engineer	
Active registration number / state / expiration date	626 / Louisiana / 11-20-2023			
Year registered	2017	Discipline	Professional Transportation Planner	
Active registration number / state / expiration date	115/ Louisiana/ 12-21-2024			
Year registered	2018	Discipline	Road Safety Professional	
Contract role(s) / brief description of responsibilities	Traffic Engineering / TMP			

03/11 – 05/13	**Huey P. Long Bridge Widening - (Westbank and Eastbank Approaches and Main Bridge Deck Widening) (Jefferson Parish, LA)** The contractor for the Huey P. Long Widening in Jefferson Parish, LA brought on USI about half-way into construction to improve the flow of traffic during required closures. Ms. Michel prepared traffic control devices plans (TCDP) for multiple phases of construction. The TCDPs also included the design of a traffic signal plan for the installation of temporary signal heads to control lane shifts.
09/08 – 02/09	**District 02 Signal System Restoration Program** Ms. Michel was project manager and lead engineer working with LADOTD District 02 in assessing and repairing specified signals in Terrebonne (13 signals) and Lafourche Parishes (6 signals) damaged by hurricanes in the 2008 hurricane season. Signal equipment was assessed, and designs were prepared, including signing & marking and lighting, for immediate repair, minor rebuilds, and total reconstruction as needed. Construction Engineering and Inspection (CEI) services were provided during the construction phase.
01/14 – 08/19	**US 90 (I-49 South) Albertson's Parkway to Ambassador Caffery Design-Build Project** (Lafayette Parish, LA) Ms. Michel was the traffic engineer for updating US 90 to a controlled access facility by converting at-grade intersections to an interchange. The bridge structure had to span the intersection and a railroad. She supervised the design and analysis and performed QA-QC for temporary and permanent signal plans, permanent signage plans, temporary traffic control plans and the transportation management plan. Signal plans were prepared using the DOTDs latest TSI format. Analysis included developing design hour volumes for the design year and modeling signals in Synchro. Phasing and timing were developed for both permanent and temporary signal operation.

Firm employed by: Urban Systems, Inc.					
Name	**Brandon D. Perilloux, PE, PTOE, RSP$_1$**			Years of relevant experience with this employer	11
Title	Associate / Transportation Engineer			Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			BS / 2010 / Civil Engineering		
Active registration number / state / expiration date			39968 / Louisiana / 03-31-2022		
Year registered	2002	Discipline	Professional Engineer: Civil Engineering		
Active registration number / state / expiration date			4432 / Louisiana / 03-18-2024		
Year registered	2002	Discipline	Professional Traffic Operations Engineer		
Active registration number / state / expiration date			187 / Louisiana / 12-21-2024		
Year registered	2018	Discipline	Road Safety Professional		
Contract role(s) / brief description of responsibilities			Traffic Engineering / TMP		

10/17 – 11/19	**TMP for US 90 Bridge Maintenance over I-10 Ramps at LockMoor** Development of a Traffic Management Plan (TMP) for proposed bridge repairs on US 90 in Calcasieu Parish was managed by Mr. Perilloux. This TMP included conducting safety analysis, detour analysis and developing proposed mitigations where applicable.
11/12 – 09/16	**Bridge Preventative Maintenance District 61 and Port Allen** Traffic management plans (TMP) were for bridge replacement and repairs for various locations in Louisiana. Mr. Perilloux assisted on and was project manager on these projects. This included developing different levels of TMPs based on LADOTD EDSM guidelines. In addition to traffic analysis, tasks included coordinating with the prime on the least impactful sequence of construction and also identifying detour routes.
02/20 – Current	**LA 23: Belle Chasse Bridge & Tunnel** Mr. Perilloux is responsible for managing USI's part of the project which is to provide construction and design support as part of the Owner Verification (OV) services. USI is a subconsultant for this project and Mr. Perilloux oversees the project managing/coordination of reviewing traffic related submittals from the design-builder. These submittals include traffic analysis and traffic signal design plans. Mr. Perilloux will also assist with traffic related issues during construction.

Firm employed by: Urban Systems, Inc.					
Name	**Nicole H. Stewart, PE, PTOE**			Years of relevant experience with this employer	15
Title	Vice President / Transportation Engineer			Years of relevant experience with other employer(s)	1.5
Degree(s) / Years / Specialization			BS / 2004 / Civil Engineering BS / 2004 / Physics		
Active registration number / state / expiration date			34750 / Louisiana / 09-30-2023		
Year registered	2009	Discipline	Professional Engineer: Civil Engineering		
Active registration number / state / expiration date			2923 / Louisiana / 08-2023		
Year registered	2002	Discipline	Professional Traffic Operations Engineer		
Contract role(s) / brief description of responsibilities			Traffic Engineering / TMP		

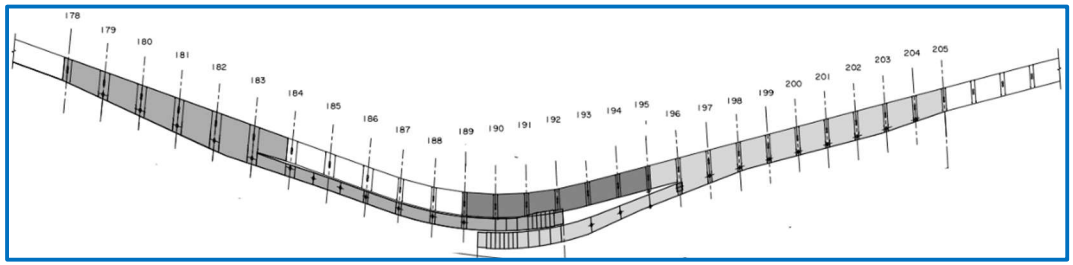
10/17 – 05/19	**TMP for I-10: West of 108 to I-210 Interchange: Rubblize and Overlay** As the lead engineer for this Traffic Management Plan, Ms. Stewart was responsible for the preparation of the safety analysis. She conducted the analysis per the guidelines set forth by LADOTD in *Guidelines for Crash Data Analysis.* She conducted queue analysis to identify when lane closures would be permitted, identified the construction impact area and reviewed crash data for more than 350 collisions. Ms. Stewart identified trends and calculated crash rates and determined that the section of I-10 that was going to be rubblized had a crash rate that was higher than the statewide average.
04/10 – 06/11	**I-10 Crossing – Irish Bayou Bridge Interstate 10 New Orleans East** Ms. Stewart was the supervising engineer for the design of Traffic control devices plans for the I-10 Highway Crossing Levee Enlargement project at Irish Bayou Road in New Orleans East. The plans included multiple and phased road closures of a six (6) lane section of Interstate 10 including nighttime closures.
02/15 – 06/16	**Bridge Preventative Maintenance District 61 and Port Allen** Ms. Stewart was the principal in charge for Traffic Management Plans (TMP) for bridge replacement and repairs for various locations in Louisiana. The level of each TMP was based on LADOTD EDSM guidelines. A Level 3 TMP was prepared for the reconstruction of the LA 1 bridge over the Intracoastal Waterway. For this TMP, detailed work zone impact management strategies were developed to help minimize the project's impact on mobility.

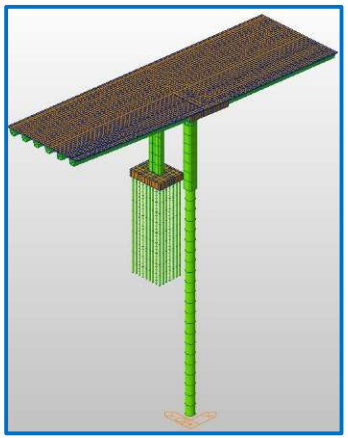
17. Firm Experience:

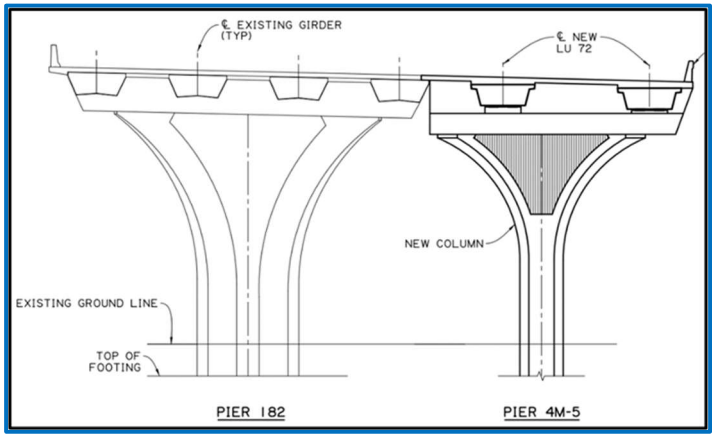
Firm name	SDR Engineering Consultants, Inc.			Past Performance Evaluation Discipline(s)	Bridge
Project name	**MacArthur Interchange Completion Phase II**			Firm responsibility (prime or sub?)	Prime
Project number	H.011309.5	Owner's name	LADOTD		
Project location	Jefferson Parish, LA		Owner's Project Manager	Li Yang, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, (225) 379-1456, Li.Yang@LA.GOV				
Services commenced by this firm (mm/yy)	08/19	Total consultant contract cost ($1,000's)		$3,319	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$2,750	

MacArthur Interchange Completion Phase II provides connections between the eastbound direction of the West Bank Expressway (US 90-Z) and the eastbound frontage road near Peters Road and the East Bound Harvey Tunnel. The new ramps will provide access to the US 90-Z from MacArthur Ave. and Destrehan Ave. traffic and to help alleviate traffic congestion at the West Bank Expressway/Manhattan Boulevard intersection.

The Project consists of providing all engineering design services required to construct two separate ramp structures and the relocation of the frontage road in the eastbound direction. Access to the West Bank Expressway from Peters Road and the Harvey Tunnel to be provided by the proposed on-ramp 5M. To accommodate ramp 5M, the existing eastbound Manhattan Boulevard exit ramp is to be removed and a new relocated Manhattan Boulevard exit-ramp 4M is to be provided.



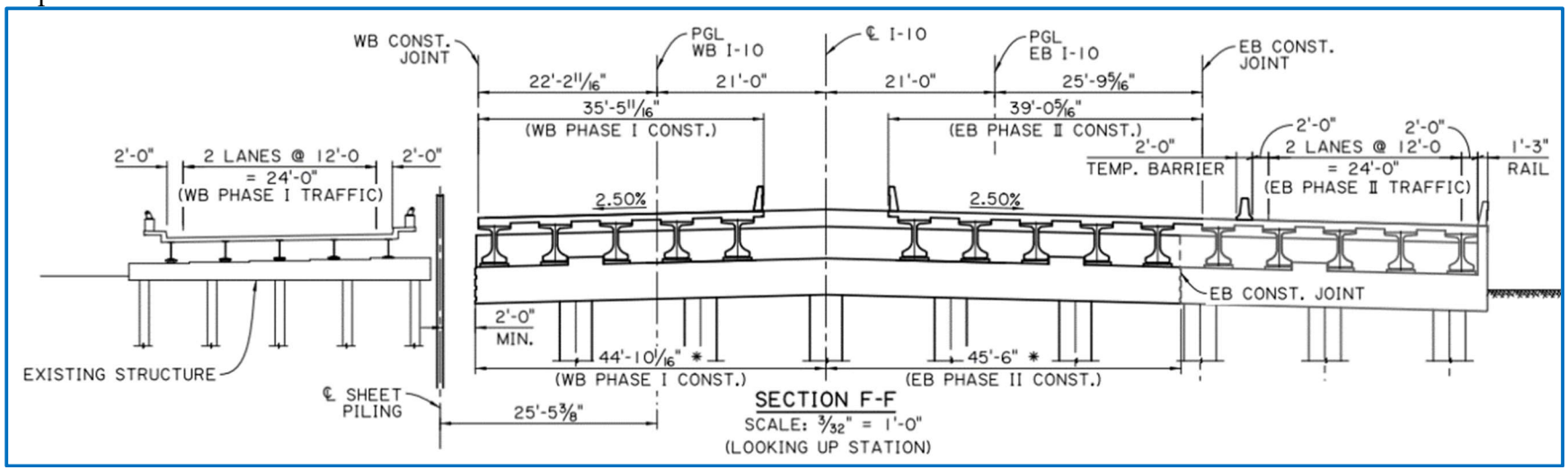




Team: Amir Botros, PhD, PE; Wesley Callaway, EI; **Adnan Elsaad, PE; Osama Elsaad, PE**; **Sarah Elsawah, EI**; Patrick Duffy, PE; **James Fussell, PE**; **Travis Honore, EI; Zhiyong Liang, PhD, PE**, **Ahmed Rageh, PhD, EI; Andy Rodriguez, EI; Hatem Seliem, PhD, PE; Mohsen Shahawy, PhD, PE**; **Shalin Sheth, EI; Sara Sotoud, PhD, EI; Feng Xie, PE**; Mengqiu Ye, PE.

Firm name	SDR Engineering Consultants, Inc.			Past Performance Evaluation Discipline(s)	Bridge
Project name	**I-10 Overpass Over US 165 & MP RR**			Firm responsibility (prime or sub?)	Prime
Project number	H.002980	Owner's name	LADOTD		
Project location	Jefferson Davis Parish, LA			Owner's Project Manager	Brian Delatte, PE
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, 225-379-1329, Brian.Delatte@la.gov				
Services commenced by this firm (mm/yy)	10/16	Total consultant contract cost ($1,000's)			$609
Services completed by this firm (mm/yy)	04/21	Cost of consultant services provided by this firm ($1,000's)			$609

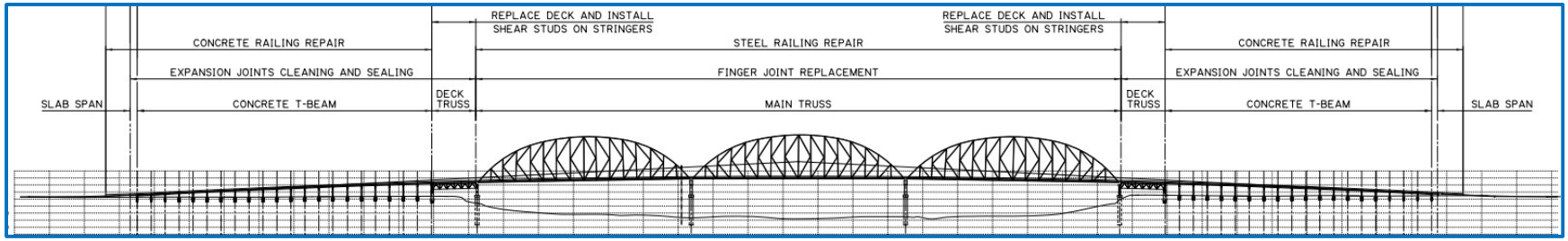
SDR provided structural design and plans development for the replacement of EB and WB of I-10 overpass US 165 and MP Railroad bridges. Each bridge total length is 765 feet comprising seven (7) spans. Four (4) spans were made one continuous unit, and the other three (3) spans were another continuous unit. Design included all elements of bridge superstructure and substructure along with required slope and embankment work.



The replacement of the bridge involved complex construction phasing to maintain traffic on the interstate while removing the old structure and constructing the new bridges. To ensure design economy and accelerated construction, DOTD standard precast prestressed concrete girders (LG Girders) were used for the superstructure.

Team: Amir Botros, PhD, PE; **Adnan Elsaad, PE; Osama Elsaad, PE**; **Sarah Elsawah, EI**; Patrick Duffy, PE; **James Fussell, PE**; **Travis Honore, EI; Zhiyong Liang, PhD, PE**; Jacob Parker, PE**; Andy Rodriguez, EI; Hatem Seliem, PhD, PE; Mohsen Shahawy, PhD, PE**; **Shalin Sheth, EI; Feng Xie, PE**.

Firm name	SDR Engineering Consultants, Inc.			Past Performance Evaluation Discipline(s)	Bridge
Project name	**Long-Allen Bridge (LA 182 over Atchafalaya River-Berwick Bay)**			Firm responsibility (prime or sub?)	Prime
Project number	H.011487	Owner's name	LADOTD		
Project location	Lafayette Parish, LA		Owner's Project Manager	Chris Guidry, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, (225) 379-1329, Chris.Guidry@LA.GOV				
Services commenced by this firm (mm/yy)	10/18	Total consultant contract cost ($1,000's)		$946	
Services completed by this firm (mm/yy)	02/21	Cost of consultant services provided by this firm ($1,000's)		$946	



The bridge was built in 1933 and consists of 47 spans with a total length of 3,746 feet. The approach spans consist of two reinforced concrete slab spans, 40 reinforced concrete T-beam spans, and 2 deck truss spans. The main spans consist of 3 identical through truss spans with span length of 608 feet. The substructure is comprised of concrete pile bents, two-column concrete bents, and concrete piers. The scope of work includes:

- Inspection of superstructure.
- Load rating of main truss, deck truss, and approach spans.
- Evaluation of superstructure and substructure to determine scope of rehabilitation.
- Diagnostic load test of approach spans using strain gauges and calibration trucks.
- Design rehabilitation, and develop construction plans and cost estimate.
- Develop temporary traffic control plans.

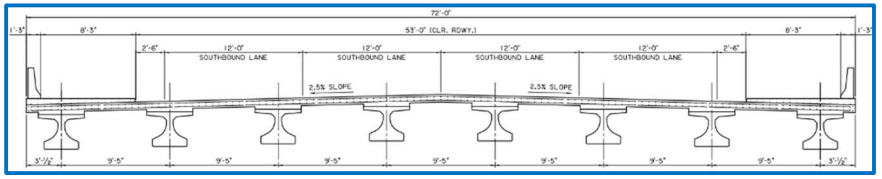
Bridge rehabilitation includes, cleaning and painting of all steel members, CFRP strengthening of approach slab spans, replacing concrete deck of deck truss spans, heat-straightening of selected truss members, jacking the deck truss and repair of the rocker bearings, replace finger joints and supporting beams, clean and seal of expansion joints, repair of concrete railing, applying epoxy-urethane overlay system on roadway, and applying methyl methacrylate concrete sealer on sidewalks.

Firm name	SDR Engineering Consultants, Inc.			Past Performance Evaluation Discipline(s)	Bridge
Project name	**US 71 (LA-1) Market Street over ICG RR**			Firm responsibility (prime or sub?)	Prime
Project number	H.012009	Owner's name	LADOTD		
Project location	Caddo Parish, LA		Owner's Project Manager	Carl Gaudry	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, 225-379-1075, Carl.Gaudry@la.gov				
Services commenced by this firm (mm/yy)	07/17	Total consultant contract cost ($1,000's)		$160	
Services completed by this firm (mm/yy)	08/18	Cost of consultant services provided by this firm ($1,000's)		$160	

This project was to provide Stage 0 Design (Feasibility Study) on the twin two-lane bridge structures on US 71 (LA-1) Market Street viaduct Southbound over ICR railroad through downtown Shreveport. The bridges also cross over the city's Festival Plaza on the north approach and a business storage area on the south approach. The Roadway is classified as a Principal Arterial in an urbanized area. These structures were built in the year 1940 and are constructed with reinforced concrete super and sub structures with a few steel I-beam spans at the approaches.

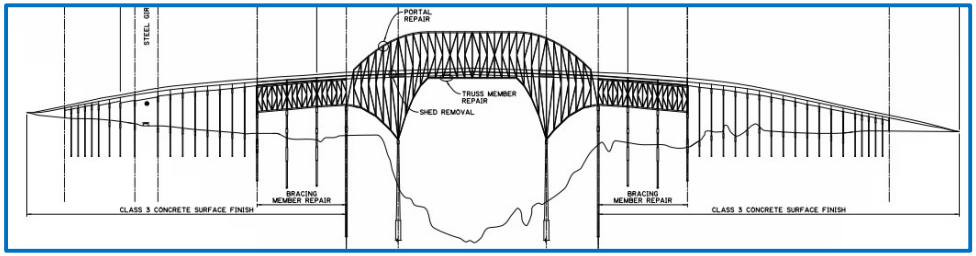
Based on reviewing existing documents, inspection of the existing bridge, and SDR evaluation, it was recommended that the two twin bridges to be replaced with a single bridge structure within the same right of way. Two alternates were designed to satisfy the railroad minimum clearance requirements of 23.5 ft. vertical and 25 ft. horizontal, Alternates "C" and "E". Several stakeholders were identified and were approached for solicitate of views (SOV) about the two selected alternates.

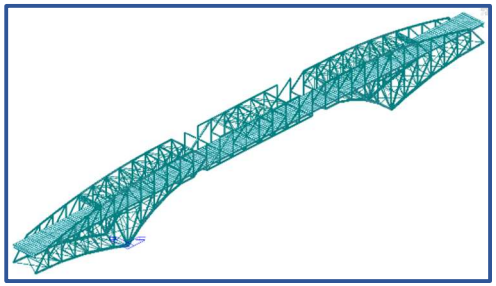
Team: **Adnan Elsaad, PE; Osama Elsaad, PE**; Patrick Duffy, PE; **James Fussell, PE; Zhiyong Liang, PhD, PE; Hatem Seliem, PhD, PE; Mohsen Shahawy, PhD, PE**; **Sara Sotoud, PhD, EI; Feng Xie, PE**; Mengqiu Ye, PE.



Firm name	SDR Engineering Consultants, Inc.			Past Performance Evaluation Discipline(s)	Bridge
Project name	**US 80 Texas Street over Red River Bridge Rehab**			Firm responsibility (prime or sub?)	Prime
Project number	H.011484	Owner's name	LADOTD		
Project location	Shreveport, LA		Owner's Project Manager	Stephanie Doolittle, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, (225) 379-1329, Stephanie.Cavalier@LA.GOV				
Services commenced by this firm (mm/yy)	11/15	Total consultant contract cost ($1,000's)		$962	
Services completed by this firm (mm/yy)	04/18	Cost of consultant services provided by this firm ($1,000's)		$962	

This project was to provide hands-on inspection, load rating, and rehabilitation design for the US 80 Texas Street Bridge over Red River including the truss pans and approach spans. The bridge consisted of a main truss span 884 feet long, six (6) 102.75 feet steel deck truss spans, one (1) 91 feet steel girder span, and 35 reinforced concrete deck girder approach spans of varying span lengths. The major tasks included:



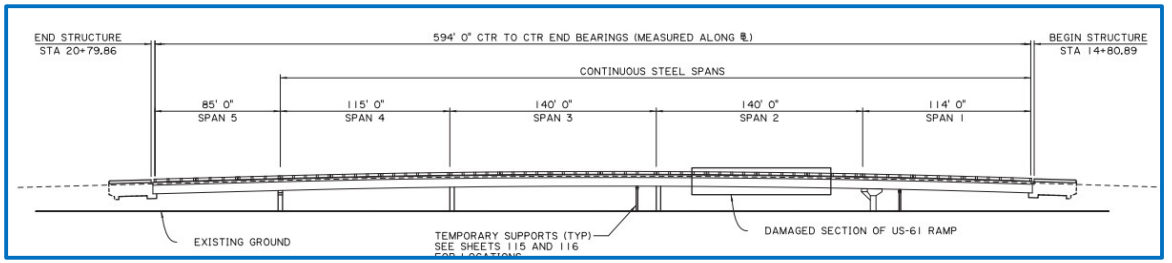


- In-depth inspection of all components of the superstructure and substructure.
- Ultrasonic testing of pins.
- LRFR Load rating utilizing 3-D FE modeling.
- Evaluation of bridge and determination of proposed scope for rehabilitation.
- Develop final report with rehabilitation recommendations.
- Design of rehabilitation and preparation of construction plans.
- Develop special provisions and construction cost estimate.
- Provide construction support (approving submittals, responding to RFIs, site visits, change orders preparation).

Staff: Amir Botros PhD, PE; **Adnan Elsaad; PE, Osama Elsaad, PE;** Sam Fallaha, PE; **James Fussell, PE;** Fares Jnaid, PE**, Zhiyong Liang, PhD, PE;** Josh Porter, PE**; Hatem Seliem, PhD, PE; Mohsen Shahawy, PhD, PE; Feng Xie, PE.**

Firm name	SDR Engineering Consultants, Inc.			Past Performance Evaluation Discipline(s)	Bridge
Project name	**I-10: WB on-Ramp From US-61**			Firm responsibility (prime or sub?)	Prime
Project number	H.012302	Owner's name	LADOTD		
Project location	Sorrento, Ascension Parish, LA		Owner's Project Manager	Kian Yap, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, 225-375-1328, Kian.Yap@LA.GOV				
Services commenced by this firm (mm/yy)	6/2016	Total consultant contract cost ($1,000's)		$298	
Services completed by this firm (mm/yy)	10/2017	Cost of consultant services provided by this firm ($1,000's)		$298	

Interstate I-10 westbound on-ramp from US-61 is a curved steel plate girder bridge built in 1975. The bridge was struck by an over-height vehicle causing severe damage to the exterior girder. The total length of the bridge is 594 ft. The superstructure consists of two curved steel plate girders with a floor system acting compositely with concrete deck slab.



SDR tasks included inspection of the bridge, design of the replacement span, develop repair details and construction plans, load testing after completion of the repair works, and provide construction supports. Due to the continuity of the system, removing the exterior damaged girder would induce internal forces and deformation in the system rendering the construction to connect the girders very challenging. Such behavior was captured by the detailed three-dimensional finite element models using for structural analysis of the bridge structure during staged construction. The repair technique developed was to build the entire damaged span off-site and to slide in place using SPMT to provide minimal closure of I-10.

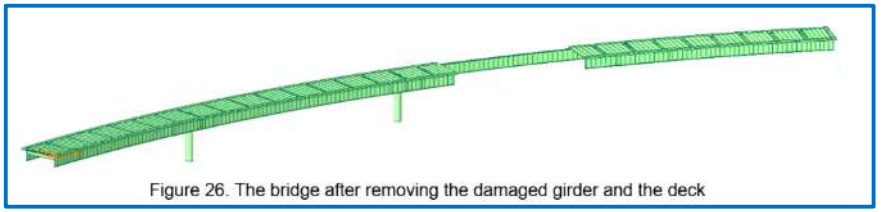


Figure 26. The bridge after removing the damaged girder and the deck

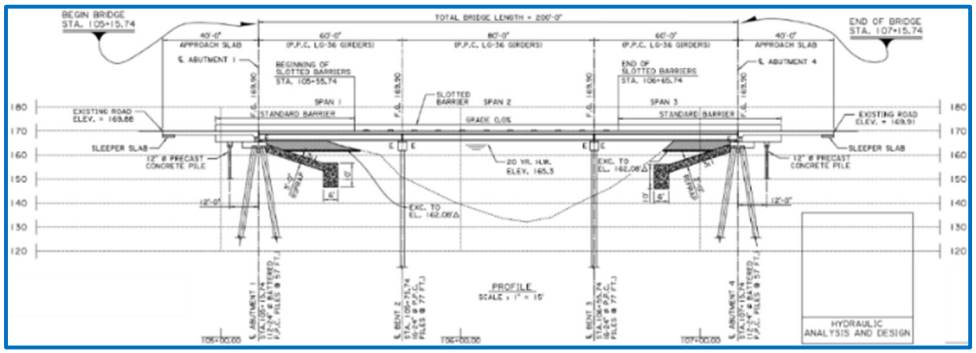
The team members involved in this project included: Amir Botros PhD, PE; **Adnan Elsaad; PE, Osama Elsaad, PE;** Sam Fallaha, PE; **James Fussell, PE;** Fares Jnaid, PE**, Zhiyong Liang, PhD, PE;** Josh Porter, PE**; Hatem Seliem, PhD, PE; Mohsen Shahawy, PhD, PE; Feng Xie, PE.**

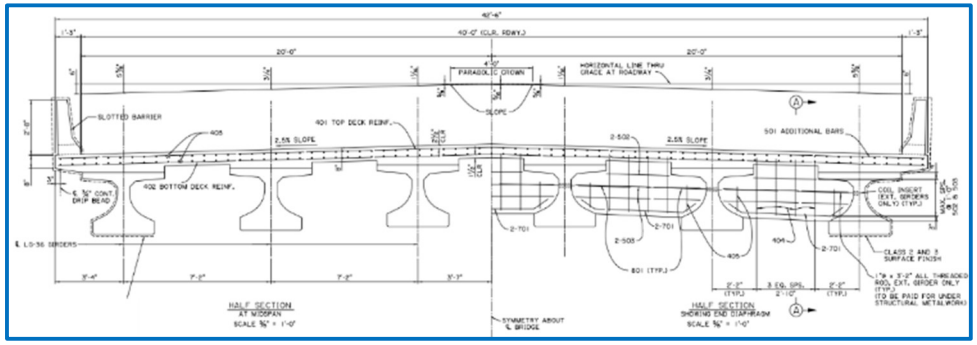
Firm name	SDR Engineering Consultants, Inc.			Past Performance Evaluation Discipline(s)	Bridge
Project name	**LA 10 Beaver Creek Bridge**			Firm responsibility (prime or sub?)	Prime
Project number	H.012699	Owner's name	LADOTD		
Project location	St. Helena Parish, LA		Owner's Project Manager	Stephanie Cavalier, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, 225-379-1329, Stephanie.Cavalier@LA.GOV				
Services commenced by this firm (mm/yy)	09/16	Total consultant contract cost ($1,000's)		$209	
Services completed by this firm (mm/yy)	11/16	Cost of consultant services provided by this firm ($1,000's)		$209	

This project was an emergency design task for the replacement of a three-span prestressed concrete bridge that was damaged in flood, which was completed in less than two months. The bridge has a total length of 200 feet and a clear roadway width of 40 feet.

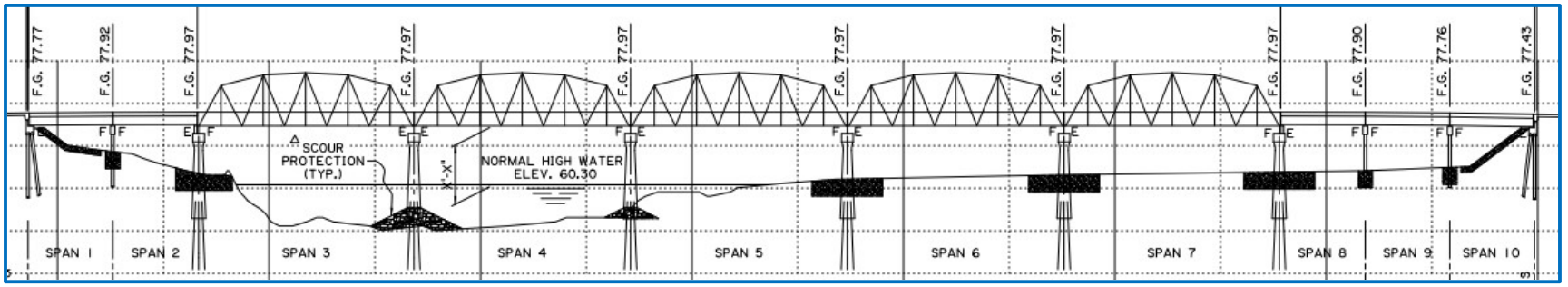
The superstructure consists of six (6), PPC LG-36 girders, acting in composite action with an 8.5 in. continuous concrete deck. The substructure consists of cast-in-place concrete caps and precast concrete piles. SDR engineering services incluced construciton support besides design and final plans preparation. Construction support services inlcuded approval of conctractor submnittal, review of shop drawings, responding to RFIs, and regular site visits.

Staff: Amir Botros, PhD, PE; **Adnan Elsaad, PE; James Fussell, PE;** Joshua Porter, PE**; Hatem Seliem, PhD, PE; Mohsen Shahawy, PhD, PE; Zhiyong Liang, PhD, PE, Feng Xie, PE**.



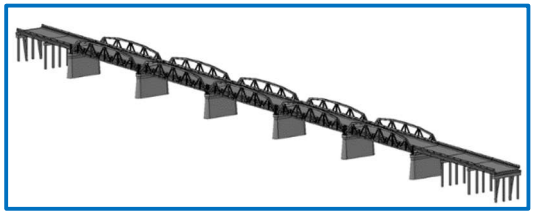


Firm name	SDR Engineering Consultants, Inc.			Past Performance Evaluation Discipline(s)	Bridge
Project name	**LA 66 Big Bayou Sara Bridge Rehab**			Firm responsibility (prime or sub?)	Prime
Project number	H.002281	Owner's name	LADOTD		
Project location	West Feliciana Parish, LA		Owner's Project Manager	Brian Delatte, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, 225-379-1328, Brian.Delatte@LA.GOV				
Services commenced by this firm (mm/yy)	01/13	Total consultant contract cost ($1,000's)		$540	
Services completed by this firm (mm/yy)	08/16	Cost of consultant services provided by this firm ($1,000's)		$540	



The bridge is historic (built in 1949) carrying LA-66 over Big Bayou Sara. It consists of five (5), 100 feet steel pony truss spans and five (5), 40 feet steel I-beam approach spans. Services provided included:

- In-depth inspection of the superstructure and substructure.
- Development of 3-D Finite Element models to determine internal forces.
- Evaluation of the existing structure and determine deficient elements.
- Design rehabilitation system for the superstructure and substructure.
- Develop preliminary and final plans for construction,
- Design of temporary steel, two-lane detour bridge to be constructed on north side of the existing bridge to maintain traffic during rehabilitation work on existing bridge.
- Develop of cost estimation and schedule.
- Construction support (constractor's submittal, RFIs, site visits, change orders)

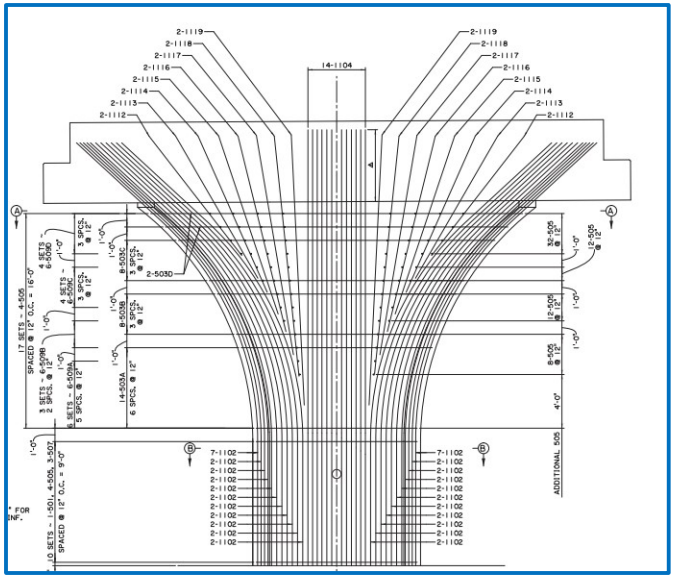


The team members involved in this project included: **Adnan El Saad, PE; James Fussell, PE;** Marc Hoffmann, EI; Brian Kever, PE; **Zhiyong Liang, PhD, PE; Hatem Seliem, PhD, PE; Mohsen Shahawy, PhD, PE; Feng Xie, PE**.

Firm name	SDR Engineering Consultants, Inc.			Past Performance Evaluation Discipline(s)	Bridge
Project name	**MacArthur Interchange Completion Phase IB**			Firm responsibility (prime or sub?)	Prime
Project number	H.009933	Owner's name	LADOTD		
Project location	Jefferson Parish, LA		Owner's Project Manager	Chris B. Guidry, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, 225-375-1328, Chris.Guidry@LA.GOV				
Services commenced by this firm (mm/yy)	06/12	Total consultant contract cost ($1,000's)		$917	
Services completed by this firm (mm/yy)	07/13	Cost of consultant services provided by this firm ($1,000's)		$917	

MacArthur Interchange Phase IB (Evaluation and Redesign; Full technical evaluation of completed bridge widening plans was carried out under a task for peer review, where several constructability issues and detailing were discovered. In addition, the capacity of the existing bridge was questioned by LADOTD to the point of requiring posting of the bridge. The redesign task was carried out under an existing Retainer Contract with HUVAL, Inc.

The redesign team consisted of HUVAL, SDR and M&M. SDR was tasked with the design and final plans production of all complex Superstructure elements consisting of the prestressed U-girders and LG girders, deck, inverted-T cap beams, and columns, and all complex columns with unbalanced loads. In addition, due to the structural complexity of the existing inverted-T piers, special complex analysis was required to evaluate and determine the cut lines for accommodating the widening which was also performed by SDR. In addition, the re-alignment of the new ramps was necessary to avoid major structural issues related to cutting existing piers and creating significant unbalanced loads. The evaluation of existing cut lines and new alignment was developed by SDR staff and later transferred to HUVAL. SDR staff knowledge and experience was essential in untangling the proposed non-constructible details; proposing an essentially new design that is simple and cost effective while maintaining all aesthetic aspects of the original design. SDR, as a part of the redesign team, has completed the alterative design for the MacArthur Bridge that eliminates many of the problems experienced in the previous design.



The team members involved in this project included: **Mohsen Shahawy, PhD, PE**; **Adnan El Saad, PE**, Brian Kever, PE, **Zhiyong Liang, PhD, PE,** Matt Hamby, EI, Tharu George, EI.

Firm name	Volkert, Inc. VOLKERT		Past Performance Evaluation Category(ies)*	Road
Project name	**I-12 to Bush, LA (LA 435 – LA 40 / LA 41)**		Firm responsibility (prime or sub?)	Sub
Project number	H.005154		Owner's name	LADOTD c/o T. Baker Smith
Project location	Livingston, Tangipahoa, St. Tammany, Louisiana		Owner's Project Manager	Dennis Hymel, PE, T. Baker Smith
Owner's address, phone, email	1100 South Acadia Rd., Thibodaux, LA 70301, 985-446-7970; Dennis.Hymel@tbsmith.com			
Services commenced by this firm	04/2014	Total consultant contract cost ($1,000's)		N/A
Services completed by this firm	11/2021	Cost of consultant services provided by this firm ($1,000's)		$51,392

I-12 to Bush project was a TIMED project connecting LA 3241 from the LA 40/LA 41 intersection in Bush, LA to I-12 at the LA 434 Interchange. As a sub-consultant to T. Baker Smith, Volkert is providing bridge and road design services as necessary to complete the submittal of Stage 3 Design, Part III Preliminary Plans. Volkert is responsible for the review of the environmental study, traffic data, parish maps, aerialphotos, and DOTD roadway classification.

Volkert's scope of work for bridge design includes:

- Conducting field visits to the bridge site(s) and assessing the existing conditions of possible permit issues, roadway alignments alternates, etc., and determining ifany additional bridges are required.
- Developing a list of required bridges and provide estimated types, sizes (lengths and widths) and locations, and preparing construction cost estimates for each bridges and alternatives.
- Preparation of a set of preliminary bridge plans and construction cost estimated for the preferred options.

Volkert's scope of work for road design services includes providing QA/QC services of T. Baker Smith's road design deliverables including design criteria, geometrics, hydraulic design and analysis, and cross-sectional elements. As a part of supplemental agreement No. 2, Volkert is performing a traffic study to obtain existing and projected future traffic variables to improve the safety and efficiency of the roadway.

The team members involved in this project included: **Janet Evans, Perry Leblanc**

Firm name	Volkert, Inc. VOLKERT			Past Performance Evaluation Category(ies)*	Road
Project name	**Macarthur Interchange Completion – Phase II**			Firm responsibility (prime or sub?)	Sub
Project number	H.011309		Owner's name	LADOTD c/o SDR Engineering Consultants, Inc.	
Project location	Jefferson Parish, Louisiana			Owner's Project Manager	Hatem Seliem (SDR)
Owner's address, phone, email	2820 Continental Drive #100, Baton Rouge, LA 70808, 225-444-5671; hseliem@sdrengineering.com				
Services commenced by this firm	10/2015	Total consultant contract cost ($1,000's)			N/A
Services completed by this firm	09/2020	Cost of consultant services provided by this firm ($1,000's)			$391,845

This project involves the addition of new on and off-ramps and the demolition of an existing off-ramp to the West Bank Expressway inJefferson Parish. The addition of these new structural elements requiresthe relocation of the adjacent frontage road from Peters Road to Manhattan Blvd. The total project length is 1.947 miles including the ramps. The project is currently in the Preliminary Plans phase approaching 90% and will proceed into Final Design.

Volkert is responsible for the design of the geometry for the entire project as well as the design of the relocated frontage road and its connection to the new on and off ramps and the existing tunnel and a right turn lane on Peters Road. This design includes new subsurface drainage, sequence of construction in a congested area, and the development of preliminary and final roadway plans to be included in the overall project set. Ms. Lisa Frugé serves as the Project Manager for Volkert's portion of the work. Ms. Frugé developed the horizontal and vertical geometry of the road and ramps as well as developing the corridor and determining the necessary right of way taking, sequence of construction, cross sections, and cost estimates. Ms. Loniello is designing the drainage system and Ms. Leumas assists in the overall creation of the construction plans submittal.

The team members involved in this project included: **Janet Evans, Ashley Beckendorf, Perry Leblanc**

Firm name	Volkert, Inc. VOLKERT		Past Performance Evaluation Category(ies)*	Road
Project name	**I-10 Widening from Highland Interchange to LA 73 Interchange**		Firm responsibility (prime or sub?)	Prime
Project number	H.009250		Owner's name	LADOTD
Project location	East Baton Rouge and Ascension Parish, LA		Owner's Project Manager	Peggy Jo Paine, PE
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA 70804, 225-379-1065; Peggy.Paine@la.gov			
Services commenced by this firm	09/2012	Total consultant contract cost ($1,000's)		N/A
Services completed by this firm	07/2020	Cost of consultant services provided by this firm ($1,000's)		$845,000

This project consists of providing engineering and related services required to widen existing I-10 to the median side from a four-lane freeway to a six-lane freeway from Highland Rd. to LA 73 (7 miles) including alternate pavement design for travel lanes and inside shoulders, and the rehabilitation of existing travel lanes and outside shoulder. There are 4 bridges on this project that will have to be widened or replaced.

Original Contract: Pre-construction services including 30% preliminary roadway and bridge design. Dual existing bridges over LA 42 (Highland Road), Bayou Manchac and LA 73 required comprehensive evaluation reports to determine as to whether each structure will need to be widened or replaced. The LA 928 structure over I-10 was evaluated for the widening of I-10 and all required rehabilitation work identified.

Supplemental Agreement No. 1: pre-construction services to include the completion of 100% preliminary roadway and bridge design plans, as well as the development of 100% final roadway, bridge, and lighting design plans. (currently on hold pending IMR completion)

Work Order No. 1: providing traffic counts at 5 locations to determine temporal volume variation, peak weekdays/weekends, peak periods, peak hours, and turning movement counts. (08/2015)

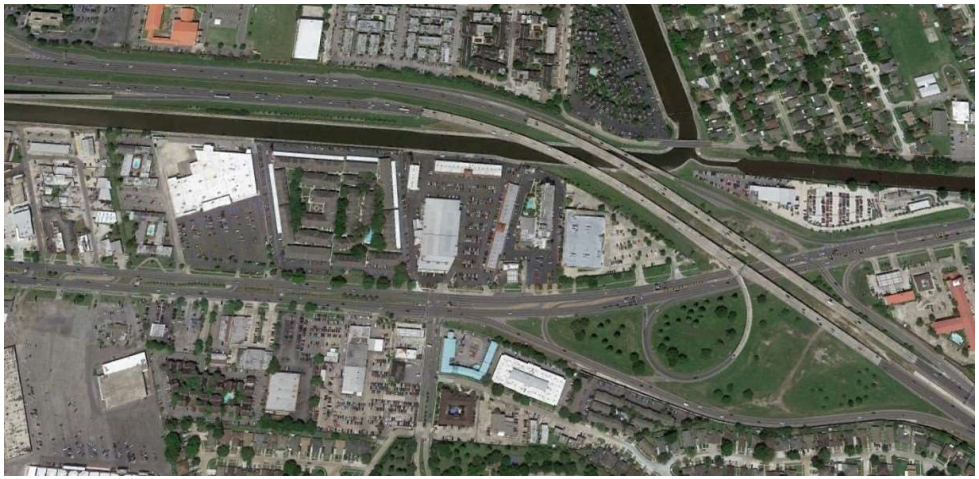
Supplemental Agreement No. 2: Volkert was contracted to perform and prepare an Interstate Modification Report (IMR) to analyze the existing roadway network surrounding the LA 42 (Highland Road) interchange at Interstate I-10. The project involved a significant amount ofdata collection such as 7-day volume and classification counts, a speed study, travel time study, field observations, and a safety/crash study along 5 corridors and 10 intersections.

The team members involved in this project included: **Janet Evans, Ashley Beckendorf, Jonathan Gambino, Perry Leblanc**

Firm name	Volkert, Inc. VOLKERT		Past Performance Evaluation Category(ies)*	Road
Project name	**I-10 Widening Design/Williams Blvd. Interchange to Veterans Blvd. Interchange**		Firm responsibility (prime or sub?)	Sub
Project number	H.003074.5		Owner's name	LADOTD c/o GEC, Inc.
Project location	Jefferson Parish, LA		Owner's Project Manager	Phillip Meyer, GEC Inc.
Owner's address, phone, email	8282 Goodwood Blvd., Baton Rouge, LA 70806, 225-612-3000; pmeyer@gecinc.com			
Services commenced by this firm	06/2017	Total consultant contract cost ($1,000's)		N/A
Services completed by this firm	08/2018	Cost of consultant services provided by this firm ($1,000's)		$663,770

This project involves the widening of I-10 between the Williams Boulevard and Veterans Boulevard interchanges in Jefferson parish. The totalproject length is 1.85 Miles. The project consists of constructing one 12' additional lane with a 12' inside shoulder along I-10 eastbound and westbound roadways with median barrier. Additionally, an auxiliary lane shall be added to the outside of the eastbound roadway from the entrance at Power Boulevard to the exit at Veterans Boulevard. As a part of this project, the existing bridges over Canal No. 3 and Veterans Boulevard shall be replaced, and sound barriers shall be constructed on the north side of the 1-10 westbound bridges. Volkert is responsible for the development and road design, drainage design and Traffic Management Plans.

The team members involved in this project included: **Janet Evans, Ashley Beckendorf, Jonathan Gambino, Perry Leblanc**



Firm name	Volkert, Inc. VOLKERT		Past Performance Evaluation Category(ies)*	Road
Project name	**I-12 Widening (US 190 to LA 59) Route I-12**		Firm responsibility (prime or sub?)	Sub
Project number	H.005154		Owner's name	LADOTD c/o T. Baker Smith
Project location	Livingston, Tangipahoa, St. Tammany, Louisiana		Owner's Project Manager	Dennis Hymel, PE, T. Baker Smith
Owner's address, phone, email	1100 South Acadia Rd., Thibodaux, LA 70301, 985-446-7970; Dennis.Hymel@tbsmith.com			
Services commenced by this firm	09/2016	Total consultant contract cost ($1,000's)		N/A
Services completed by this firm	03/2018	Cost of consultant services provided by this firm ($1,000's)		$331,000

This project is to widen and rehabilitate I-12 to the median side from a four-lane freeway to a six-lane freeway section in both theEast and Westbound direction. The project begins just west of US190 and ends just east of LA 59 for approximately 4 miles. The US190 and LA 59 interchanges are included in this project.

As a sub-consultant to T. Baker Smith, Volkert is providing bridge design and roadway design quality control services as necessary tocomplete the submittal of Stage 3 Design, Part III Preliminary Plansand Part IV, Final Plans. Mrs. Lisa Frugé is serving as Volkert's project manager.

The team members involved in this project included: **Janet Evans, Ashley Beckendorf, Perry Leblanc**

Firm name	Volkert, Inc. VOLKERT		Past Performance Evaluation Category(ies)*	EA
Project name	**LA 1088 Corridor Study**		Firm responsibility (prime or sub?)	Prime
Project number	H.010116		Owner's name	LADOTD
Project location	St. Tammany Parish, LA		Owner's Project Manager	Jeff Brown, PE
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA 70804, 225-379-1305			
Services commenced by this firm	02/2015	Total consultant contract cost ($1,000's)		N/A
Services completed by this firm	02/2016	Cost of consultant services provided by this firm ($1,000's)		$524,000

The scope of services for this project consisted of the preparation of an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA), and other applicable laws for the project. Theproject proposed to improve the mobility and safety of vehicle, pedestrian and bicycle traffic along the LA 1088 corridor between LA 59 (Girod St.) and the I-12 westbound ramps in St. Tammany Parish. The total length of the project is approximately 3.5 miles. The study area for this project is considered to be from the intersection of LA 59 and US 190 north along LA 1088 until its intersection with LA 36.

Volkert was responsible for evaluating the social, economic, and environmental consequences of the alternatives (including the no-build) and present this information in the EA document. In addition to the formal EA document and Finding of No Significant Impact (FONSI), Volkert was required to develop separate reports such as Wetland Finding, Phase I Environmental Site Assessment, Phase I Cultural Resources Survey Reports, Noise analysis, possible Section 4(f) statement, Conceptual Stage Relocation Plan, etc.

Volkert performed a line and grade study which includes:

- Establishment of design criteria; Required lane configurations based on level of service.
- Developed typical roadway sections; Developed horizontal geometry.
- Developed vertical geometry and set minimum roadway grade; Identified major drainage structure locations.;
- Established approximate required right of way limits; Developed a list of impacted improvements.
- Identified known existing utilities and any potential conflicts; Cost estimates for right of way, utility relocation, engineering, and construction

The team members involved in this project included: **Janet Evans, Ashley Beckendorf, Perry Leblanc**

Firm name	Volkert, Inc. VOLKERT	Past Performance Evaluation Category(ies)*	Road
Project name	**LA 1/I-10 Connector**	Firm responsibility (prime or sub?)	Prime
Project number	H.005121	Owner's name	West Baton Rouge Parish Transportation Authority
Project location	West Baton Rouge Parish, Louisiana	Owner's Project Manager	Riley Berthelot
Owner's address, phone, email	Governmental Building 880 North Alexander Ave., Port Allen, LA 70767, 225-366-2403; rberthelot@wbrcouncil.org		
Services commenced by this firm	11/2010	Total consultant contract cost ($1,000's)	N/A
Services completed by this firm	06/2013	Cost of consultant services provided by this firm ($1,000's)	$405,200

Volkert performed engineering and related services to prepare preliminary plans for a new connector roadway between LA 1 at LA 988 (Beaulieu Lane) and I-10 at the LA 415interchange in West Baton Rouge Parish. The project included a flyover interchange at LA 1, associated roadway and drainage design, bridge over the inter-coastal waterway and connection to LA 415 south of I-10.

Volkert reviewed the preferred alignment for improved efficiency and operation and made recommendations to the client as part of the plan development process. The preferred alignment is Alternate #4 as indicted in the Final Line and Grade Study dated August 2006 completed under State Project 700-61-0113. Volkert also coordinated traffic control plans and connections to LA 1 and LA 415 with LA DOTD. Volkert provided survey, geotechnical investigations, environmental compliance, and preliminary design.

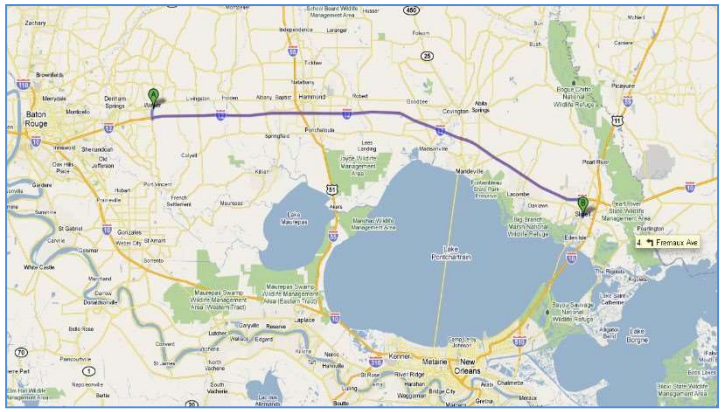
Preliminary design included bridge design, roadway design, drainage design, utility relocation coordination, and roadway lighting design.

The Owner, West Baton Rouge Parish Transportation Authority, set up this project in three phases. The work performed under this contractwas Phase I and was funded by the Transportation Authority and encompassed 30% design/preliminary design. Phases II and III included detail design and construction of the project and was privately funded by the firm selected (PPP). The tolls were implemented by the PPP to fund the design and construction of the final project.

The team members involved in this project included: **Janet Evans**

Firm name	Volkert, Inc. VOLKERT		Past Performance Evaluation Category(ies)*	Road
Project name	**I-12 Stage 0 Feasibility Study and Environmental Inventory**		Firm responsibility (prime or sub?)	Prime
Project number	H.005154		Owner's name	LADOTD
Project location	Livingston, Tangipahoa, St. Tammany, Louisiana		Owner's Project Manager	Mike Aghayan
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-1808; mike.aghayan@la.gov			
Services commenced by this firm	09/2010	Total consultant contract cost ($1,000's)		$1,317
Services completed by this firm	01/2013	Cost of consultant services provided by this firm ($1,000's)		$237,222

The project consists of increasing capacity for I-12 from LA 447 in Walker, LA to the I-10/I-59 interchange in Slidell, LA. Preliminary design is being accomplished in sufficient detail to determine costs and impacts. Cost estimates are being accomplished for all alternatives including construction costs for roadway and new ormodified bridges, utility relocations, right-of-way costs, potential noise walls, and environmental mitigation. An environmental inventory is being accomplished todetermine if there were any substantial environmental issues that may stop the addition of capacity or cause the cost to escalate due to mitigation. Feasibility will be determined for each of the alternatives, and recommendations for the preferred alternative will be developed and documented in Stage 0 Reports. Volkert is accomplishing overall project Management, preparation of preliminary design including typical sections and plans, and preparation of cost estimates.



As part of this study, Volkert accomplished a field review and is evaluating over 100 Bridges to determine if they can be widened or should be replaced during a future widening on the I-12. Volkert will separate the 72-mile corridor into segments which will be prioritized based on need for additional capacity, cost, safety, and level of service.

The team members involved in this project included: **Janet Evans**

Firm name	Forte & Tablada, Inc		Past Performance Evaluation Discipline(s)*	Survey	
Project name	**Rural Bridge Replacement Initiative Phase I**		Firm responsibility (prime or sub?)	Sub	
Project number	15 S.P. Numbers	Owner's name	LADOTD		
Project location	47 Structures in Districts 04, 05, 08 and 58		Owner's Project Manager	Valerie Tourres	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA, 225-379-1292, Valerie.Tourres@la.gov				
Services commenced by this firm (mm/yy)	08/20	Total consultant contract cost ($1,000's)		$6,600	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$587	

Forte and Tablada, Inc. was a subconsultant to T Baker Smith to provide the topographic survey for 17 bridges for State Project Numbers H.013954, H.013979, H.013985, H.013992, H.013994, and H.013995. While the project is ongoing in the design phase, Forte and Tablada has completed the topographic survey in accordance with LA DOTD's Location and Survey Manual. The projects are currently in design and the anticipated Final Plans completion date is May 2022. The largest challenges to overcome for this project were the bridge locations and the advanced schedule. Forte and Tablada was able to overcome these challenges with its communications software (Teams) and utilizing multiple field crews and Professional Land Surveyors trained in LA DOTD's Location and Survey field procedures and data collection protocols.

Forte and Tablada is also providing property surveys and right of way mapping as the need arises during the design process.

This project displays Forte and Tablada's ability to conduct topographic surveys and right of way mapping for bridge sites of a similar size in accordance with LA DOTD standards.

The team members involved in this project included**: Russell Coco,** PE, MBA-Principal-in-Charge, **Ross Wilson**, PLS.-Project Surveyor, **Bradley Holleman**-Surveyor-in-Charge, **Jace Ricard**, PLS-Surveyor, **Rachel Waldroup**, LSI-Pre Professional, **Jeremy Cormier**-Survey Technician, **Tommy Lake**-Party Chief

Firm name	Forte & Tablada, Inc		Past Performance Evaluation Discipline(s)*	Survey	
Project name	**Rural Bridge Replacement Initiative Phase II**		Firm responsibility (prime or sub?)	Sub	
Project number	5 S.P. Numbers	Owner's name	LADOTD		
Project location	20 Structures in Districts 4 and 5		Owner's Project Manager	Valerie Tourres	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA, 225-379-1292, Valerie.Tourres@la.gov				
Services commenced by this firm (mm/yy)	06/21	Total consultant contract cost ($1,000's)		Unknown	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$895,881	

Forte and Tablada, Inc. was a subconsultant to T Baker Smith to provide the topographic survey for 20 bridges for State Project Numbers H.014219, H.014222, H.014228, H.014231, and H.014236. While the project is ongoing in the design phase, Forte and Tablada has completed the topographic survey in accordance with LA DOTD's Location and Survey Manual. The projects are currently in design and the anticipated Final Plans completion date is May 2022.

This project displays Forte and Tablada's ability to conduct topographic surveys and right of way mapping for bridge sites of a similar size in accordance with LA DOTD standards.

The largest challenges to overcome for this project were the bridge locations and the advanced schedule. Forte and Tablada was able to overcome these challenges with its communications software (Teams) and utilizing multiple field crews and Professional Land Surveyors trained in LA DOTD's Location and Survey field procedures and data collection protocols.

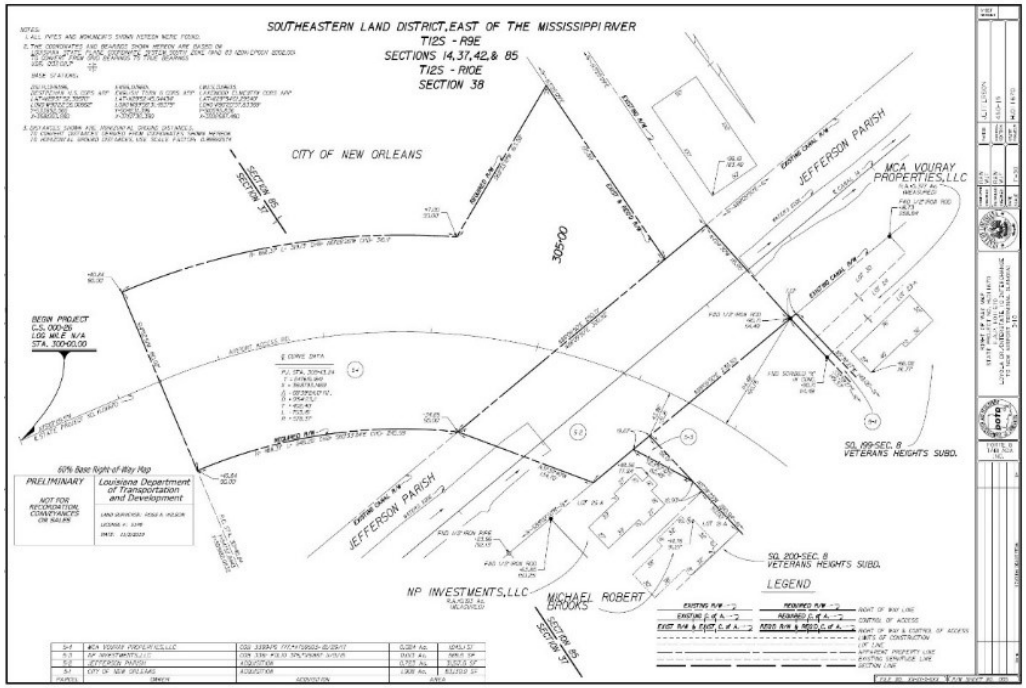
Forte and Tablada is also providing property surveys and right of way mapping as the need arises during the design process.

The team members involved in this project included**: Russell Coco**, PE, MBA-Principal-in-Charge, **Ross Wilson**, PLS-Project Surveyor, **Bradley Holleman**-Surveyor-in-Charge, **Jace Ricard**, PLS-Surveyor, **Rachel Waldroup**, LSI-Pre Professional, **Jeremy Cormier**-Survey Technician

Firm name	Forte & Tablada, Inc			Past Performance Evaluation Discipline(s)*	Survey
Project name	**I-10/ Loyola Interchange Improvements**			Firm responsibility (prime or sub?)	Sub
Project number	H.011670	Owner's name	LADOTD		
Project location	Kenner, LA	Owner's Project Manager	Tim Nickel, PE, LA DOTD		
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70804; 225-379-1292; Timothy.Nickel@LA.GOV				
Services commenced by this firm (mm/yy)	07/19	Total consultant contract cost ($1,000's)	Unknown		
Services completed by this firm (mm/yy)	01/20	Cost of consultant services provided by this firm ($1,000's)	$552		

Forte and Tablada provided a Property Survey, Right-Of-Way Maps, Topographic Survey, Drainage Survey, and QA/QC of the work. The project stretches from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd. Forte and Tablada is responsible for rapidly delivering the survey as part of pre-construction services for this design-build project.

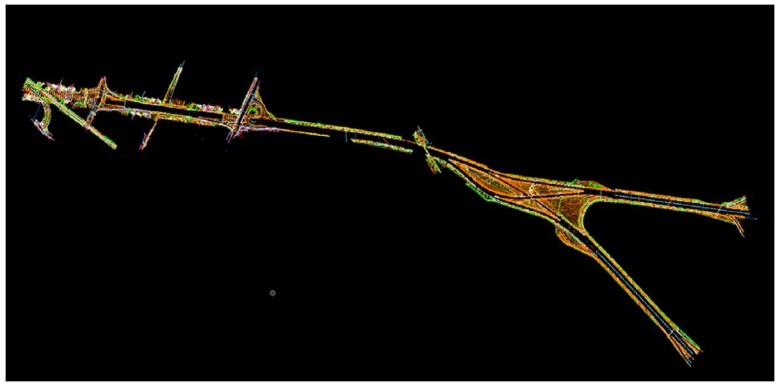
The team members involved in this project included: **Russell Coco**, PE-Principal-In-Charge, **Ross Wilson**, PLS-Project Manager, Will Fontenot, PLS-ROW QC Reviewer, **Jace Ricard**, PLS-Survey Management and CAD Support, **Gerald Middleton**, PLS-ROW QC Reviewer, **Tommy Lake**-Lead Party Chief, **Rachel Waldroup**-CAD Technician, Jeremy Cormier-CAD Technician.



This project displays Forte and Tablada's ability to conduct topographic surveys, title takeoffs, property surveys and right of way mapping in accordance with LA DOTD standards.

Firm name	Forte & Tablada, Inc		Past Performance Evaluation Discipline(s)*		Survey
Project name	**I-10 (LA 415 to Essen Lane on I-10 and I-12) Survey**			Firm responsibility (prime or sub?)	Sub
Project number	S.P. No. H.004100 F.A.P. No. H004100	Owner's name	LADOTD		
Project location	East and West Baton Rouge Parishes, LA		Owner's Project Manager	Stanley Ard	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-1292, Stanley.Ard@la.gov				
Services commenced by this firm (mm/yy)	01/18	Total consultant contract cost ($1,000's)		$6,180.0	
Services completed by this firm (mm/yy)	06/19	Cost of consultant services provided by this firm ($1,000's)		$1,400.0	

Forte and Tablada, Inc. was responsible for a topographic survey of the I-10 corridor from approximately 500' East of Perkins Rd. to Essen Ln., and the I-12 corridor from the I- 10/I-12 Merge to Essen Ln. Responsibilities on this project were establishing horizontal and vertical control, establishing targets for Mobile LiDar roadway scans to control precision, and performing a topographical survey to LA DOTD Standards. Forte and Tablada, Inc. was responsible for all field and office work within the above limits of survey as part of a team on the project.



The team members involved in this project included: Russell J. Coco, Jr., P.E.-Principal In Charge, Ross Wilson, P.L.S.-Project Manager, **Jace Ricard**, P.L.S.-Survey Technician, **Tommy Lake**, P.L.S.-Party Chief, Will Fontenot, P.L.S.-Surveyor-in-Charge, Steve LeBlanc, P.L.S.-Survey Crew Coordinator

This project displays Forte and Tablada's ability to use advanced technology such as lidar scanning to conduct topographic surveys on bridge projects for LA DOTD.

Firm name	Forte & Tablada, Inc		Past Performance Evaluation Discipline(s)*		Survey
Project name	**LA 327 Spur: Staring Lane Extension Route LA 327-S**			Firm responsibility (prime or sub?)	Prime
Project number	S.P. No. H.011684.5	Owner's name	LADOTD		
Project location	East Baton Rouge Parish, LA		Owner's Project Manager	Barrett Smith	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70804, 225-379-1292				
Services commenced by this firm (mm/yy)	11/18	Total consultant contract cost ($1,000's)			$165
Services completed by this firm (mm/yy)	04/19	Cost of consultant services provided by this firm ($1,000's)			$165

Forte and Tablada completed a topographic survey for this project which is located in East Baton Rouge Parish, between the intersections of La 42 (Burbank Dr.) and Staring Ln. and La 327 (Gardere Ln.) and La 30. A complete Topographic survey including all utilities with depths and all drainage was required, along with finish floor elevations of all buildings that fall within the survey limits.

The team members involved in this project included: **Joey Coco**, P.E.-Principal-In-Charge, Will Fontenot, P.L.S.-Surveyor-in-Charge, **Ross Wilson**, P.L.S.-Project Manager, **Jace Ricard**, P.L.S.-Surveyor

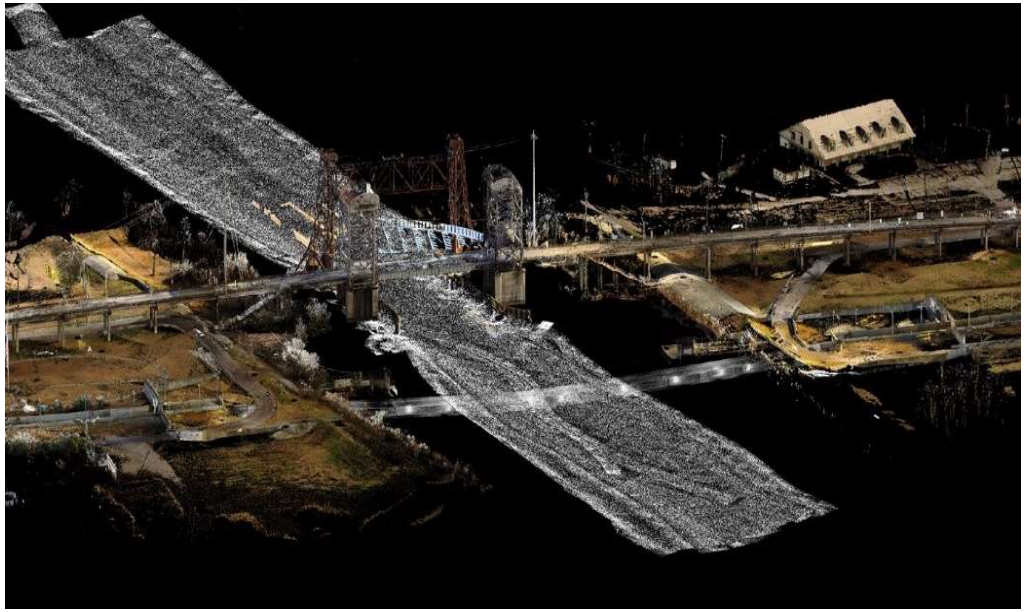
This project displays Forte and Tablada's ability to conduct topographic surveys in accordance with LA DOTD standards contained within the Location and Survey Manual.

Firm name	Forte & Tablada, Inc			Past Performance Evaluation Discipline(s)*	Survey
Project name	**Belle Chasse Bridge and Tunnel Replacement**			Firm responsibility (prime or sub?)	Prime
Project number	S.P. No. H.004791.5	Owner's name	LADOTD		
Project location	Plaquemines, LA		Owner's Project Manager	Stanley Ard	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-1292, Stanley.Ard@la.gov				
Services commenced by this firm (mm/yy)	05/17	Total consultant contract cost ($1,000's)		$401.7	
Services completed by this firm (mm/yy)	10/18	Cost of consultant services provided by this firm ($1,000's)		$249.6	

Forte and Tablada provided comprehensive topographic surveying services for the Belle Chase Bridge and Tunnel Replacement project for LA DOTD. Included in this work was a survey performed utilizing traditional methods, terrestrial laser scanning of roadway surfaces, and multi-beam 3-D hydrographic surveying. The below image depicts a combined point cloud, or 3D model, from a multibeam hydrographic surveying sensor and a LiDAR laser scanner. Features were extracted from the point cloud and incorporated into the final MicroStation InRoads survey deliverables.

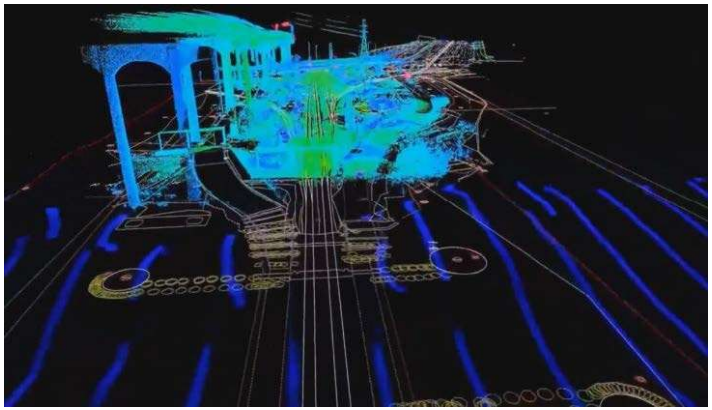
The team members involved in this project included: **Joey Coco**, P.E.-Principal-In-Charge, Will Fontenot, P.L.S.-Surveyor-in-Charge, **Jerry Middleton**, Jr., P.L.S.-Party Chief/Technician, Steve LeBlanc, P.L.S.-Party Chief/Technician, **Ross Wilson**, P.L.S.-Project Manager, Brent Campbell-Senior Technician, **Tommy Lake**-Party Chief

This project displays Forte and Tablada's ability to use advanced technology such as lidar scanning and multibeam hydrographic equipment to conduct topographic surveys on bridge projects for LA DOTD.



Firm name	Forte & Tablada, Inc			Past Performance Evaluation Discipline(s)*	Survey
Project name	**Almonaster Avenue Lift Bridge**			Firm responsibility (prime or sub?)	Sub
Project number	S.P. No. H.004698	Owner's name	LA DOTD c/o Volkert & Associates		
Project location	Orleans Parish, LA	Owner's Project Manager	Jan Evans, PE, Volkert & Associates		
Owner's address, phone, email	7967 Office Park Boulevard, Baton Rouge, LA 70809, 225-218-9440, jevans@volkert.com				
Services commenced by this firm (mm/yy)	02/13	Total consultant contract cost ($1,000's)	$185		
Services completed by this firm (mm/yy)	10/13	Cost of consultant services provided by this firm ($1,000's)	$185		

Forte and Tablada, Inc. was responsible for performing complete topographic and property surveys, developing a drainage map, and establishing existing right-of-way for North line of I-10, CSX Railroad property and Almonaster, establishing elevations to develop a Digital Terrain Model with the widths matching the limits of the topographic survey, and providing a drainage map. The entire bridge super and sub structures were scanned to locate every pile. Bridge clearances were found, extracting two-dimensional line work for the superstructure. A horizontal plan of two-dimensional site plan for the bridge and a volume calculation for the counterweight was also created. As there was no access to the adjacent rail property, Forte and Tablada, Inc.'s Advanced Measurements was able to use three-dimensional laser scanning to survey the area without permits or trespassing on railroad right of way. This project demonstrates Forte & Tablada's topographic survey, property survey, ROW maps and tile take off experience for transportation projects.



This project displays Forte and Tablada's ability to use advanced technology such as lidar scanning to conduct topographic surveys on bridge projects for LA DOTD.

The team members involved in this project included: Robert J. Badeaux, CFO, Wilfred Fontenot, PLS**, Jonathan Coco**-Adv. Measurements Dept. Leader, Steve LeBlanc, PLS-Survey Party Chief/Technician, **Ross Wilson**, PLS-Project Manager

Firm name	Monroe & Corie, Inc.		Past Performance Evaluation Category(ies)*	Bridge
Project name	**Ouachita Parish Off System Bridge Replacement**		Firm responsibility (prime or sub?)	Prime
Project number	H.013130		Owner's name	LADOTD
Project location	Ouachita Parish		Owner's Project Manager	Barbara Ostuno
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802, 225 379-1047, Barbara.Ostuno@LA.GOV			
Services commenced by this firm	09/18	Total consultant contract cost ($1,000's)		$113
Services completed by this firm	03/21	Cost of consultant services provided by this firm ($1,000's)		$109

This OSBR project consisting of two bridges in OUACHITA Parish was surveyed, designed and administered by the four key individuals currently employed by MONROE & CORIE, INC. as follows. Mr. Corie was responsible for the developing the Drainage Map and calculating the design flows for the new bridge. He also is responsible for the QA/QC reviews. Ms. Simpson was responsible for the Solicitation of Views and Categorical Exclusion (SOV) and coordination of Wetland Study and Preliminary Jurisdictional Determination (PJD). Ms. Vicknair is responsible for all of the CADD operations as well as the design detailing and Final Plan Production. Mr. Monroe was responsible for the field surveys, Hydraulic Reports, Preliminary and Final plan design. Pictured below at left is the old timber bridge on Charles Rawls Road, and at right below is the timber pile supported bridge on Red Cut Road and both should be scheduled for construction bidding later this year.

Firm name	Monroe & Corie, Inc.		Past Performance Evaluation Category(ies)*	Bridge
Project name	**Rapides Parish Off System Bridge Replacement**		Firm responsibility (prime or sub?)	
Project number	H.011526		Owner's name	LADOTD
Project location	Rapides Parish		Owner's Project Manager	Gary Pentek
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802, 225 379-1047, Gary.Pentek@LA.GOV			
Services commenced by this firm	06/15	Total consultant contract cost ($1,000's)		$159
Services completed by this firm	06/19	Cost of consultant services provided by this firm ($1,000's)		$149

This OSBR project consisting of three bridges in Rapides Parish was surveyed, designed and administered by the four key individuals currently employed by MONROE & CORIE, INC. as follows. Mr. Corie was responsible for the developing the Drainage Map and calculating the design flows for the new bridge. He also was responsible for the QA/QC reviews. Ms. Simpson was responsible for the Solicitation of Views and Categorical Exclusion (SOV) and coordination of Wetland Study and Preliminary Jurisdictional Determination (PJD). Ms. Vicknair was responsible for all of the CADD operations as well as the design detailing and Final Plan Production. Mr. Monroe was responsible for the field surveys, Hydraulic Reports, Preliminary and Final plan design. Pictured below (from left to right) is the old timber on Castor Plunge Road, the timber pile supported bridge on Palmer Chapel Road and the old timber bridge on H. Strange Road which are all currently scheduled for replacement construction this year.



Firm name	Monroe & Corie, Inc.	Past Performance Evaluation Category(ies)*	Bridge
Project name	**Tangipahoa Parish Off System Bridge Replacement**	Firm responsibility (prime or sub?)	
Project number	H.011527	Owner's name	LADOTD
Project location	Tangipahoa Parish	Owner's Project Manager	Gary Pentek
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802, 225 379-1047, Gary.Pentek@LA.GOV		
Services commenced by this firm	08/15	Total consultant contract cost ($1,000's)	$150
Services completed by this firm	09/17	Cost of consultant services provided by this firm ($1,000's)	$145

This OSBR project consisting of three bridges in Tangipahoa Parish was surveyed, designed and administered by the four key individuals currently employed by MONROE & CORIE, INC. as follows. Mr. Corie was responsible for the developing the Drainage Map and calculating the design flows for the new bridge. He also was responsible for the QA/QC reviews. Ms. Simpson was responsible for the Solicitation of Views and Categorical Exclusion (SOV) and coordination of Wetland Study and Preliminary Jurisdictional Determination (PJD). Ms. Vicknair was responsible for all of the CADD operations as well as the design detailing and Final Plan Production. Mr. Monroe was responsible for the field surveys, Hydraulic Reports, Preliminary and Final plan design. Pictured below (from left to right) is the old timber on Vitrano Road, the timber pile supported bridge on Brown Road and the old timber bridge Randall Road. Brown Road was deleted from the program, but the other two currently are under construction.

Firm name	Urban Systems, Inc.		Past Performance Evaluation Category(ies)*	Traffic
Project name	**US 90 (I-49 South) Albertson's Parkway to Ambassador Caffery Design / Build**		Firm responsibility (prime or sub?)	Sub
Project number	SP H.010620		Owner's name	LADOTD
Project location	Lafayette Parish, LA		Owner's Project Manager	Peggy Jo Paine, P.E.
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, Louisiana, 70802, 225-379-1065, peggy.paine@la.gov			
Services commenced by this firm	01/14	Total consultant contract cost ($1,000's)		N/A
Services completed by this firm	08/19	Cost of consultant services provided by this firm ($1,000's)		$232.6

Urban Systems, Inc. was part of the Design/Build team under the engineering task for this project. Th project included upgrading a portion of US90 from a four-lane facility to a six-lane facility with controlled access. The project also included providing a system of frontage roads to provide connectivity. Urban Systems was responsible for a variety of tasks including developing a signage plan, traffic signal plans, temporary traffic control plans (TCDP), traffic analysis and a Level 3 Traffic Management Plan (TMP) based on **LADOTD EDSM VI.1.1.8.**

Signage and Traffic Signal Plans

As part of the definitive design portion of this project, USI developed signage and traffic signal plans based on LADOTD requirements. The traffic signal plans were also developed in the latest LADOTD TSI format. USI worked closely with the contractor, team members and local entities throughout the construction phase.

Temporary Traffic Control Plans (TCDP)

Temporary traffic control plans were developed for the various phases of construction. These plans also included temporary traffic signals for some of the phases**.** These plans were developed to meet the current LADOTD standards. Some of these plans involved complicated detours and devices to not affect traffic while completing construction.

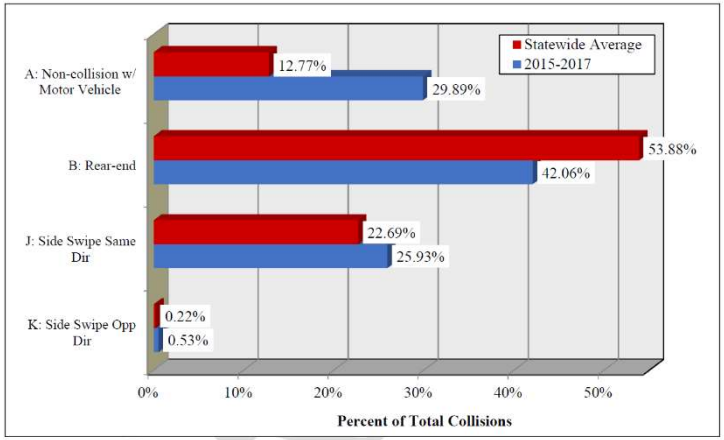
Traffic Study and TMP

Traffic analysis was conducted during the project to determine the impact construction and the proposed configuration would have on traffic conditions. Traffic volumes were re-routed for each phase on construction and capacity analysis was conducted for each scenario. A safety analysis was prepared for the study US 90 roadway segment, LA 182 roadway segment, and the US 90 at Albertsons Parkway/St. Nazaire Road intersection based on the guidelines set forth by LADOTD in *Part III: Guidelines for Conducting a Safety Analysis for Transportation Management Plans and Other Work Zone Activities, May 2013.* The purpose of this analysis is to assess the safety impacts of the construction activities within the project area and mitigate the impact on the state highway.

The team members involved in this project included: **A. Michel , N. Stewart**

Firm name	Urban Systems, Inc.	Past Performance Evaluation Category(ies)*	Traffic
Project name	**TMP for I-10 West of LA 108 and I-210 Interchange**	Firm responsibility (prime or sub?)	Sub
Project number	H.009620.5-1	Owner's name	LADOTD
Project location	Calcasieu Parish, LA	Owner's Project Manager	Hadi Shirazi
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70804, 225-379-1929, Hadi.Shirazi@la.gov		
Services commenced by this firm	05/18	Total consultant contract cost ($1,000's)	N/A
Services completed by this firm	04/19	Cost of consultant services provided by this firm ($1,000's)	$70

The objective of this project was to assist with conducting a Level 4 Transportation Management Plan (TMP) based on LADOTD EDSM VI.1.1.8 for rubblize and overlay work on US 90 over I-10 in Calcasieu Parish, Louisiana. The objective of the TMP was to identify the challenges and to address strategies to minimize the traffic delays associated with the lane closures, demand volumes and incidents within the construction limits and primary detour roadways on I-10 and I-210 within the Lake Charles Metropolitan Area. This project also updated a TMP performed for the I-210 Prien Lake Bridge Re-Decking and Safety Improvement Project (H.010916.5) dated January 2016.



Traffic data was reviewed within the study area and a field visit was conducted to verify information on roadway geometrics and traffic conditions. A traffic data was report was developed and submitted for inclusion in the TMP document.

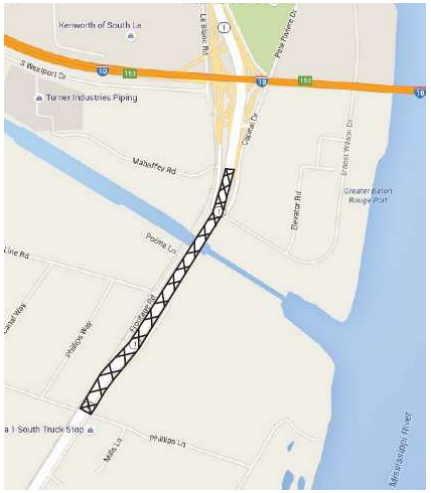
A safety analysis was conducted based on LADOTD guidelines. Crash rates were calculated for each location and compared to LADOTD's statewide averages and to LADOTD's High Potential for Safety Improvements (formerly the Abnormally High Crash) List. Charts were developed at each location and compared to statewide averages based on various categories. Crash diagrams were also developed to document the number, location and type of crashes. Each crash report was reviewed for accuracy.

An alternative route analysis was conducted for an assessment of the proposed detour routes. The analysis also included a safety and mobility plan to gather and address concerns for the detour routes.

The team members involved in this project included: **N. Stewart**

Firm name	Urban Systems, Inc.		Past Performance Evaluation Category(ies)*	Traffic
Project name	**Bridge Preventative Maintenance Port Allen Bridge**		Firm responsibility (prime or sub?)	Sub
Project number	H.001234.4		Owner's name	LADOTD
Project location	Port Allen, LA		Owner's Project Manager	Brian Delatte
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70804, (225) 379-1823, Brian.Delatte@LA.GOV			
Services commenced by this firm	11/12	Total consultant contract cost ($1,000's)		N/A
Services completed by this firm	06/16	Cost of consultant services provided by this firm ($1,000's)		$62.6

The objective was to conduct a Level 3 Transportation Management Plan (TMP) based on LADOTD EDSM VI.1.1.8 for reconstruction of two (2) bridge structures over the Intracoastal Waterway (ICWW) in Port Allen, Louisiana. A TMP was critical for this location as the LA 1 bridges serves as the major crossing of the ICWW and serves up to 45,000 vehicles per day. An important aspect of this project was how to minimize construction impacts on an already congested roadway section.



Peak intersection turning movements and seven-day hourly volume counts with classification were collected within the study area. Peak intersection capacity analysis was conducted using Synchro software to determine the impact the different phases on construction would have on the subject intersections. A unique part of the capacity analysis was to analyze a non-typical stop-controlled intersection with different gap acceptance values to match field conditions.

A safety analysis was conducted based on the LADOTD's *Guidelines for Crash Data Analysis, June 2014*. Crash rates were calculated for each location and compared to LADOTD's statewide averages and to LADOTD's High Potential for Safety Improvements (formerly the Abnormally High Crash) List. Charts were developed at each location based on collisions by type, injury severity, time and pavement conditions.

An important strategy to minimize work zone impacts was an evacuation plan as LA 1 is a critical artery during a hurricane evacuation.

A list of potential stakeholders was developed for a future stakeholder's meeting. The list was crucial for this project as many port related and industrial business are located in the project area and should be informed about the project.

The team members involved in this project included: **A. Michel, B. Perilloux, N. Stewart**

18. Approach and Methodology:

KICKOFF MEETING

Prior to the kickoff meeting, coordinate with DOTD Project Manager on possible date and time and coordinate on required attendees, including utility companies.

i. Coordinate an on-site meeting with DOTD and parish to determine if there are resources that need to be avoided. During this field visit, the consultant's team shall assess any issues that might impact the design approach and/or construction methods. Based on the determinations from this visit, prepare Pre-Design Checklist addressing all issues.

ii. Request for review all available and relevant bridge data including:
   a) Bridge inspection/load rating reports to determine load restrictions or maintenance of traffic requirements), and gain a understanding of the current health and serviceability of the existing structures, .
   b) Existing alignment study, as-built plans, existing R/W, traffic data, and parish maps,
   c) Stage 0 (Feasibility Studies),
   d) Stage 1 (Environmental Clearance) documents to review purpose and need and environmentally sensitive areas, Traffic studies: traffic data, expected detours, or recommendations.
   e) Topographic survey for the railroad overpass bridges (Recall Nos. 007490 and 007500).

iii. Determine if the "DOTD Minimum Design Guidelines" or if the "Guidance for Preservation/Rehabilitation/Replacement (PRR) Projects" will dictate the minimum requirements for this project.

The kickoff meeting will be used to:

1. Establish clear understanding of the project goals and discuss any DOTD and Parish concerns to be addressed in the design phase.
2. Discuss possible bridge replacement options and establish design criteria for bridge and roadway design,
3. Determine the frequency for design coordination progress meetings and develop a hierarchy for communication,
4. Discuss recommended drainage alternate type and applicable dimensions and incorporate DOTD staff comments to be included the hydraulic design of the drainage structures.
5. Discuss Demolition requirements for the existing bridge spans directly located over the MO PACIFIC RR tracks.
6. Review any questions that may have arisen after the review of existing documents.
7. Prepare and discuss preliminary project schedule for the major activities.
8. Develop a refined scope of work (SOW) and QC/QA process.

SDR will have a railroad coordination meeting as described in the next section to take into consideration review times by both, DOTD and MO PACIFIC for submittals, demolition procedure, and potential design alternative that could help reduce construction time and disruption to the traveling public.

Based on the results of the kickoff meeting and the communications with MO PACIFIC, a Critical Path Method schedule containing at a minimum, all dates for deliverables in the preliminary and final plans will be prepared.

A refined SOW based on the results from the kickoff meeting will be prepared and submitted along with the recommended project schedule to DOTD PM for approval. Upon approval, SDR will use the finalized scope to develop the required manhours for the project covering Stage 3: Design Process and Stage 5: Construction Support.

RAILROAD COORDINATION

SDR team has done previous projects similar in nature along railroad infrastructure. The team will ensure that coordination between MO PACIFIC and DOTD is at the forefront and starts immediately after the kickoff meeting.

As part of the coordination, the team will review the design criteria established at the kickoff meeting with MO PACIFIC and establish the railroad specific design criteria needed for this project. This includes confirming the horizontal clearance requirements, if MO PACIFIC has future track expansions planned along the corridor, and vertical clearance requirements. Also, discuss proposed demolition plans and any conditions that need to be addressed. The team will work with DOTD and MO PACIFIC to expediate the required permits and development of required exhibits.

Accelerated Bridge Construction (ABC)

The main challenge for the railroad overpass bridge replacement is the selection of the appropriate bridge structure type to meet current vertical and horizontal clearance requirements while limiting daily traffic impact on railroad and existing roads. Limiting impact could be enhanced through the selection of the bridge elements and construction methods. The suitability of accelerated construction techniques and top-down construction should be considered to minimize this impact and shorten construction time, therefore, impact on public. The overall cost is also important and need to be optimized against structure type and construction method. SDR has performed successfully significant number of projects utilizing ABC (**ex. US-61, ramp K over I-10 interstate located in Ascension Parish, where the entire span was constructed off site and moved into place during a 6 hours period**). ABC could be achieved through off site construction and moving the span by SPMT or through utilization of prefabricated bridge elements designed and installed to facilitate top-down construction.

SDR will work with DOTD and MO PACIFIC to determine if any types of accelerated bridge construction (ABC) may be used to help expedite the

construction schedule. Coordination will be necessary for staging locations and right-of-way needs, and railroad restrictions on short-term closures to allows this method of construction.

PART I: PRELIMINARY PLANS

Our team will follow the latest DOTD requirements for development of different milestone submittals for both Preliminary Plans and Final Plans, including the use of the latest approved Greenbook, DOTD EDSMs, Minimum Design Guidelines, Complete Streets Initiative, DOTD and AASHTO Bridge Design Manuals, Bridge Design Technical Memorandums (BDTM), Hydraulics Manual, and DOTD CAD standard submittals.

To facilitate the design process, our team will utilize throughout all submittals Inroads SS4 built on Openroads technology. Openroads technology uses "on the fly" design that updates corridor models instantaneously. The instantaneous update allows the designer to see, in a real 3D CAD environment, how the project model ties into existing topographic conditions while being able to identify any areas where the design may need modifications. The anticipated submittals are shown below.

PRELIMINARY PLANS	FINAL PLANS
30% Preliminary Plans	**30% Final Plans**
60% Preliminary Plans	**60% Final Plans**
90% Preliminary Plans	**90% Final Plans**
100% Preliminary Plans	**98% Final Plans**
	100% Final Plans
Other forms, checklists and reports as stated in RFP	

Figure 1. The SDR design team will follow the DOTD Design Preparation Manual for submittals that are required for both Stage 3: Part I and Part II.

As per the requirements of the RFP, the Consultant shall keep a log of all Agency provided comments and shall provide DOTD with a disposition of comments response following each plan submittal.

30% Preliminary Plans

Before moving into the 30% Preliminary Plan submittal, SDR team will use all available information and decisions from railroad coordination to determine best options for type of bridge structures and construction approach to carry forward into the development of construction plans. ***SDR team will work with DOTD to determine the most economical structure for each project site location and*** **submit a bridge determination report describing the type of structure, vertical and horizontal alignments, and anticipated construction methods, including ABC and top-down construction.**

SDR PM will submit to DOTD PM, for approval, a list of software(s) to be used for bridge design. Once the software design approach is approved, the design team will use the existing data, environmental investigation, traffic assessment, and geotechnical site information to determine whether any element of the work could fall outside the "**Site Expectations and Assumptions"** listed on the RFP.

As part of the 30% Preliminary Design process, SDR will utilize the topographic survey and drainage maps that were provided by DOTD (Recall # 007490 and 007500) and the new survey along a portion of US 190 at the Little Bayou Teche bridge sites. The design team will perform a back check through the data to make sure that all required information is available to begin preparation of design plans. Any questions regarding the accuracy of supplied survey will be brought in and discussed with the DOTD PM to request any additional data through the DOTD Survey and Location Department.

To help with schedule and as part of the previously mentioned existing data request, our team's approach will be to request any, previous Microstation design files that were created during the Stage 0 or Stage 1 studies.

Our design team will request through the DOTD PM the required pavement sections from the DOTD Geotechnical Department to incorporate the different layers of roadway section materials into the typical sections. These sections will be utilized in creating roadway templates for use in the Inroads corridor models to help streamline the design team's efforts to where assumed sections are not being used early in the construction plan development process.

The 30% submittal will include all requirements listed in the RFP and any other requirements identified during the kickoff meeting. Our team will also include the proposed geometric alignments and early preliminary vertical profiles.

60% Preliminary Plans

SDR will finalize the projected and adopted centerlines for all bridge replacement locations. SDR team will export the design data files into the SS2 Inroads format for use by DOTD and verify the drawings with CADConform. Additionally, as part of the 60% Preliminary Plan submittal, SDR will begin the development of general bridge plans showing the horizontal configuration of the bridges along with the vertical profiles featuring required height clearance to the low chord of the proposed bridges.

SDR team will develop proposed drainage maps for the road improvements and any required drainage improvements underneath the bridges along the railroad corridor. It will also develop a comprehensive hydraulic model to determine which type of drainage for all four bridges and roadway will be required to provide the most efficient runoff capture. We will utilize the DOTD hydraulics manual in conjunction with HYDRWin for development of hydraulic recommendations and drainage design report. Our team currently utilizes Geopak drainage module and/or OpenFlows FlowMaster for development of drainage models, and the software is based off FHWA HEC manuals. Use of these drainage softwares will allow the design team to build a comprehensive design model not only for the road but hydraulics as well. It will be requested

through the DOTD Project Manager to use this approach; however, if not approved, SDR has personnel who are very familiar with the DOTD Hydraulics software. A preliminary hydraulics design report will be part of the 60% Preliminary Plans delivery.

90% & 100% Preliminary Plans

Both 90% and 100% Preliminary Plans will include the proposed initial sequence of construction and required preliminary ROW taking lines, if necessary. For all bridge replacement projects, the most likely scenario is to replace the bridges along the existing alignment. This would require a possible road closure if an efficient and short detour route is available that could handle the existing ADT. Traffic analysis and determination of the best traffic management plan for both bridge locations will be performed. Normally DOTD prefers detour routes along State Highways, SDR PM will coordinate with the DOTD PM and possibly the districts to determine if using the local road network would be acceptable. Both locations may be candidates for the alternative bridge construction method to reduce overall time a road closure without any unnecessary expenditure of funds for a temporary construction servitude and temporary detour bridge.

As outlined in the RFQ, a Level 2 Traffic Management Plan (TMP) will be required. We will follow EDSM VI.1.1.8 that outlines what is required for a TMP. According to the DOTD Transportation Data Management System, US 190 along the improvement area carries over 10,000 vehicles per day. We will coordinate with DOTD to obtain traffic volume and safety data for traffic study to perform safety analysis and alternative route analysis. If historic data is not available, we will follow the Traffic Study Scope of Services as outlined on the DOTD Traffic Engineering website. We will determine the optimum detour route and will coordinate with the bridge/ road designers on a Work Zone Impact Management Strategy document to minimize risk and delays to the travel public. In addition, we will develop the required striping plans per the DOTD Traffic Control Plan standards and MUTCD manual. We will coordinate with the DOTD PM and the District 03 Traffic Operations Engineer to determine if the District has any preference as how to handle possible bridge closures.

A Plan-In-Hand (PIH) meeting will be held at the district 03 office and in the field to determine if any additional changes to the plans may be necessary before finalizing 100% Preliminary Plans and submitting for DOTD approval. ROW taking lines will be finalized as part of this process. The scope of work per the advertisement indicates that the topographic survey for MO PACIFIC RR bridges has been completed, however, ROW mapping was not mentioned. It is assumed that DOTD would prepare ROW mapping for these two bridges.

100% Preliminary Plans will be approved once the DOTD PM has verified that all comments from the PIH meeting have been updated and addressed. As part of the 100% Final Plans submittal, our team will prepare any required permits that may be required for the railroad or for environmental clearance.

PART II: FINAL PLANS

As part of the Final Plans phase, our team will begin working on completing the development of construction plans, preparing them for the Stage 4: Bidding Process. SDR will begin with the 100% Preliminary Plans as the basis of carrying the project to its final completion.

30% and 60% Final Plans

The design team will coordinate with the DOTD PM finalizing all typical sections to avoid major adjustments in future submittals and to reduce adjustments to any necessary ROW taking lines. The 60% Final Plans phase will include the detailed bridge construction plans for the bridge superstructure (deck and girders) and bridge substructure (abutments, internal bents, piles/columns, and drilled shafts/spread footings). Our team will coordinate with the DOTD PM to ensure that all material sections are shown and that alternative surfaces, are acceptable to District 03 Construction Engineer in order to finalize the hydraulics design and any final adjustments to drainage structures. A complete Hydraulic Design Report and Summary of Drainage Structures sheets will be a part of the 60% Final submittal along with the initial summary of quantities “Box” sheets.

90%, 98%, and 100% Final Plans

Once 60% Final Plan comments are received, the team will begin working on the Advance Check Prints (ACP – 90% Final Plans). All summary box sheets will be provided along with revisions based on 60% Final Plans comments, finalized bridge plans, bridge load rating report, final QA/QC checklist, and Constructability Review Form. A Final Design meeting will be held to cover any additional comments from this submittal that will be revised in the 95% Final Plans. All final construction cost estimates and any required special provisions will be prepared and submitted. SDR PM will coordinate with the DOTD to ensure that all necessary submittals are made to prepare for 100% Final Plans. Once all comments have been resolved, our design team will stamp and sign all construction plan sheets and submit to the DOTD PM the final pay item list for DOTD to create the Summary of Quantities Sheets to be included in the final set of plans. Once Final Plans have been submitted and approved along with final cost estimates and specifications, the project will be ready to move into Stage 4, the project letting for construction by DOTD.

QA/QC

SDR will provide the DOTD PM with the internal QA/QC manual for the design team. This manual will be the basis of our team quality control and quality assurance for each submittal; however, we will supplement this manual with all required DOTD checklists for each submittal. Our team will also perform independent technical design reviews at all submittal milestones by team members who are not directly associated with the progression of the project. These reviewers will check the construction plans for accuracy and compare

them to bridge design calculations/analyses. Our team will maintain records of all correspondence between the SDR PM and the DOTD PM.

STAGE 5: CONSTRUCTION

Once a contractor is awarded the project and under contract, the SDR construction support lead, Hatem Seliem, PE, along with select members of the design team will assist the DOTD PM in addressing and coordination of receiving and documenting Requests For Information (RFIs) and Shop Drawings from the CE&I Field Engineer. Once RFIs and Shop Drawings are logged, the SDR construction support lead will distribute to appropriate member/s of the design team for review and approval regarding conformance to the construction plans, 2016 DOTD Standard Specifications, and DOTD BDE Manual. SDR will assist in any RFIs if the contractor needs additional clarification of the intent of the construction plans. Responses to RFIs and Shop Drawings will be done in a timely manner as to not incur any additional delays.

WORK ZONE TRAINING REQUIREMENTS (WZTR)

WZTR trained personnel of SDR team are identified on Section 14.

PROJECT SCHEDULE

Prior to starting the work, a critical path schedule will be submitted to DOTD PM for approval.

SDR team is prepared to compress the project schedule by fast-tracking to accelerate the plans development without sacrificing quality. The survey team is prepared to add additional crews as needed to accelerate delivery and all other team members are prepared for accelerated delivery if required. Work on all four bridges will run concurrently and we do recognize the budgeting process and the immediate need to meet a certain delivery date. Our teamwork load will allow us to meet any accelerated delivery date as deemed appropriate by the DOTD PM.

US 190: UPRR OVERPASS NEAR OPELOUSAS_PROJECTED SCHEDULE

		Task / Month		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	**.0**	**KICKOFF MEETING & SITE VISIT**	1																										
2	**.0**	**DOCUMENT REVIEW**	2	**2 Mon.**																									
3	**.0**	**RAILROAD COORDINATION**		**12 Months**																									
3	.1	Agreements	3																										
3	.2	Demolition & Removal Plans	4																										
3	.3	Construction Sequence	6																										
3	.4	Review & Approval	4																										
4	**.0**	**SURVEY**		**18 Months**																									
4	.1	Topographic Survey	3																										
4	.2	Property Survey W Title Take-Off	3																										
4	.3	Base R/W Maps	2																										
4	.4	Final R/W	2																										
5	**.0**	**HYDRAULIC & DRAINAGE**		**12 Months**																									
5	.1	Hydraulic Analysis	2																										
5	.2	Hydruaic Design	4																										
5	.4	Drainage Maps	3																										
6	**.0**	**PRELIM PLANS**		**12 Months**																									
6	.1	Design Critria	1																										
6	.2	30% Prelim Plans	4																										
6	.3	60% Prelim Plans	4																										
6	.4	90% Prelim Plans	3																										
6	.5	100% Prelim Plans	1																										
7	**.0**	**FINAL PLANS**														**14 Months**													
7	.1	30% Final Plans	4																										
7	.1	60% Final Plans	4																										
7	.2	90% Final Plans	4																										
7	.3	98% Final Plans	2																										
7	.4	100% Final Plans	2																										

WORK PACKAGE | ACTIVITY/DELIVERABLE | DOTD REVIEW

19. Workload:

Firm(s)	Past Performance Evaluation Discipline(s)	State project number	Project name	Remaining unpaid balance**
SDR Engineering Consultants, Inc.	Bridge	H.009859.5	TO # 12 Rehabilitation of LA 3094 Bridge	$800
		H.014288.2	TO # 13 LA 82 Mermentau Bridge Rehab	$18,672
		4400021595	TO # 2-LG Girders Design Charts	$78,000
		H.009730.5	H.009730.5 / TO # 3	$38,900
		H.009859.5	H.009859.5 / TO # 2	$36,400
Volkert, Inc.	CE&I/OV	H.002151.6	Retainer Contract Retainer 44-19950 For Construction Engineering Management and Staff Augmentation Services For District 03 – TO 2, Acadia, Evangeline, Iberia, Lafayette, St. Landry, St. Martin, St. Mary & Vermillion Parishes, LA	$148,280
	Bridge	H.011152.5	I-12 Widening (US 190 to LA 59) Route I-12, St. Tammany Parish, LA	$22,815
	Road	H.001309.5	MacArthur Interchange Completion Phase II, Route US 90-Z, Jefferson Parish, LA	$77,678
	Bridge	H.004113	I-12 to Bush LA 3241 (LA 435 to LA 40 / LA 41), St. Tammany Parish, LA	$51,392
	CE&I/OV	H.003370	I-220 / I-20 Interchange Improvement & Barksdale AFB Access, Bossier Parish, LA	$762,211
	Traffic	H.009250	IMR I-10 Highland Road to LA 73, East Baton Rouge and Ascension Parishes, LA	$1,490,597
Urban Systems, Inc.	CE&I / OV	H.004791	Belle Chasse Bridge & Tunnel	$116,574
	Traffic	H.011309.5	Mac Arthur Final Design	$30,687
		H.012812	US 190: Northshore and Camp Villere	$22,028
		H.004891	Reserve to I-10 Connector	$54,482
		H.010571	Williams Traffic Signal Design	$22,750
		H.011965.5	IWGO Bridge Rehabilitation TMP	$6,826

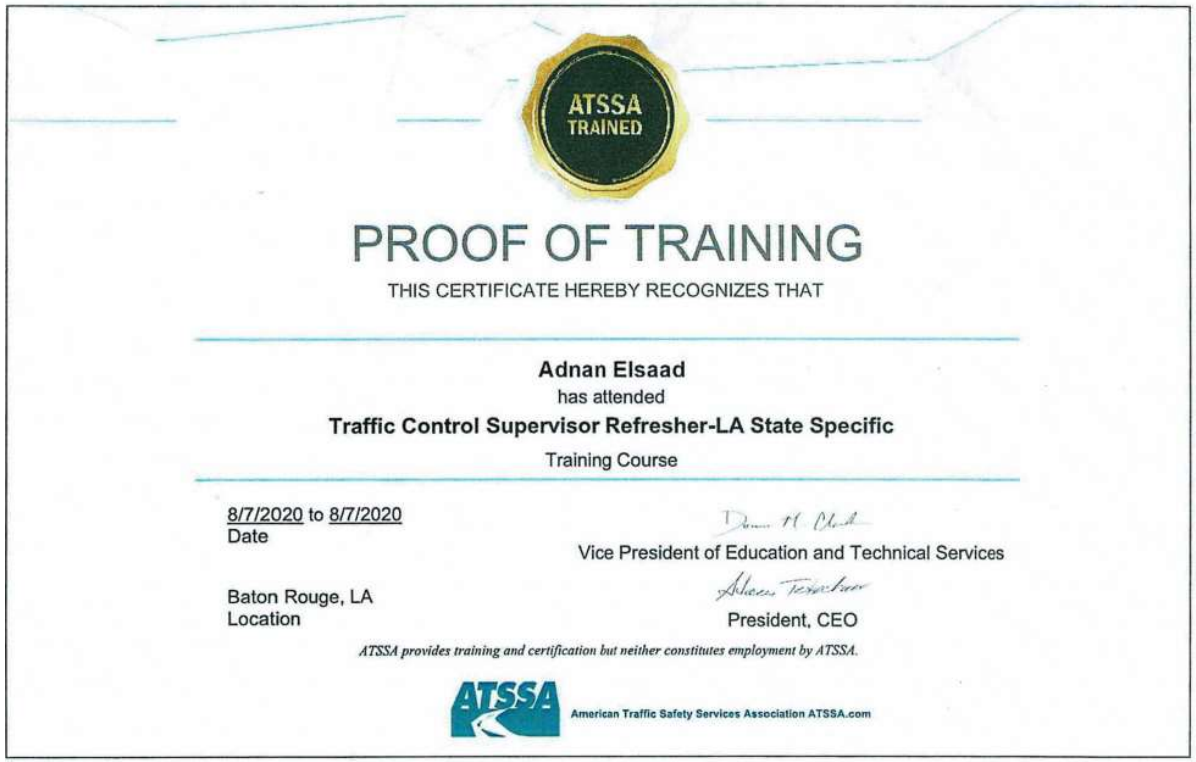
Firm(s)	Past Performance Evaluation Discipline(s) *	State project number	Project name	Remaining Unpaid Balance**
Forte and Tablada, Inc.	Bridge	H.012485.1	IDIQ Contract 4400010099, Task Order No. 4 Off System Bridge Load Rating, Statewide	$ 190,738
		H.012485.1	IDIQ Contract 4400010099, Task Order No. 5 Bridge and Culvert Load testing	$276,656
	Survey	H.014628.5	IDIQ Contract 4400010587, Task Order No. 17 Turn Lanes at Rice Mill	$71,418
		H.014219, H.014222, H.014228, H.014231, H.014236, H.013954, H.013979, H.013985, H.013992, H.013994, H.013995, H.013990	Rural Bridge Replacement Initiative	$54,676
		H.003931.5	IDIQ Contract 443015237 I-10 Calcasieu River Bridge Replacement	$2,067,730
		H.004273.5	DOTD I-49 Connector (Lafayette Regional Airport to I-10/US 167 Interchange)	$119,318
		H.012485.1	IDIQ Contract 4400010099, Task Order No. 3 Metal Culverts Inspection, Statewide	$103,399
		H.011684	LA 327 Spur: Staring Lane Extension Route LA 327-S	$50,279
		H012072	LA 60 Drain Bridge	$1,428

Firm(s)	Past Performance Evaluation Discipline(s) *	State project number	Project name	Remaining Unpaid Balance**
Monroe & Corie, Inc.	Bridge	H.013143	Avoyelles Parish – Carbon Plant Road Bridge	975
		H.014320	East Baton Rouge Parish – Van Buren Street	1,646
		H.014322	East Baton Rouge Parish – Centurion Ave.	16,462
		H.014255	Rapides Parish – Beeson Road	4,938
		H.014218 H.014219 H.014222 H.014225 H.014238 H.014239 H.014264	North Rural Bridge Replacement Initiative – Phase II Hydraulic Analysis & Design	156,841
		H.01395, H.013957 H.013963 H.013966 H.013968 H.013976	South Rural Bridge Replacement Initiative – Phase I Hydraulic Analysis & Design	68,022
		H.012061 H.012891 H.014213 H.014215 H.014216 H.014241 H.014251 H.014253 H.014257 H.014276 H.014278	Rural Bridge Replacement Initiative – Phase II Hydraulic Analysis & Design	41,940

20. Certifications/Licenses:

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

Hatem Seliem PhD, PE, PMP



ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Adnan Elsaad
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

8/7/2020 to 8/7/2020
Date

Vice President of Education and Technical Services

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.

ATSSA American Traffic Safety Services Association ATSSA.com

Bradley Holleman, PLS FORTE & TABLADA

Ross Wilson, PLS FORTE & TABLADA

LOUISIANA ASSOCIATED GENERAL CONTRACTORS, INC.
666 North Street – Baton Rouge, LA 70802
Phone: 225/344-0432 * Fax: 225/344-0458
www.lagc.org

March 16, 2021

To Whom It May Concern,

This is to verify that the below listed emplcyee of Forte & Tablada has successfully completed LADOTD required ATSSA Traffic Control Training.

ATSSA Traffic Control Supervisor Refresher Training – January 27, 2021 – Brad Holleman

This letter will serve as temporary proof of training until above listed employees receive their official certificates from American Traffic Safety Services Association (ATSSA).

If there are any questions regarding this issue, please contact Mr. Brett Morgan of LADOTD at Headquarters in Baton Rouge, LA (225-379-1584) or Michael Demouy at the above captioned address.

Best Regards,

Michael Demouy – LAGC Manager

Jace Ricard, PLS FORTE & TABLADA

The American Traffic Safety Services Association

Hereby recognizes that

Jace Ricard

has attended

Traffic Control Supervisor-LA State Specific Training Course

04/12/2017
Date

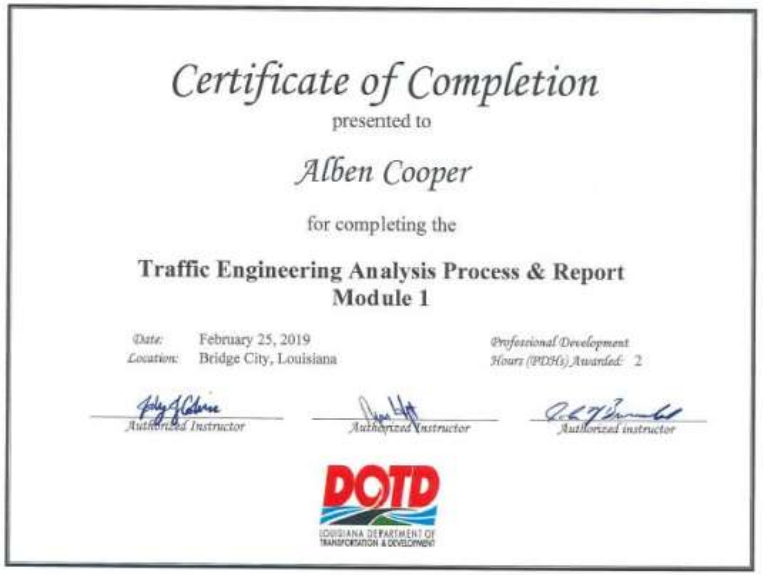
Baton Rouge, LA
Location

Training & Products Dept. Director

President, CEO

ATSSA
SAFER ROADS SAVE LIVES

Alben P. Cooper, PE, PTOE



Certificate of Completion

presented to

Alben Cooper

for completing the

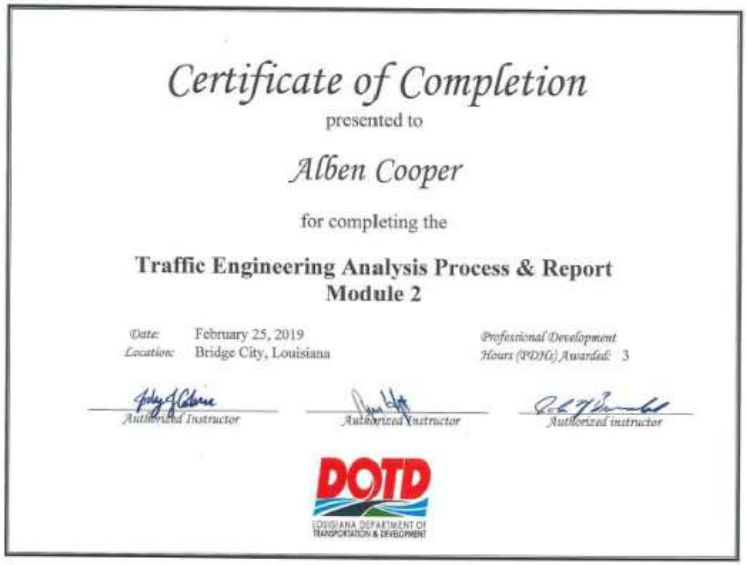
Traffic Engineering Analysis Process & Report
Module 1

Date: February 25, 2019
Location: Bridge City, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Alben Cooper

for completing the

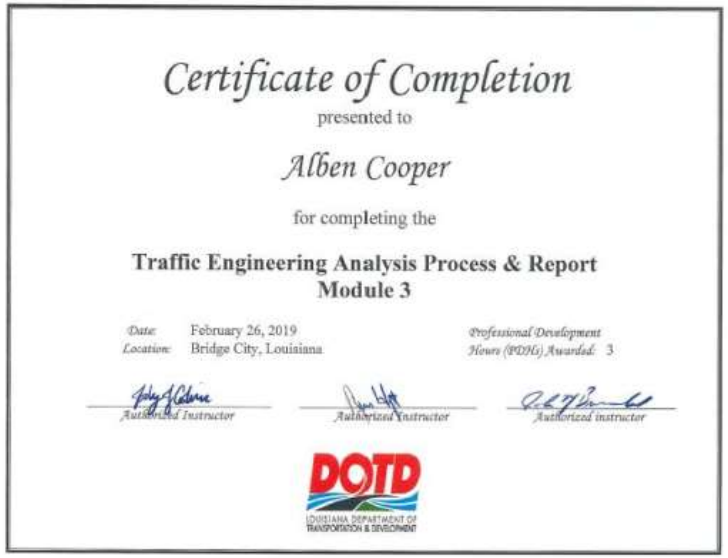
Traffic Engineering Analysis Process & Report
Module 2

Date: February 25, 2019
Location: Bridge City, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Alben Cooper

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: February 26, 2019
Location: Bridge City, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Alison C. Michel, PE, PTOE, PTP, RSP

Certificate of Completion

presented to

Alison Catarella-Michel

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

Certificate of Completion

presented to

Alison Catarella-Michel

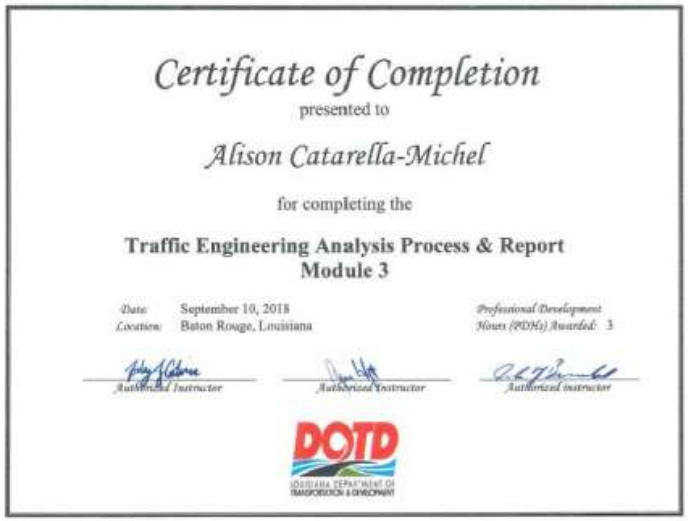
for completing the

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



Certificate of Completion

presented to

Alison Catarella-Michel

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

Brandon D. Perilloux, PE, PTOE, RSP

Certificate of Completion

presented to

Brandon Perilloux

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: February 25, 2019
Location: Bridge City, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD

Certificate of Completion

presented to

Brandon Perilloux

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: February 25, 2019
Location: Bridge City, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD

Certificate of Completion

presented to

Brandon Perilloux

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: February 26, 2019
Location: Bridge City, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD

Nicole H. Stewart, PE, PTOE

Certificate of Completion

presented to

Nicole Stewart

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: January 14, 2019
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD

Certificate of Completion

presented to

Nicole Stewart

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: January 14, 2019
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD

Certificate of Completion

presented to

Nicole Stewart

for completing the

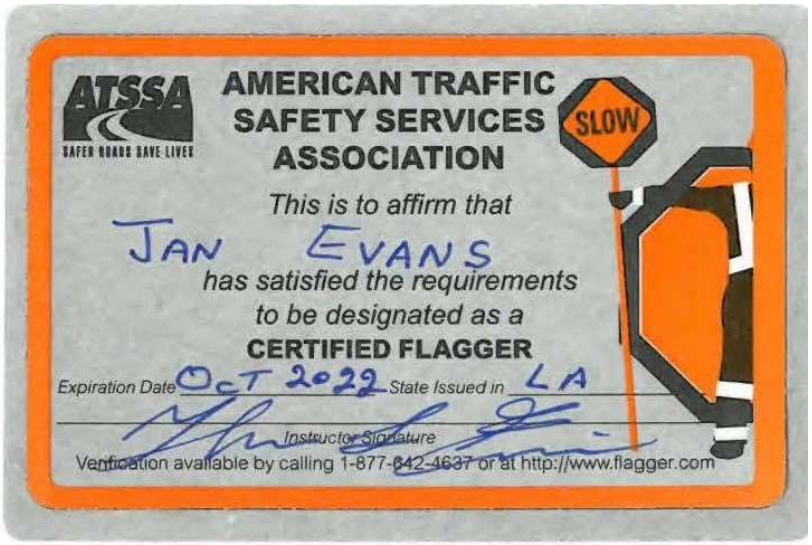
Traffic Engineering Analysis Process & Report
Module 3

Date: January 15, 2019
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD


ATSSA
SAFER ROADS SAVE LIVES
AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION
SLOW
This is to affirm that
JAN EVANS
has satisfied the requirements to be designated as a
CERTIFIED FLAGGER
Expiration Date OCT 2022 State Issued in LA
Instructor Signature
Verification available by calling 1-877-642-4637 or at http://www.flagger.com


The American Traffic Safety Services Association
Hereby recognizes that
Janet Evans
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course
11/01/2018 to 11/01/2018
Date
Baton Rouge, LA
Location
ATSSA
SAFER ROADS SAVE LIVES
Training & Products Dept. Director
President, CEO

Jonathan Gambino, PE, PTOE VOLKERT

Certificate of Completion

presented to

Jonathan Gambino

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: February 25, 2019
Location: Bridge City, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Jonathan Gambino

for completing the

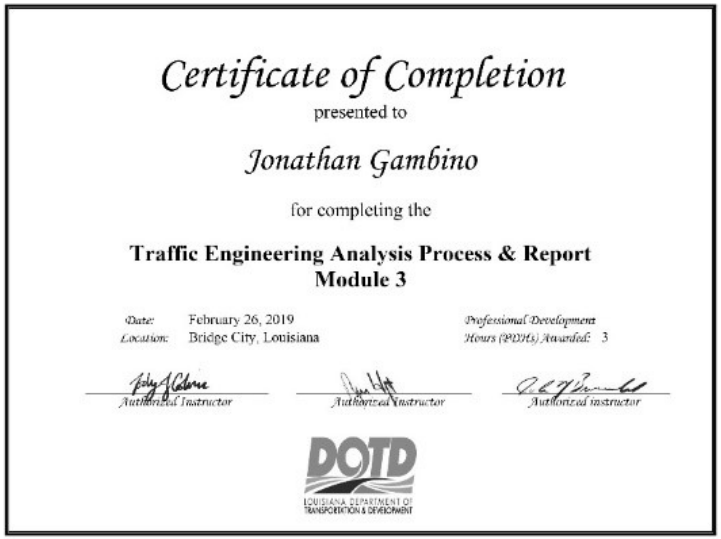
Traffic Engineering Analysis Process & Report
Module 2

Date: February 25, 2019
Location: Bridge City, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Jonathan Gambino

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: February 26, 2019
Location: Bridge City, Louisiana

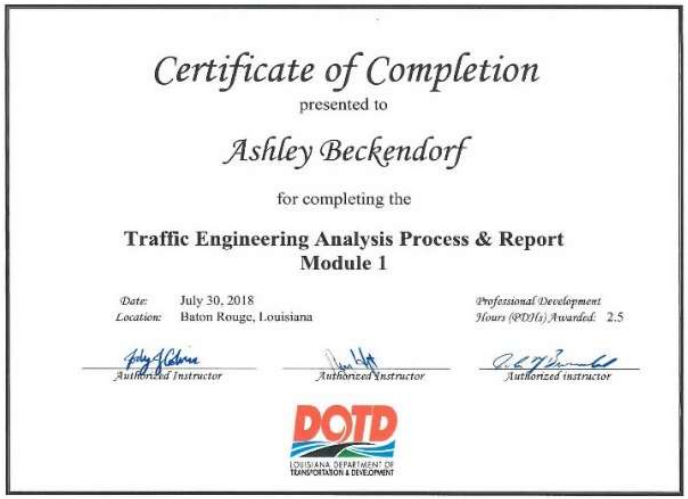
Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Ashley Beckendorf, PE

VOLKERT



Certificate of Completion

presented to

Ashley Beckendorf

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: July 30, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ashley Beckendorf

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: August 6, 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

Ashley Beckendorf

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 29, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

SDR

AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION

This is to affirm that

ASHLEY BECKENDORF

has satisfied the requirements to be designated as a

CERTIFIED FLAGGER

Expiration Date 4/23/2025 State Issued in LA

Verification available by calling 1-877-642-4637 or at http://www.flagger.com

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

ASHLEY BECKENDORF

has participated in

FHWA-NHI-142005 NEPA and the Transportation Decisionmaking Process

hosted by

LA DOTD/LTRC

Date: December 3-5, 2018 Hours of Instruction: 18

Location: Baton Rouge, LA

Instructor

Local Coordinator

Instructor

Valerie Briggs, Director
National Highway Institute

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.

See QC/QA Plan after Section 23

22. Sub-consultant information:

If one or more sub-consultants will be used, provide the name, address, point of contact and phone number for each. Otherwise, leave this section blank.

Firm Name (as registered with Louisiana's Secretary of State)		Address	Point of Contact and email address	Phone Number
Volkert, Inc.	VOLKERT	7967 Office Park Blvd. Baton Rouge, LA 70809	Janet Evans, PE Jan.evans@volkert.com	(225) 218-9440
Fort & Tablada, Inc.	FORTE & TABLADA	9107 Interline Avenue Baton Rouge, LA 70809	Bradley Holleman, PLS bholleman@forteandtablada.com	(225) 927-9321
Monroe & Corie, Inc.	MONROE & CORIE, INC. CONSULTING ENGINEERS 11325 Pennywood Avenue	11325 Pennywood Ave. Baton Rouge, LA 70809	William C. Monroe, PE, PLS wcm@monroecorie.com	(225) 293-1905
Urban Systems, Inc.	USI	2000 Tulane Av., Suite 200 New Orleans, LA 70112	Alison C. Michel acmichel@urbansystems.com	(504) 569-3958

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.

SDR Engineering Consultants, Inc.

CONTRACT NO. 4400023434

US 190: UPRR OVERPASS NEAR OPELOUSAS

SP NO. H.000445
ROUTE US 190
ST. LANDRY PARISH

QUALITY CONTROL PLAN

REV. 00

Submitted to:

Louisiana Department of Transportation and Development

Submitted by: _____ Date: 2/9/2022
Hatem Seliem, PhD, PE, PMP (Project Manager)
SDR Engineering Consultants, Inc.

Approved by: _____ Date: 2/9/2022
Mohsen Shahawy, PhD, PE (Quality Assurance Manager)
SDR Engineering Consultants, Inc.

February 2022

TABLE OF CONTENTS

List of Appendices

1.0 INTRODUCTION

This Quality Control Plan (QCP) for the Replacement of two (2) bridges crossing the MO Pacific Railroad (MPRR) and two (2) bridges crossing Little Teche Bayou near Opelousas. The QCP has been prepared in accordance with LADOTD Bridge Design and Evaluation Manual (BDEM); Part I – Policies and Procedures; Chapter 3 – Policy for Quality Control and Quality Assurance (formerly Bridge Design Technical Memorandum No. 37 (BDTM.37)). SDR Engineering Consultants, Inc. (SDR) is committed to delivering services of the highest quality that conforms to the most current quality control standards.

This QCP details the proposed methods of controlling and assuring quality on all work products. It also includes project team organization, methods for documentation of comments and responses and record keeping of the project. This QCP clearly defines the role and responsibility of each person involved with the project.

The QCP will be updated throughout the duration of the project as and when it becomes necessary due to change in staffs or scope of the work.

1.1 PROJECT DESCRIPTION

SDR Team shall provide all necessary engineering and related services required for design and developing plans for the replacement of MO Pacific Railroad (MPRR) and two bridges crossing Little Teche Bayou near Opelousas in St. Landry Parish, District 03. The project number, recall numbers, and details of the four (4) bridges are as follows:

SN	Project No.	Recall No.	Route	Crossing	Parish
1	H.000445	007490	US 190	MP RR	St. Landry
2		007500			
3		007530		Little Teche Bayou	
4		007540			

The services to be provided for replacing the four (4) bridges are as follows:

- Topographic Survey
- Property Survey
- Right of Way Maps
- Hydraulic Design and Drainage
- Roadway Design
- Bridge Design
- Construction Support Services (if required, supplemental agreement)

1.2 PROJECT GOVERNING STANDARDS AND CRITERIA

The Scope of Services requires that this contract shall be in compliance with the following standards, manual, specifications as applicable to the required services:

AASHTO

- LRFD Bridge Design Specifications, 9th Edition (2020)
- Manual for Bridge Evaluation, 3rd Edition (2018)
- Manual for Bridge Element Inspection, 2nd Edition (2019)
- A Policy on Geometric Design of Highways and Streets, 7th Edition (2018)
- Roadside Design Guide, 4th Edition (2015)
- Roadway Lighting design Guide, 7th Edition (2018)
- LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signal, 1st Edition (2020 interim revisions)

Louisiana Department of Transportation and Development

- Project Delivery Manual (2013)
- Bridge Design and Evaluation Manual, Revision No. 9 (2019)
- Bridge design Technical Memorandum, as applicable
- Engineering Directives and Standards Manual, as applicable
- Hydraulics Manual (2011)
- A Guide to Construction, Operating, and Maintaining Highway Lighting Systems (2017)
- Louisiana Standard Specifications for Roads and Bridges (2016)
- Real Estate Operations Manual (2018)

FHWA

- Hydraulic Engineering Circular No. 18, Evaluating Scour at Bridges, 5th Edition (2012)
- Manual on Uniform Traffic Control Devices, 2009 Edition

1.3 PROJECT SCHEDULE

Services will commence upon receipt of the Notice-to-Proceed (NTP) and as directed by the Department's Project Manager. **A detailed schedule will be prepared and submitted to LADOTD PM upon award of the project.** The schedule will reflect the dates for each submittal and will include all the tasks for coordination as well as DOTD review.

Our team is prepared to compress this schedule by fast-tracking to accelerate the plans development process without sacrificing quality. Our survey team is prepared to add additional crews as needed to accelerate delivery and all other members are prepared for accelerated delivery if required. Work on all four bridges will run concurrently and we do recognize the budgeting process and the immediate need to meet a certain delivery date. Our teamwork load will allow us to meet any accelerated delivery date as deemed appropriate by the DOTD PM. A proposed time schedule is shown below.

Design, calculation book, and load rating calculation will be submitted in PDF format along with the 100% Final Plans in accordance with "*Consultant Submittal Review Checklist*" (Appendix K of LADOTD BDEM).

US 190: UPRR OVERPASS NEAR OPELOUSAS_PROJECTED SCHEDULE

		Task / Month		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	**.0**	**KICKOFF MEETING & SITE VISIT**	1																										
2	**.0**	**DOCUMENT REVIEW**	2	**2 Mon.**																									
3	**.0**	**RAILROAD COORDINATION**		**12 Months**																									
3	.1	Agreements	3																										
3	.2	Demolition & Removal Plans	4																										
3	.3	Construction Sequence	6																										
3	.4	Review & Approval	4																										
4	**.0**	**SURVEY**		**18 Months**																									
4	.1	Topographic Survey	3																										
4	.2	Property Survey W Title Take-Off	3																										
4	.3	Base R/W Maps	2																										
4	.4	Final R/W	2																										
5	**.0**	**HYDRAULIC & DRAINAGE**		**12 Months**																									
5	.1	Hydraulic Analysis	2																										
5	.2	Hydruaic Design	4																										
5	.4	Drainage Maps	3																										
6	**.0**	**PRELIM PLANS**		**12 Months**																									
6	.1	Design Critria	1																										
6	.2	30% Prelim Plans	4																										
6	.3	60% Prelim Plans	4																										
6	.4	90% Prelim Plans	3																										
6	.5	100% Prelim Plans	1																										
7	**.0**	**FINAL PLANS**														**14 Months**													
7	.1	30% Final Plans	4																										
7	.1	60% Final Plans	4																										
7	.2	90% Final Plans	4																										
7	.3	98% Final Plans	2																										
7	.4	100% Final Plans	2																										

WORK PACKAGE | ACTIVITY/DELIVERABLE | DOTD REVIEW

1.4 DEFINITION OF TERMS

The use of the terms *quality control (QC)* and *quality assurance (QA)* within the QCP have the following meanings:

- Quality Control refers to actions, procedures, and methods that are routinely employed at the production and administrative levels, and under the jurisdiction of the Project Manager (PM), to produce the desired result of quality professional services.
- Quality Assurance refers to actions, procedures, and methods employed at the management and senior technical levels to verify that prudent quality control procedures are in place, are being followed, and that the desired result of quality professional services is being achieved.

2.0 PROJECT ORGANIZATION

2.1 PROJECT TEAM

SDR Team members and the area of service to be provided by each member is as follows:

Consultant	Area of Service
SDR: SDR Engineering Consultants, Inc.	Bridge Design and Project Management
Volkert, Inc.	Roadway
Monroe & Corie, Inc.	Hydraulic and Drainage
Fort & Tablada, Inc.	Topographic and Property Survey
Urban Systems, Inc.	Traffic

Figure 1 shows the organizational structure of the team. Each member of the team shares the responsibility of ensuring that quality professional services are being achieved.

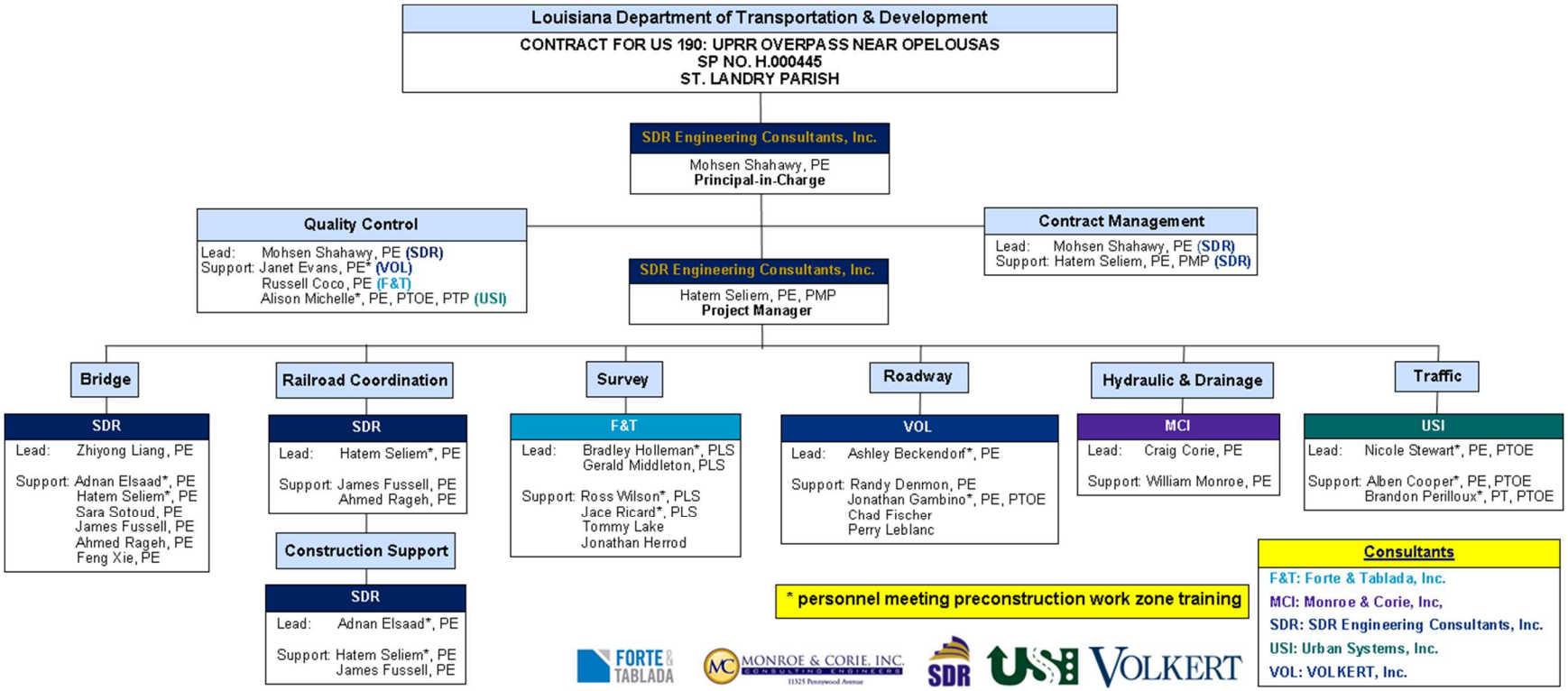


Figure 1: Organizational Chart

2.2 TEAM MEMBER QC/QA RESPONSIBILITIES

The main functions of key staff classifications in relation to quality control and quality assurance are described below.

- Engineering/Planning Technical Staff are responsible for planning and executing assignments so that the work is produced in accordance with the Scope of Services and in the format that LADOTD requests and expects. The most important place to assure quality is at the technical staff production level where the work is planned and executed. This is accomplished by selecting the most experienced and skilled professionals to perform each specific task.
- Project Engineers/Planners/Scientists are highly experienced professionals who are responsible for directing a team of technical staff in performing a specific task of the project. They also establish quality control procedures for their responsible areas and assign quality control functions for their staff. The procedures must conform to QCP.
- Hatem Seliem, PhD, PE, as Project Manager, is responsible for allocating resources to various elements of the work, preparing and implementing the QCP, scheduling the various activities and adjusting the plans as the work progresses to resolve identified potential problem areas in a timely manner. The PM, working together with the respective Project Engineer/Planner/Scientist, identifies the suitable persons/teams to perform QC reviews on each project element/deliverable. The PM is also responsible for maintaining records of all QC and QA reviews in the project files. The PM is also personally responsible for performing a final quality check of all work before it is submitted to LADOTD and ensuring that the procedures outlined in this document have been followed without exception. The PM will maintain communication with LADOTD to assure satisfaction with the project's progress and performance.
- Quality Control Reviewers are persons or teams responsible for performing independent technical reviews on specific project tasks, verifying the quality and technical adequacy of the project deliverables, and assuring their compliance with applicable standards and requirements. The QC Reviewers are not directly involved in the preparation of the documents/plans.
- Mohsen Shahawy, PhD, PE, as Principal-in-Charge (PIC), is responsible for allocating the required resources to perform the project and for monitoring the project to ensure adherence to the contractual terms and the QCP. The PIC provides periodic audits of technical performance of SDR staff. The PIC is also responsible for client interface and obtaining client feedback and input regarding the project and SDR's performance.
- Mohsen Shahawy, PhD, PE, as Quality Assurance Manager (QAM), is responsible for ensuring that all deliverables have entered the QC review process and that adequate time has been allowed to perform a complete QC review. The QAM has the authority to delay the submittal of a deliverable should he/she deem that this deliverable has

not received a satisfactory QC review prior to its submittal. The QAM will not participate in the production of any elements of the project.

3.0 QUALITY CONTROL AND QUALITY ASSURANCE REVIEWS

3.1 GENERAL

Prior to submittal, each deliverable will undergo QC and QA reviews consistent with this QCP and LADOTD's quality control requirements. Where applicable, LADOTD's quality control checklists will be used to verify that each deliverable conforms to the current requirements and expectations. Appendix I from the LADOTD BDEM Chapter 3 will be included in every submittal, and Appendix D from the same chapter will be included in the final submittal (see Appendix I in this document for the forms).

The QC reviews of studies, reports, drawings, specifications, calculations, cost estimates, and/or other project- related deliverables will require a minimum of two individuals:

- The deliverable *Author* (for documents) or *Originator* (for plans and calculations). During the QC process, this individual will also function as the *Corrector* and *Back-checker.*
- The *QC Reviewer/Checker* who will also function as the *Verifier*.

All QC Reviewers/Checkers/Verifiers will be qualified Engineers/Planners/Scientists who are experienced in the discipline being checked and not actively involved in the preparation of the deliverable. No Author or Originator will perform a formal QC check on his/her own work.

QA reviews will be performed by the QAM.

A checkprint is a copy of a document (report/memorandum), drawing, or calculation in its pre-submission form used for the purpose of checking and marking comments, additions, deletions, and corrections. The checkprint is identified as such by being accompanied by a QC form (for documents) or bearing the specific QC stamp (for drawings, calculations).

The checking procedures that will occur during the QC and QA reviews are discussed in the next section.

Table 1
Summary of Project Deliverables and Production Schedule

Deliverable	Responsible Engineer/Planner/Scientist Author/Originator	Responsible QC Reviewer	Anticipated QC Review Start Date	Anticipated QA Review Start Date	Anticipated Submittal Date
SDR Produced Deliverables					
			xx/xx/xx	xx/xx/xx	xx/xx/xx
Subconsultant Produced Deliverables					

3.2 DESIGN CHECKS AND REVIEWS

3.2.1 Design Review Requirements

Structure designs and drawings are subject to design and detailing reviews in accordance with the following table:

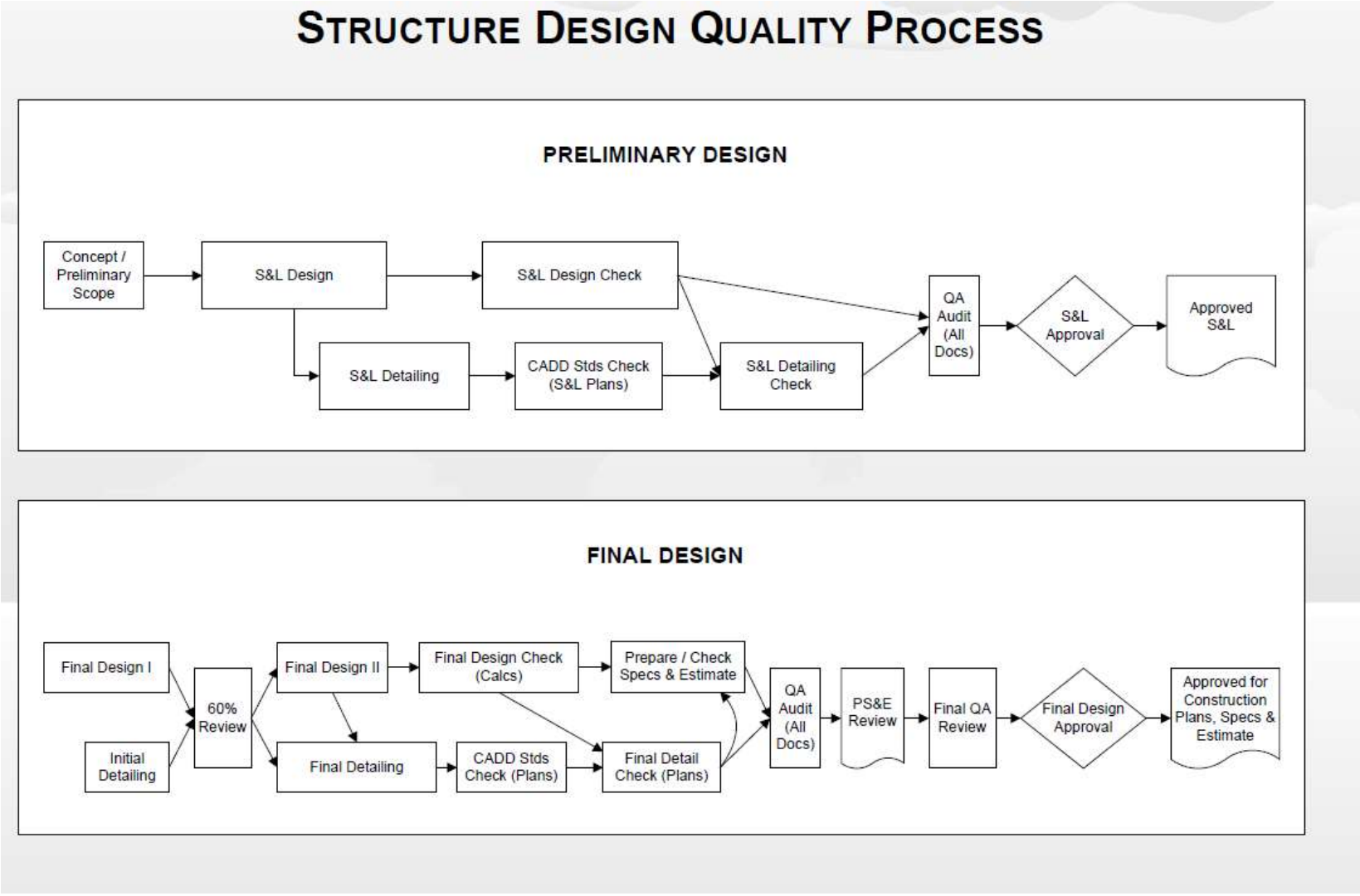
DESIGN REVIEW REQUIREMENTS								
	REVIEW TYPE							
	SITUATION & LAYOUT CHECK		60% REVIEW	CADD STDS CHECK	FINAL DESIGN CHECK			FINAL QA REVIEW
STRUCTURE TYPE	DESIGN	DRWG	DESIGN	DRWG	DESIGN	DRWG	SPECS & EST	ALL DOCS
Bridge	X	X	X	X	X	X	X	X
Drainage Structures	X	X		X	X	X	X	X
Retaining Wall	X	X		X	X	X	X	X
Overhead Signs			X	X	X	X	X	X
Bridge Widening	X	X	X	X	X	X	X	X
Structure Repair			X	X	X	X	X	X
Sound Wall *		X	X	X	X	X	X	X
Structural Barriers *			X	X	X	X	X	X

* Applies only to non-standard sound walls and structural barriers not covered by LADOTD standard drawings.

3.2.2 Structure Design Quality Process

The following chart illustrates the structure design quality process proposed for this project.

Figure 2: Preliminary and Final Design Quality Process



QC COLOR CODE

REMEMBER TO USE SIGN-OFF STAMP!

ORIGINATOR
(DESIGNER)

Typed Text, Blueline Prints, Calculations, Black/White Copy

NOT IN: RED, YELLOW, OR GREEN

CHECKER
(OTHER THAN DESIGNER)

Yellow for Correct

Red for "Corections"

"Additions or Deletions" changes

Use blue for notes to Originator

BACKCHECKER
(DESIGNER)

Green Check Mark for Agreement

"Corections" ✓

Green Stet and Crossout when it is agreed "No Changes"

Ok
"Additions or Deletions" changes

UPDATER
(ORIGINATOR/ DRAFTER)

Green Encirclement when Updated

"Corections" ✓

RECHECKER
(OTHER THAN DESIGNER)

Yellow over Red and Green to indicate updated correctly

r
A ✓

Ok
"Additions or Deletions" changes

REVIEWERS
(NOT INVOLVED IN ACTIVIITES LISTED ABOVE)

Insures QC process was followed.

Comments in Blue identified by initials and dates.

3.2.3 Situation & Layout (S&L) Check

The Situation & Layout Sheet(s) define(s) the general concept and geometry of the structure. The Situation & Layout Sheet(s) must be completed, checked, corrected and approved before the Designer begins the final design of the structure. The conceptual design of the structure is checked including the geometric layout, structure type, span length, support locations, girder type and spacing, horizontal and vertical clearances, expansion joints locations, aesthetic requirements, potential utility conflicts, context sensitivity, preliminary seismic strategy, and other items appropriate for the bridge under consideration.

The drawings are checked to verify compliance with the *Situation and Layout Detailing Checklist.* The checklist is completed by the Checker and becomes part of the QC documentation for the structure. The drawings are checked for agreement with the most current roadway drawings. Issues and discrepancies with the roadway information are identified and resolved prior to completing the S&L Check. The S&L drawings must detail any aesthetic and environmental requirements related to the structure as outlined in the appropriate documents.

After the Situation & Layout drawings are checked and issued, the roadway designer will immediately communicate any roadway changes to the bridge designer to prevent unnecessary re-design.

See Appendix A for "**STRUCTURES SITUATION & LAYOUT DESIGN APPROVAL**" Form.

3.2.4 60% Design Review

At or near 60% completion, structure plan sets are reviewed to verify concept and scope. This is not a detailed design or drawing check, but a review to validate the design direction and ensure that the design scope and intent on all project design criteria and requirements are being met. This review provides an opportunity to make changes in the design before it progresses to the point where design changes become prohibitive.

See Appendix B for a sample of the **60% DESIGN REVIEW CHECKLIST.**

3.2.5 CADD Standards Check

All drawings will be checked to verify compliance with correct drafting practices and CADD Standards. The CADD Standards Check occurs prior to the drawing QC check. If the drawing does not meet CADD Standards, it will be corrected before proceeding with the drawing QC check. The CADD Standards Check will be completed by a Senior Design Technician.

See Appendix C for a sample of the **CADD STANDARDS CHECKLIST**

3.2.6 Final Design Check

During the Final Design Review, all drawings are thoroughly checked as a complete package. Although previously checked, the latest S&L is once again checked during the Final Design Review to ensure compliance with the latest roadway plans and to verify that information and details not available at the S&L phase are included.

The entire set of design documents (plans, calculations, specifications, engineer's estimate, etc.) will be checked. All checking will be completed before the PS&E package is submitted. Changes to the design package after the QC process is complete will be checked by the same procedures.

See Appendix D for **FINAL DESIGN QA REVIEW CHECKLIST**.

3.2.7 LADOTD Oversight Reviews

LADOTD oversight reviews occur at the following design stages:

1. Preliminary Design Review
2. 60% Design Review
3. 95% Design Review
4. 98% Design Review
5. Review of Final Design (may occur in conjunction with the PS&E Review).

The LADOTD Structures Oversight Engineer assigned to the project may request additional oversight reviews if deemed necessary.

3.2.8 Design Approvals

Design approvals are required at specific design milestones.

DESIGN APPROVAL REQUIREMENTS		
	APPROVAL TYPE	
STRUCTURE TYPE	*SITUATION & LAYOUT*	*FINAL DESIGN*
Bridge	X	X
Drainage Structures	X	X
Retaining Wall	X	X
Overhead Sign Structure		X
Bridge Widening	X	X
Structure Repair		X
Sound Wall*		X
Structural Barrier*		X

*Applies only to non-standard sound walls and structural barriers not covered by LADOTD standard drawings.

3.2.9 Final Design QA Review

The Final Design QA Review is completed by SDR QCM or his/her designee. The Final QA Review takes place after the PS&E Review and just prior to the Final Design Approval. The submittal includes all design documents as indicated on the Final Design QA Review Checklist. The following components are the subject of the final QC/QA checks:

1. Completed structure plan set (signed and sealed)
2. Specifications (Special Provisions)
3. Engineer's estimate
4. Design Certification Forms (Complete for Final Design)
5. Design Criteria Summary
6. Approved Design Exceptions
7. Computer Design Software List
8. Bridge Load Rating Report
9. Previous review comments with responses and final dispositions
10. Design Calculations
11. Independent Review Checklist, Letter Report and Calculations (when required)
12. Any other final design documents and reports, as appropriate

See Appendix D for the **FINAL DESIGN QA REVIEW CHECKLIST.**

4.0 QC CHECKING PROCEDURES

4.1 CHECKING OF DOCUMENTS

Each document developed for the project will undergo two QC reviews. Figure 3 provides a flow diagram of the QC and QA review processes for documents. The first QC review will be a technical review to check the technical accuracy of the document's content and its compliance with applicable guidelines, procedures, regulations, and standards. All review revisions will be completed prior to proceeding with the second QC review. The second QC review will occur on a clean copy of the revised document after the technical QC review is completed and is intended to check for spelling, grammar, formatting, readability, and consistency.

Upon completion of the document, the responsible Project Engineer/Planner/Scientist (Author) will initiate the technical and editorial QC reviews by filling out the top two sections and the "name" column of the third section of the QC form shown in Figure 4.

For both reviews, comments/corrections will be marked by the QC Reviewers on the checkprints in red. The QC Reviewers will initial the bottom right corner of each page of the checkprint. Upon completion of the reviews, the QC Reviewers will sign and date the QC form and return it along with the marked-up checkprint to the Author. The Author will confirm the corrections/comments, consult with the appropriate person(s) to resolve conflicts, and revise the document accordingly. Acting as the Corrector and/or the Back-checker, the Author will revise the document in accordance with the comments. Comments that are addressed, as suggested by the QC Reviewer, will be highlighted by the Author on the checkprint in yellow. Comments that, after discussion with the QC Reviewer, are deemed no longer valid, will be crossed by the Author in green on the marked-up document along with a brief note explaining the reason.

The Author will initial and date the QC form and return it along with the checkprint and a revised document to the QC Reviewer who, acting as the Verifier, will confirm with green check marks on the checkprint that each comment is addressed satisfactorily. Should any comments be improperly addressed, the QC Reviewer will return both documents to the Author for additional changes. When the QC Reviewer is satisfied with all corrections, he/she will initial and date the QC form and return it to the Author with the documents. This action completes the document's QC review process. At the end of this process, all comments on the checkprint must be either highlighted in yellow or crossed in green; each comment must bear the QC Reviewer's green check mark.

At the closing of the QC review process, the Author will deliver to the PM a clean copy of the submittal document, the technical review and editorial review checkprints, and the QC form. The PM will inspect the checkprints and submittal document to verify that the process has been adequately followed, all comments were properly addressed, and the deliverable meets LADOTD's expectations. After completing this inspection, the PM will initial and date the QC form and prepare and sign the Certificate of Compliance (see Appendix H). The PM will

forward the checkprints, the submittal document, the completed QC form, and the signed Certificate of Compliance to the QAM.

As a final check, the QAM will verify that the QC process has been followed by reviewing the checkprints, the QC form, and the submittal document. If the QAM finds that the process was not adequately followed, he/she will return the documents to the PM with instructions for completing the missing elements. If the QAM is satisfied that the process has been followed, he/she will sign the Certificate of Compliance and return it along with the submittal document to the PM for delivery to LADOTD.

After completion of the QC and QA review process, the PM will archive the technical and editorial QC review checkprints, the QC form, a record copy of the submitted document, and a copy of the Certificate of Compliance in the project's QC files for record keeping. An electronic file of these items will also be created and saved in the QC folder of the project's directory.

Figure 3: Document Quality Control and Quality Assurance Process

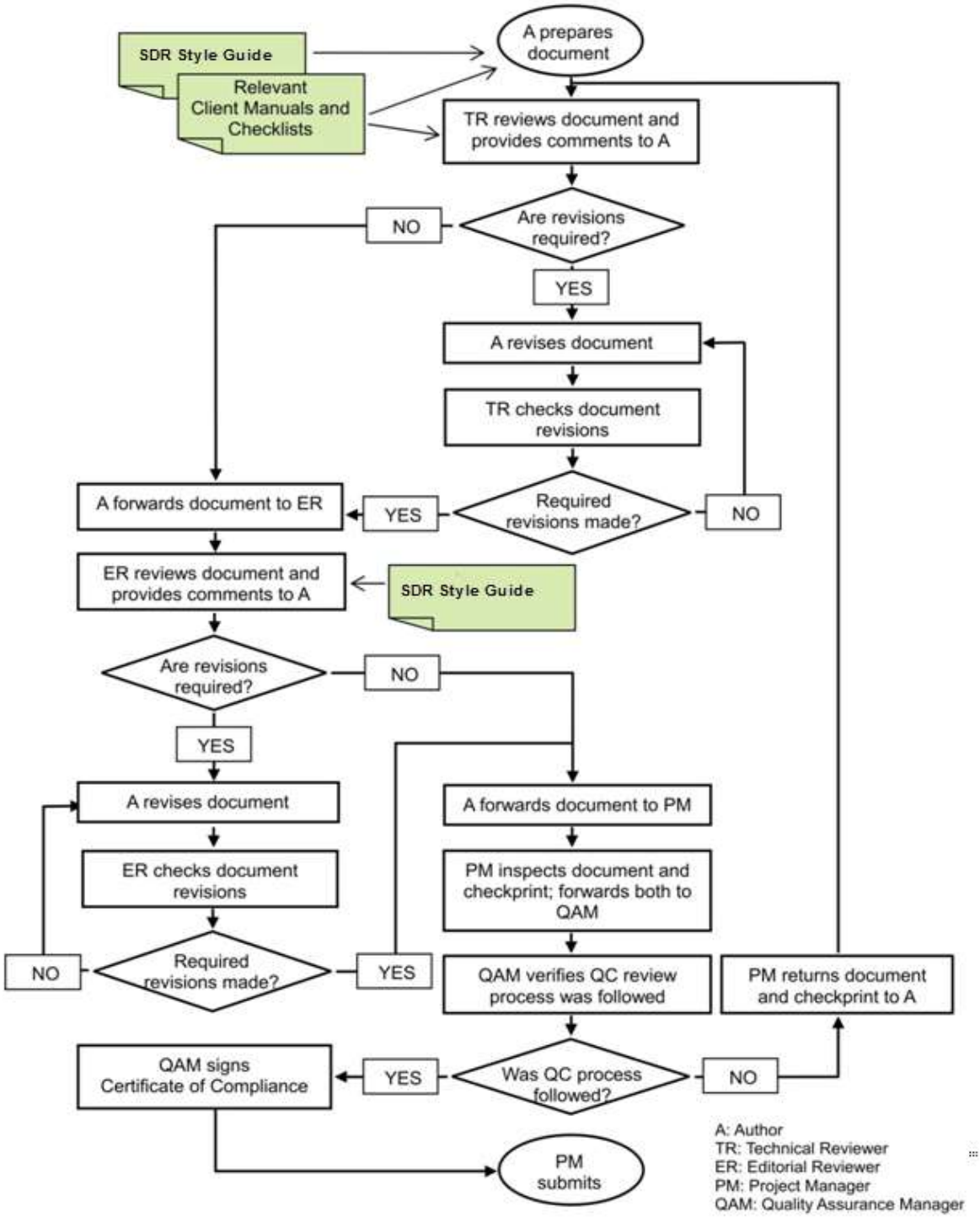


Figure 4: Quality Control Form for Documents

DOCUMENT QUALITY CONTROL FORM

Labor Charge Number	Project #		Task #	
Budget/Hours			Due Date	

PROJECT INFORMATION

Project Name	
Document Title	
Document Date	
Electronic File Name	
File Number	
Document Author(s)	
Project Manager	

TECHNICAL/EDITORIAL REVIEW

			NAME	INITIALS	DATE
TECHNICAL REVIEW	Primary Review (red=correction)	TR			
	Revised (yellow over red)	A			
	Revisions Reviewed (green check=OK green circle = additional correction)	TR			

EDITORIAL REVIEW	Primary Review (red=correction)	ER			
	Revised (yellow over red)	A			
	Revisions Reviewed (green check on revision=OK green circle = additional correction)	ER			
PM Approval					
QAM Approval					

SPECIAL INSTRUCTIONS FOR REVIEWER (IF ANY)

A = Author, Responsible for following document through process
TR = Technical Reviewer
ER = Editorial Reviewer
PM = Project Manager
QAM= Quality Assurance Manager

4.2 CHECKING OF DRAWINGS

Drawings are prepared by teams of staff, under the direction of Project Engineers/ Planners/Scientists assigned by the PM. The drawings are developed progressively by an iterative process using provided sources of information, such as reports, record data, preliminary sketches, samples, and workups, in conformance with the requirements, design criteria, and standards and guidelines provided by LADOTD. Before a drawing is considered as a completed deliverable, it will be independently checked by a qualified QC Reviewer for:

- Conformance with the design criteria and project requirements.
- Completeness and clarity.
- Coordination with other aspects of the project, i.e., structural, civil, traffic, right-of-way, etc., and with other associated project documents.
- Compatibility of notes and references.
- CADD standards, graphic standards, and proper plans preparation practice.
- Coordination with adjacent projects.

The checking process used for drawings is described below and shown in Figure 5. The first formal issue of a drawing is the checkprint and is routed by its Originator (the responsible Project Engineer/Planner/Scientist) to the assigned QC Reviewer(s)/Checker(s). Multiple copies of checkprints may be routed to several QC Reviewers/Checkers of different departments with interfacing project responsibilities. The Originator will place the QC stamp, shown in Figure 6, on the first page/sheet of the checkprint and fill in the first line. The QC Reviewers/Checkers will inspect the project drawings to determine if they meet the objectives of the task and are complete, accurate, and suitable for their intended use.

Figure 5: Drawing and Calculations Quality Control and Quality Assurance Process

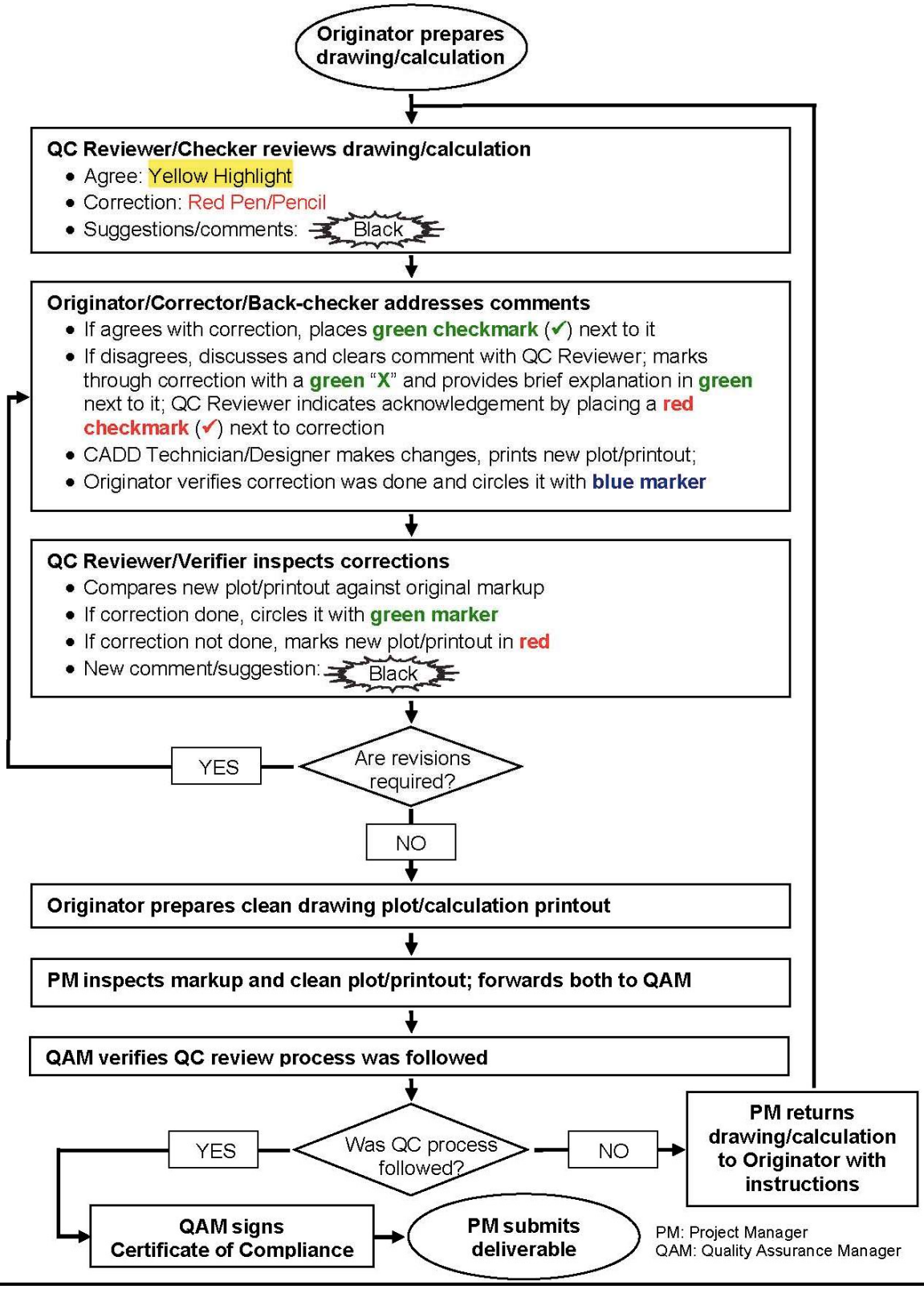


Figure 6: Drawing and Calculations QC Stamp

(Ready for Checking)	*Signature*	*Date*
Originator		

No. _____ Date _____

CHECKPRINT

Dwg. Checked against calcs. and calc. check confirmed.

By _____ Date _____

Checked _____ Date _____
Backchecked _____ Date _____
Corrected _____ Date _____
Verified _____ Date _____

QC Process Approved By: _____

Date

All items on the drawing(s) must be marked by the QC Reviewer/Checker to indicate either agreement or disagreement. The following colors will be used:

- **Yellow highlight**: QC Reviewer/Checker agrees with the drawing or element.
- **Red marking**: area requiring correction.
- **Blue/Black marking**: relative comments noted by the QC Reviewer/Checker.

As the QC Reviewers/Checkers inspect and mark each drawing, they will initial in the bottom right corner of every page/sheet of the checkprint and will fill in the second line of the QC stamp. Following their review, the QC Reviewers/Checkers will return the checkprints to the Originator.

The Originator, acting as the Back-checker, will inspect and confirm the suggested corrections/comments, consolidate and coordinate comments from different QC

Reviewers/Checkers, and (if needed) consult with the Checkers and other appropriate person(s) to resolve any conflicts. A green check mark will be placed on the checkprint next to the comments that need to be addressed. Comments that are no longer valid, based on discussions between the Originator and the QC Reviewer(s)/Checker(s), will be crossed out with a green "X." A brief explanation will be written in green next to the comment. The QC Reviewer/Checker who made the comment will indicate his/her concurrence by placing a red check mark next to the comment. As the Originator/Back-checker reviews and addresses the comments on each drawing, he/she will also fill-in the third line of the QC stamp.

The Originator, acting as the Corrector, will decide on the proper follow-up actions for each comment and direct the CADD staff to perform the required changes on the CADD files. Once the CADD staff makes the corrections to the original CADD file(s), they will plot a clean set of the revised drawing(s). The Originator/Corrector will verify the corrections and, if satisfied, will mark with a blue circle the QC Reviewer's comment on the checkprint. After this task is completed, the Originator/Corrector will fill in the fourth line of the QC stamp and return both the checkprint and the clean drawing(s) to the QC Reviewer.

The QC Reviewer, acting as the Verifier, will back-check the revised drawing(s) against the checkprint. If the comment has been properly addressed, the QC Reviewer/Verifier will circle the comment in green. If a comment is not satisfactorily addressed and/or has new comments, the QC Reviewer/Verifier will mark the clean drawing and return both sets (revised drawings and original checkprints) to the Originator and the process will be repeated. The newly marked checkprints will be attached to the original checkprint set for record keeping. At the end of this process, all comments on the checkprints will be either circled in blue and green or crossed out in green. After all corrections are acceptably verified by the QC Reviewer/Verifier, he/she will fill in the fifth line of the QC stamp.

At the closing of the QC review process, the Originator will deliver to the PM the checkprint(s) and clean copies of the submittal drawing(s). The PM will inspect the checkprint(s) and submittal drawing(s) to verify that the process has been adequately followed, all comments were properly addressed, and the drawing(s) meet LADOTD's expectations. After completing this inspection, the PM will fill in the sixth line of the QC stamp and prepare and sign the Certificate of Compliance. The PM will forward the checkprint(s), the submittal drawing(s), and the signed Certificate of Compliance to the QAM.

As a final check, the QAM will verify that the QC review process has been followed by inspecting the checkprint, the QC stamp, and the submittal drawing(s). If he/she is satisfied that the process has been followed, the QAM will also sign the Certificate of Compliance, which will be submitted by the PM to LADOTD with the submittal drawing(s). If the QAM finds that the process was not adequately followed, he/she will return the drawing(s) to the PM with instructions for completing the missing elements.

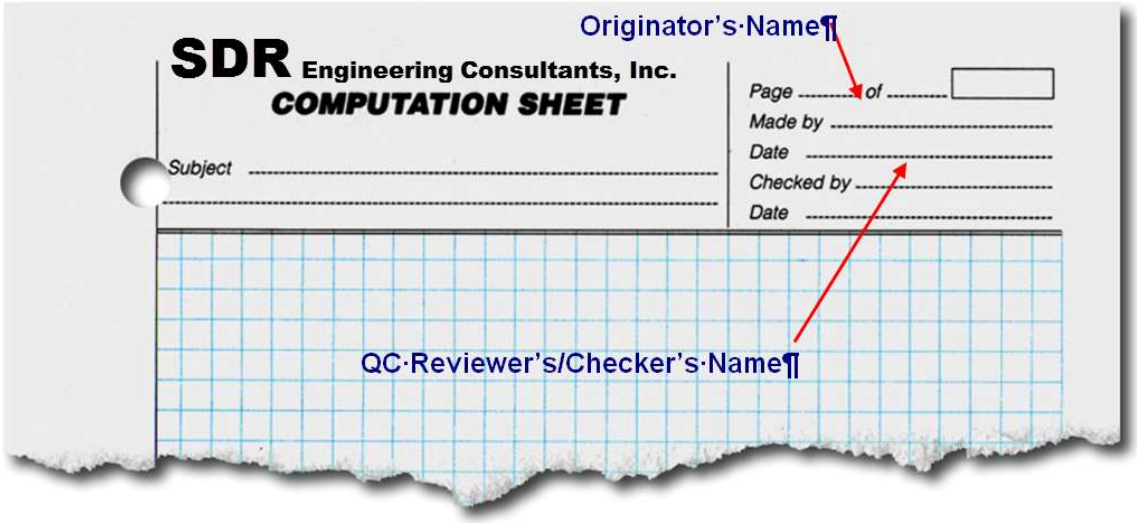
After completion of the QC and QA processes, the PM will archive the checkprint(s), a record copy of the submitted drawings, and a copy of the Certificate of Compliance in the project's

QC files for record keeping. An electronic file of these items will also be created and saved in the QC folder of the project's directory.

4.3 CHECKING OF CALCULATIONS

Calculations can be either manual or computer generated printouts. Manual calculations will be prepared in pencil on the standard SDR computation sheets, shown in Figure 7. A calculation may also include supporting information – such as forms, charts, graphs, data sheets, and others, which must be attached to the computation sheets. Assumptions upon which calculations are based will be stated in the calculations. Assumptions with limited application should immediately precede the calculations to which they apply.

Figure 7: SDR Manual Computation Sheet



The Designer is responsible for creating and maintaining the design calculations for the assigned structure in a neat and logical manner which is conducive to checking and in accordance with this policy.

1. Title page with Structure Drawing Number, Structure Name, Design Calculations title, and Designers names.
2. Table of Contents.
3. Design Criteria Summary (include a list of applicable AASHTO and LADOTD design specifications used in the design).
4. Design Criteria Exceptions (a list of any deviations from the project design criteria, along with the approval documentation).
5. List of computer programs and spreadsheets used in the design.
6. Completed Design & Detailing Progress Form.
7. Use standard letter-sized paper for computer generated calculations.

8. Number all pages with a numbering scheme that covers the entire set of calculations.
9. Identify the appropriate code references in the right hand column of the calculations.
10. Reference computer programs and indicate appropriate code section. Computer documentation includes: name of program, vendor, version, and release date.
11. Include Bridge Type Selection Report and Seismic Strategy Report.
12. Bridge Load Rating Report and Calculations.

After completion of his/her task, the Originator (the designer/analyst responsible for the calculations) will create a checkprint consisting of copies of all computation sheets, computer printouts and any other related support attachments. He/she will place the QC stamp, shown in Figure 6, on the first page of the checkprint, or, if necessary, on the back of the first page to avoid clutter, and will fill in the first line of the QC stamp.

The Originator will review the data and the Scope of Services with the assigned QC Reviewer/Checker. The Originator will provide the QC Reviewer/Checker with design criteria, copies of pertinent information, and related documents and calculations.

The QC review will include verification of the introductory material on the calculation sheet, the assumptions, and the calculations. The QC Reviewer/Checker will verify that all information is appropriate, correct, complete, consistent, legible, and reproducible. The QC Reviewer/Checker will mark all items on the calculation sheets and all printouts to indicate his/her agreement or disagreement and initial the bottom right corner of each inspected page/sheet. The following is the color code to be used for marking calculations:

- **Yellow highlight**: QC Reviewer/Checker agrees with the calculation, assumption, etc.
- **Red marking**: calculation, assumption, etc., requiring correction.
- **Black marking**: relative comments noted by the QC Reviewer/Checker.

Following his/her review, the QC Reviewer/Checker will fill in the second line of the QC stamp and return the checkprint to the calculations Originator. The Originator, acting as the Back-checker, will inspect and confirm the suggested corrections/comments, consolidate and coordinate comments from different QC Reviewers/Checkers, and (if needed) consult with the QC Reviewers/Checkers and other appropriate person(s) to resolve any conflicts. Green check marks will be placed on the checkprint next to the comments that need to be addressed. Comments that are no longer valid, based on discussions between the Originator and the QC Reviewer(s)/Checker(s), will be crossed out with a green “X” and a brief explanation will be written in green next to the comment. After completion of this task, the Originator/Back-checker will fill in the third line of the QC stamp.

The Originator, acting as the Corrector, will make the necessary revisions to the calculation sheets and/or printouts to address the comments. As each comment is addressed, the Originator/Corrector circles the comment in blue on the checkprint. After completion of this task, the Originator/Corrector will fill in the fourth line of the QC stamp and print a revised,

clean calculations set. Both the checkprint and the clean calculations set will be then returned to the QC Reviewer(s).

The QC Reviewer(s), acting as the Verifier(s), will compare the revised calculations set against the original checkprint. If he/she finds that the comment has been properly addressed, the QC Reviewer/Verifier will circle the comment in green on the original checkprint. If he/she finds that a comment is not satisfactorily addressed and/or has new comments, the QC Reviewer/Verifier will mark the revised calculations set, return both sets to the Originator, and the process will be repeated. The newly marked checkprints will be attached to the original checkprint set for record keeping. At the end of this process, all comments on the checkprints will be either circled in green and blue or crossed out in green. After all corrections are acceptably verified by the QC Reviewer/Verifier, he/she will fill in the fifth line of the QC stamp.

At the closing of the QC review process, the Originator will deliver to the PM the checkprint(s) and a clean copy of the submittal calculations. The PM will inspect the checkprint(s) and submittal calculations to verify that the QC process has been adequately followed, all comments were properly addressed, and the calculations meet LADOTD's expectations. After completing this inspection, the PM will fill in the sixth line of the QC stamp and prepare and sign the Certificate of Compliance. The PM will forward the checkprint(s), the submittal calculations, and the signed Certificate of Compliance to the QAM.

As a final check, the QAM will verify that the QC review process has been followed by inspecting the checkprint, the QC stamp, and the submittal calculations set. If he/she is satisfied that the process has been followed, the QAM will also sign the Certificate of Compliance, which will be submitted by the PM to LADOTD with the submittal calculations. If the QAM finds that the process was not adequately followed, he/she will return the checkprint and final calculations set to the PM with instructions for completing the missing elements.

After completion of the QC and QA processes, the PM will archive the checkprint(s), a record copy of the submitted calculations, and a copy of the Certificate of Compliance in the project's QC files for record keeping. An electronic file of these items will also be created and saved in the QC folder of the project's directory.

See Appendix E for the **DESIGN CALCULATIONS CHECKLIST** and also Appendix F for **STRUCTURE DESIGN CERTIFICATION FOR DESIGN CALCULATIONS.**

4.4 60% DESIGN REVIEW

When the structure drawings have progressed to the point where the design of major structure elements are adequately illustrated (at or near 60% completion), the Senior Design Engineer will conduct a 60% Design Review. The purpose of this review is to identify any design flaws that will significantly affect the design before significant work effort is performed to the point where it becomes prohibitive to modify the design. The 60% Design Review is not a detailed check of the design or the drawings, but a check of the general concept and functionality of the structure. This review occurs prior to the final drawing check. Scheduling the 60% Design Review as early in the design process as possible will improve the opportunity to incorporate

quality, efficiency, and economics into the design without significant redesign. This review may also identify structural elements that require special design procedures. For unusual or complicated structures, the Senior Design Engineer may organize a review team to participate in this review. The review team may include representatives from the LADOTD bridge group, inspection group, construction, maintenance, and other design disciplines.

The Reviewer will check the design for constructability, maintainability, inspectability, and that the standard details are correctly applied. The Reviewer will verify that the design matches the project criteria and scope, and that all aesthetic and environmental requirements are being incorporated into the structure. The final seismic strategy report will also be reviewed.

The 60% Design Review submittal will typically include the following unchecked drawings:

60% REVIEW PLAN SUBMITTAL CONTENT		
BRIDGE	OVERHEAD SIGN STRUCTURE	OTHER STRUCTURE TYPES
Situation & Layout Soil Data Sheets Pile Details Foundation Plan Abutment Details Bent Details Framing Plan Girder Details Camber Diagrams Diaphragms / Cross-frames Bearings Post-Tensioning and/or Prestressing Details Deck Details Screed Elevations Parapet Details Other Major Element Details	Sign Location Sign Panel Geometry Sign Support Geometry Roadway Typical Sections Foundations	All Details (unchecked)

The 60% Design Review includes the following elements:

1. **Standard Details.** Verify that standard details are used appropriately. Ensure that any nonstandard details are appropriate.
2. **Constructability.** Check the plans for problems that would impact construction. Identify details that would require the Contractor to do the impossible or near impossible. Identify details or construction sequencing that can be modified to improve constructability without impacting the quality or design life of the completed structure.
3. **Inspectability.** Verify that all major components of the completed structure are accessible for inspection.

4. **Maintainability.** Check the major elements of the bridge for built-in problems that would impact bridge maintenance. For instance, verify that the deck drains will not soak the girders or substructure. Identify potential problems that can be avoided.
5. **Compatibility** with the surrounding environment and adjacent project elements, compliance with project aesthetics and environmental requirements, etc.
6. **Significant Design Flaws.** Identify any design flaws that will significantly affect the design and construction.

Each Reviewer fills out and signs the 60% Design Review Checklist and gives it to the Designer who places a copy with the QC documentation and a copy in the design calculations.

See Appendix B for **60% DESIGN REVIEW CHECKLIST.**

4.5 CADD STANDARDS DRAWING CHECK

The Originator of the work has the primary responsibility for compliance with LADOTD Structures CADD Standards. The Originator should not rely upon the checking process to find and correct his/her mistakes.

All completed drawings will be checked to verify compliance with correct drafting practices and LADOTD CADD Standards. This will provide consistency of structures plan drawings and ensure that proper CADD procedures are followed. The CADD Standards Check occurs prior to the drawing QC check. If the drawing does not meet CADD Standards, it will be corrected before proceeding with the drawing QC check.

The CADD Standards Drawing Check is completed by a Senior Design Technician, as assigned by the Senior Design Engineer, to check MicroStation data for compliance to Standards and Procedures. This check is performed on all files that will be released for construction.

The CADD Standards Check will check for the following:

1. All CADD contract drawings are produced in the current MicroStation format according to LADOTD CADD Standards.
2. Proper file naming conventions are followed. File names reflect the nature of their contents.
3. Correct line styles are used and are on the correct levels. Correct text size and type are used.
4. All details are drawn to scale.
5. Reference files (stored as read only) are used, as opposed to the copying of existing data (as appropriate).
6. Correct seed files or libraries of standard features/details (stored as read only) are used. No changes to an existing approved standard may be made without the approval of the Senior Design Engineer.

7. All CADD-produced prints will automatically produce the date, time and filename printed outside the left border.
8. When the CADD Standards Check is complete, fill out and sign the CADD Standards Drawing Review Checklist. The checklist will be kept with the QC documentation for the structure. Also, place a copy in the Design Calculations.

See Appendix C for **CADD STANDARDS CHECKLIST.**

4.6 CHECKING STRUCTURE DRAWINGS

The checking of structure drawings requires a minimum of two individuals: a checker/ verifier, and an originator/back checker. In most cases, the Originators of the drawing are the Designer and the Detailer. The Checker/Verifier is a designer not involved in the original design. Do not begin the final drawing check until the design calculations are complete and checked and the CADD Standards Check is complete.

4.6.1 Completing the Drawing

A drawing is considered complete and ready for checking when the Originator certifies that the content is complete and accurate and that the detailing and CADD work follow all applicable standards. The Originator is responsible for the completeness and accuracy of the drawing, and should not rely on the checking process to correct errors in content and format.

As each drawing is completed in final format and deemed ready for checking, the Originator initials the title block of the drawing, makes a Check Print copy, affixes numbers, and dates the Check Print stamp on the print of each drawing. When all drawings for the structure are complete and stamped, the Designer gives them as a complete package to the Checker.

4.6.2 Checking

The Checker checks the Check Prints of the drawings for completeness, consistency throughout the plan set, technical adequacy and conformance to any applicable standards and format, and performs specific accuracy checks required for that type of drawing. In cases where individual drawings are checked (not as a complete plan set), the Checker must check the completed plan set for completeness and consistency between drawings before the checking is considered to be complete.

The Checker checks each drawing to ensure that it accurately represents the design as described in the corresponding design calculations, and verifies that those calculations have been properly checked. This includes the checking of quantities. The Checker should not proceed with the drawing check unless the calculations have been checked. The Checker documents the checking process by highlighting in **yellow** on the Check Print each part checked that is found to be correct, and marking in **red** on the Check Print any required corrections, additions, or deletions.

NOTE: *Red or yellow should not be used to note comments or instructions. These colors are reserved for the checking process. Write comments or instructions in blue.*

The Checker will check all details on the drawing for adequacy, completeness, correctness, clarity, appropriate proportions, and proper dimensioning. All text and notes will be checked for correctness and applicability. The quantity subtotals and totals will be checked. The completed check print will show that all drawing elements (details, text, notes, etc.), without exception, have been checked by being marked either in yellow or red. The Checker will also compare the details and information on each sheet with the same or similar information on other sheets to ensure that there are no conflicts and that all elements fit together properly.

When the checking is complete, the Checker signs and dates the Check Print stamp and returns it to the Originator.

NOTE: *In the case where no corrections, additions or deletions are found, there is no need for back checking or further signatures on the Check Print stamp. The Check Print and original drawing, signed in the appropriate checked block, is returned to the Originator for placement in the project file.*

4.6.3 Back Checking

The Originator (acting as Back Checker) reviews the Checker's marks on the Check Print and personally makes or supervises the update of the Drawing Original. To document the back checking process, the Originator:

a. Check marks in **green** each of the Checker's red-marked changes if in agreement that the Original should be changed, and adds in **green**, with the concurrence of the Checker, any additional changes not picked up by the Checker.

b. Crosses out and marks OK in **green** each of the Checker's red-marked changes that both the Originator and the Checker agree should not be changed. The Back Checker should not obliterate the Checker's marks.

NOTE: The Back Checker and Checker should resolve differences encountered during the checking process so they are not repeated over and over again. If resolution cannot be achieved by the two individuals, the Senior Design Engineer should be requested to resolve the differences.

c. Signs and dates the Check Print stamp.

4.6.4 Correcting the Drawing Original

The Drawing Original is corrected by the Detailer under the supervision of the Designer (Originator). As Check Print corrections are made to the Drawing Original, the person making the changes circles in **green** each correction as incorporated. When all corrections are complete, the person correcting the drawing signs and dates the Check Print stamp.

4.6.5 Verifying the Corrected Check Print

The Verifier (usually the Checker) verifies the corrected drawing against the Check Print to assure that the agreed-upon corrections have been incorporated without error.

If the corrections are not made or are made incorrectly, the Check Print with penciled instructions is returned to the corrector. The Verifier marks in **yellow** each green-circled item after reviewing its incorporation on the Original Drawing. At the conclusion of the checking process, everything on the drawing should be marked in yellow.

The Verifier signs and dates the Check Print stamp, as applicable.

After the corrections have been verified, the Checker initials the “Checked by” block on the title block of the Drawing Original.

At the completion of the QC Review, all check boxes in the drawing title block should be initialed. The Design and Detailing Progress form will also be completely filled out (hand initialed) at this time.

To complete the checking process, the Designer of Record fills out the project information on the Design Certification for Design Plans form and seals and signs the Design Certification section. The Checker seals and signs the Design QC Certification section.

4.6.6 Disposition of the Checked Drawing

The completed original (or CADD file) is placed under the control of the Senior Design Engineer to prevent further changes to the drawing that could invalidate the checking which has been done.

4.6.7 Additional Changes or Corrections

When a change is made to a checked drawing, a new Check Print must be made to check the area that has been changed. The Check Print is stamped and labeled Check Print 2, 3, 4, etc., as applicable, and attached to the previous check print(s). The checking follows the same procedure as that of the original Check Print, except that only the portions that changed are marked up as having been checked.

4.6.8 Preparing Technical Special Provision

Specifications define work items that are not and/or cannot be defined completely in the plans. For the purpose of this document, the term *specification* refers to a *Special Provision*.

A qualified engineer/designer composes and drafts the specification under the direction of the Senior Design Engineer. The Originator verifies that the new special provision will not duplicate or inadvertently supersede other specifications.

Complete all specifications and special provisions prior to the PS&E review to allow other design and construction disciplines to review the changes or additions prior to release for construction.

4.6.9 Engineer’s Estimate

Ensure that the Engineer’s Estimate is complete and accurate by doing the following:

1. List each bid item and quantity exactly as shown in the plans.

2. Match the bid item numbers and names with the applicable specifications and plan quantities.
3. When a specification defines a new bid item, add it to the project estimate and to the Measurement and Payment specification.
4. Provide the quantity and unit price for each item.
5. Verify that the unit costs are reasonable for the bridge type and location.

4.6.10 Measurement and Payment Specification

Check the Measurement and Payment document for correctness and completeness of structure items. Add additional items and information as necessary.

4.7 QC FOR ELECTRONIC DELIVERY

For the required electronic delivery process to be implemented, SDR will produce electronic deliverables in conformance with the LADOTD Software and Deliverable Standards for Electronic Plans document. The SDR team will follow LADOTD procedures and requirements in the Professionals Electronic Delivery System for complete electronic delivery (ED) of the project. SDR will upload (or check in) electronic deliverables directly into the LADOTD ProjectWise repository at each plan delivery milestone.

4.8 RESOLUTION OF TECHNICAL DIFFERENCES

During the QC review process; there may be differences in opinions between the QC Reviewer and the Originator on whether a comment is valid or how it should be addressed. If the QC Reviewer does not agree with the way his/her comment was addressed, he/she will first discuss the matter with the Originator. If the difference in opinion cannot be resolved through the discussion, the QC Reviewer will inform the PM on the issue, who will then seek the assistance of a senior technical expert to resolve the difference. If necessary, the issue will be taken to the Department Manager and/or Principal-in-Charge for resolution.

See Appendix G for **STRUCTURES COMMENTS AND RESOLUTION SHEET**.

5.0 DOCUMENTATION OF COMMENTS/RESPONSES AND QUALITY

5.1 DOCUMENTATION OF COMMENTS AND RESPONSES

All comments made by external reviewers will be recorded either by memos, letters or marked plans received from the reviewers. In the event that comments are received through meetings with reviewers, minutes summarizing the comments received will be prepared. Comments received by a project team member other than the PM will be forwarded to the PM. Where it is necessary to discuss and clarify the comments with the reviewer(s) prior to responding, the PM will arrange for the meeting.

The Project Engineers/Planners/Scientists, who are responsible for the deliverable on which comments were received, will prepare responses to the comments. The responses will be written in a memorandum format and, at minimum, will include the deliverable's review date, the reviewer's name, the responder's name, the reviewer's comments and the responses to the comments. The PM will review all comments and responses before submitting them to the LADOTD. The comments/responses memorandum is considered a project deliverable and will undergo the document QC and QA review processes. The PM will be responsible for the submittal of the comments/responses memorandum to the appropriate reviewing entity of the LADOTD.

Electronic Review Comments (ERC) will be responded to via the internet using the format integrated into the ERC system and responded to in a manner similar to that described above. The ERC review comments and responses will be posted on the LADOTD internet address and will be checked monthly following each phase submittal.

After submittal of the comments/responses memorandum to the LADOTD and verification by the PM that the responses are acceptable, the Project Engineers/Planners/Scientists responsible for the deliverable will make necessary revisions in accordance with the responses. Each comment/response on the memorandum will be initialed by the appropriate Project Engineer/Planner/Scientist, indicating that they have verified that the comment response has been implemented.

5.2 QUALITY ASSURANCE RECORDS

The PM will be responsible for maintaining copies of the submitted comments/responses memorandums, the QC review checkprints and forms of the memorandums, and the initialed memorandums in the project files.

6.0 CONTROL OF SUBCONSULTANT QC PROCESS

Coordination will be maintained with all subconsultants throughout the project. Attention will be placed on critical path activities involving subconsultants. The subconsultants will be provided with the information they need in a timely manner to help them accomplish their tasks. Regular meetings will take place to facilitate this coordination and give them direction on the expected deliverables.

As part of their QC plans, the subconsultants will conduct quality reviews of their submittals to SDR. The subconsultants will provide evidence of their QC reviews to SDR, which the PM will archive within the project's QC files. Prior to the use of each subconsultant's deliverable or its incorporation into other project work, and/or its submission to LADOTD, the PM will check this work for technical adequacy, consistency with the Scope of Services, and for meeting the project's quality requirements. This review, however, will not substitute for the QC and QA review process that each subconsultant must implement in accordance with their QC plans.

7.0 QUALITY RECORDS AND AUDITS

7.1 QUALITY RECORDS

The PM is responsible for maintaining QC and QA records for all project deliverables. At a minimum, the following items will be archived in the project's files for each submitted deliverable:

- The QC review checkprint(s); the checkprints can be in various formats:
  - Paper format with hand written markups.
  - Electronic .pdf files produced from scanning paper copies and saved in the project's directory (drawings or documents).
  - Electronic Microsoft Word file using the track changes feature and saved in the project's directory (documents).
- A record hard copy of the submitted deliverable; record copies will be stamped as such.
- The QC form (for documents only).
- The Certificate of Compliance.

7.2 INTERNAL QUALITY AUDITS

In accordance with our QC/QA policy, SDR conducts annual quality audits for a sampling of projects at each office location. The project quality audits are conducted by certified internal auditors who are independent of the projects.

Appendix A

STRUCTURES SITUATION & LAYOUT DESIGN APPROVAL

SDR Engineering Consultants, Inc.

STRUCTURES SITUATION & LAYOUT DESIGN APPROVAL

Project Number: _____ Project Name: _____

PIN: _____ Structure No.: _____ Structure Type: _____

Structure Description: _____

ATTACHED ITEMS:

The following items are completed and attached:

- ☐ Situation & Layout sheet (s)
- ☐ Design Plan Design Quality Certification (completed for S& L plan sheets)
- ☐ Bridge Type Selection Report
- ☐ Preliminary Seismic Strategy Report
- ☐ List of Computer Software to be used in Final Design
- ☐ Design Criteria
- ☐ Design Exceptions Approval Form (if applicable)

LEAD STRUCTURAL DESIGNER

I certify that the attached Situation & Layout plans for the specified structure are complete, meet all applicable design requirements, and are ready for approval.

Signature: Date: _____

_____

Design Firm: _____

APPROVAL

I approve the submitted Situation & Layout plans for the specified bridge.

Date: _____

Signature:

_____

Note: Approval of Situation & Layout plans is required prior to beginning the final design. Approval requires the submittal of all items listed in the Attached Items box.

Appendix B

60% DESIGN REVIEW CHECKLIST

SDR Engineering Consultants, Inc.

60% DESIGN REVIEW CHECKLIST

Project Number: Project Name:

Structure No.: Structure Type:

Structure Description:

Inc.	N/A	TASK	PHASE
☐	☐	Design Criteria Summary	
☐	☐	Consultant Submittal QC/QA Certification	
☐	☐	Design Calculations	
☐	☐	Flexural Design	
☐	☐	Shear Design	
☐	☐	Bearing Design	
☐	☐	Development of Special Details	
☐	☐	General Notes	
☐	☐	Girder Properties and Strand Pattern Template	
☐	☐	Girder Details	
☐	☐	Girder End Details	
☐	☐	Build-Up and Deflection Diagrams	
☐	☐	Miscellaneous Details	
☐	☐	Bearing Details	
☐	☐	Transportation and Handling Guidelines	
☐	☐	Girder Span Details	
☐	☐	Typical Span Details	
☐	☐	Data Tables	
☐	☐	Girder Data Table	
☐	☐	Build-Up and Deflection Data Sheet	

Reviewer's Signature: _____ Date: _____

Appendix C

CADD STANDARDS CHECKLIST

SDR Engineering Consultants, Inc.

CADD STANDARDS CHECKLIST

Project Number: _____ Project Name: _____

PIN: _____ Structure No.: _____ Structure Type: _____

Structure Description: _____

Plan Sheet Number: _____ Plan Sheet Name: _____

Filename: _____ Directory: _____

AT A MINIMUM, CHECK THE FOLLOWING:

Drawing Organization:

- ☐ All CADD contract drawing are produced in MicroStation format according to LADOTD CADD Standards
- ☐ File directory structure matches CADD Standards requirements
- ☐ File names comply with CADD Standards requirements. File names reflect the nature of their contents
- ☐ Reference files (stored as read only) are used instead of copying existing data into file
- ☐ Drawings/Details are referenced properly
- ☐ Correct seed files or libraries of standard details (stored as read only) are used
- ☐ Any changes to seed files are approved by the Senior Design Engineer
- ☐ All unnecessary (temporary) files are deleted from all directories

Drawing Content:

- ☐ Drawing is flattened (Drawn 2D)
- ☐ All details are drawn to scale
- ☐ Correct line styles are used and are on the correct levels
- ☐ Text is correct size and type
- ☐ All CADD-produced prints automatically produce the date, time, and filename printed
- ☐ Drawing compiles with LADOTD Structures Division Drafting Standards
- ☐ All dimensions are auto-dimensioned & auto-annotation is used as appropriate
- ☐ Use of tags and file referencing is used appropriately

REVIEWER

Signature: _____ Date: _____

Note: Record any comments on the Structures Review Comment Form.

Appendix D

FINAL DESIGN QA REVIEW CHECKLIST

SDR ENGINEERING

FINAL DESIGN QA REVIEW CHECKLIST

Project Number: _____ Project Name: _____

PIN: _____ Structure No.: _____ Structure Type: _____

Structure Description: _____

ATTACHED ITEMS:

The following items are completed and attached:

- ☐ 100% Structure Plan Set
- ☐ Special Provisions
- ☐ Engineer's Estimate
- ☐ Electronic Design Files (MicroStation)
- ☐ Completed Design Certifications Forms
- ☐ Final Bridge Design Calculations
- ☐ Independent Review Documentation (when required)
- ☐ 60% Design Review Checklist
- ☐ Design Criteria Summary
- ☐ Approved Design Exceptions
- ☐ Computer Design Software List
- ☐ Final Seismic Strategy Report
- ☐ Bridge Load Rating Report
- ☐ Geotechnical Report
- ☐ Previous Review Comments With Response & Dispositions

AT A MINIMUM, CHECK THE FOLLOWING:

Completeness:

- ☐ Plans are complete, sealed and signed by Louisiana PE
- ☐ Special Provisions included for all work/bid items
- ☐ Engineer's Estimate complete
- ☐ Bid costs are reasonable
- ☐ Calculations are complete and organized
- ☐ Previous comments addressed
- ☐ Design Approvals
- ☐ Load Rating complete and summarized properly
- ☐ Design Checklists complete & included with calculations

General:

- ☐ Design Meets Design Intent
- ☐ Seismic Strategy implemented appropriately
- ☐ Design software acceptable
- ☐ Detailing matches standards
- ☐ Standard Details are used appropriately
- ☐ Plan Quantities match Engineer's Estimate
- ☐ Compiles with Aesthetic requirements
- ☐ Significant design issues noted (Use comment form)

Constructability:

- ☐ Design accommodates constructability
- ☐ Horizontal and Vertical clearances accommodates constructability
- ☐ Constructible details are used
- ☐ Construction sequencing is adequately addressed
- ☐ Shoring/Temporary Supports are adequately addressed
- ☐ Assess need for Contractor to submit Erection Plan

Maintainability:

- ☐ Appropriate materials used
- ☐ Maintenance-friendly details used
- ☐ Maintenance access provided as necessary

Inspectability:

- ☐ Inspection access is provided to all necessary components (bearings, expansion joints, closed sections, abutment backwalls, etc.)
- ☐ Inspection access meets safety requirements

Security:

- ☐ Public access to sensitive areas is prevented

REVIEWER

The specified bridge design documents are complete and recommended for approval.

Signature: Date: _____

_____

Note: Record any comments on the Structures Review Comment Form.

Appendix E

DESIGN CALCULATIONS CHECKLIST

SDR Engineering Consultants, Inc.

DESIGN CALCULATIONS CHECKLIST

Project Number: _____ Project Name: _____

PIN: _____ Structure No.: _____ Structure Type: _____

Structure Description: _____

INCLUDE THE FOLLOWING:

Organization:

- ☐ Title page with Structure Drawing Number, Structure Name, Design Calculations title, Designer's name
- ☐ Table of Contents
- ☐ Uses standard Structures Division letter-sized calculation sheets for handwritten calculations and sketches
- ☐ Uses standard letter-sized paper with standard Structures heading for computer generated calculations
- ☐ All pages numbered with numbering scheme that covers entire set of calculations
- ☐ Identifies appropriate code references in right hand column
- ☐ Computer documentation includes: name of program, vendor, version number, and release date
- ☐ Calculations cross-reference computer output as appropriate
- ☐ Stored in three-ring binder
- ☐ Check calculations stored in separate three-ring binder

Content:

- ☐ Complete Final Calculations
- ☐ All Design Certifications (place at beginning of calculations)
- ☐ All Design Approvals
- ☐ Design Criteria Summary
- ☐ Design Criteria Exceptions
- ☐ List of Computer Programs and Spreadsheets
- ☐ Bridge Type Selection Report
- ☐ Seismic Strategy Report (includes calculations)
- ☐ Load Rating Report
- ☐ Alternate Design Quality Plan Approval
- ☐ Completed Design Checklists
- ☐ Review Comments with Responses and Dispositions

REVIEWER

Signature: _____ Date: _____

Note: Record any comments on the Structures Review Comment Form.

Appendix F

STRUCTURE DESIGN CERTIFICATION FOR DESIGN CALCULATIONS

6/30/11 FORM SQ-1

SDR STRUCTURE DESIGN CERTIFICATION FOR DESIGN CALCULATIONS

Project Number: _____ Project Name: _____

PIN: _____ Structure Number: _____ Structure Type: _____

Structure Description: _____

Type: ☐ Design Calculations ☐ Design / Field Change

Certification For: ☐ Complete Design ☐ Partial Design. Specify: _____

Structures Quality Plan: ☐ SDR Structures QP ☐ Modified SDR Structures QP
☐ Approved Alternate

DESIGN CERTIFICATION (Designer of Record)

By stamping and signing this section, I certify that the design documents specified comply with the requirements of the Project Design Criteria, including applicable AASHTO design specifications, and the Structures Design Quality Plan specified.

Print Name: _____ Date: _____

Design Firm: _____

PE Stamp (signed & dated)

DESIGN QC CERTIFICATION

By stamping and signing this section, I certify that the design calculations have been checked in accordance with the requirements of the Structures Design Quality Plan specified.

Print Name: _____ Date: _____

Design Firm: _____

PE Stamp (signed & dated)

DESIGN QA CERTIFICATION

By stamping and signing this section, I certify that I have verified that the QC for the design calculations specified above has been completed in accordance with the requirements of the Structures Design Quality Plan specified.

Print Name: _____ Date: _____

Design Firm: _____

PE Stamp (signed & dated)

Notes: 1. Design Certification is required for permanent structures of all types, including Bridge, Box Culvert, Multi-Plate Arch, Retaining Walls, Overhead Sign Structures, and Traffic, Signal, and Camera poles.
2. Attach signed approval forms for any approved modifications to the Structures Design Quality Plan.
3. Maintain all QC/QA records for a minimum of 3 years after project completion.

Appendix G

STRUCTURES COMMENTS AND RESOLUTION SHEET

PAGE 1 OF 1

SDR STRUCTURES COMMENTS AND RESOLUTION SHEET

CODES:
A. ACCEPT COMMENT—WILL BE CORRECTED, ADDED, OR CLARIFIED.
B. DESIGNER WILL EVALUATE.
C. DELETE COMMENT
D. DEPARTMENT TO EVALUATE.

DOCUMENT CONTROL NUMBER: | REVIEW TYPE: | REVIEWER(S): | DATE:

DESCRIPTION: | DESIGNER: | DISCIPLINE: STRUCTURES | CRM:

ITEM NO.	DWG. NO.[1]	COMMENTS	CODE[2]	RESPONSE[2]	FINAL DISPOSITION[3]
1					

(1) Indicate drawing no./page no. or use "G" for general comment.
(2) To be filled out by Designer.
(3) To be determined in subsequent comment resolution meeting/discussion (list date).

Note: The intended use of this form is to provide a means for the Department to comment on submitted structural design plans and calculations. All comments must be satisfactorily resolved and incorporated into the contract documents before the design can be approved.

QUALITY PLAN\STRUCTURES COMMENT FORM_ 4/04/11

Appendix H

SAMPLE CERTIFICATIONS

STRUCTURES DESIGN CERTIFICATION FOR DESIGN PLANS

6/30/11 FORM SQ-2

SDR STRUCTURE DESIGN CERTIFICATION FOR DESIGN PLANS

Project Number: _____ Project Name: _____

PIN: _____ Structure Number: _____ Structure Type: _____

Structure Description: _____

Submittal Type: ☐ S&L ☐ Final Design ☐ Design / Field Change ☐ As-Builts

Certification For: ☐ Complete Design ☐ Partial Design. Specify: _____

Structures Quality Plan: ☐ SDR Structures QP ☐ Modified SDR Structures QP
☐ Approved Alternate

DESIGN CERTIFICATION (Designer of Record)

By stamping and signing this section, I certify that the design plans specified above comply with the requirements of the LADOTD Structures Design & Detailing Criteria.

Print Name: _____ Date: _____

Design Firm: _____

PE Stamp (signed & dated)

DESIGN QC CERTIFICATION

By stamping and signing this section, I certify that the design documents specified have been checked in accordance with the requirements of the Structures Design Quality Plan specified.

Print Name: _____ Date: _____

Design Firm: _____

PE Stamp (signed & dated)

DESIGN QA CERTIFICATION

By stamping and signing this section, I certify that I have verified that the QC for the design documents specified above has been completed in accordance with the requirements of the Structures Design Quality Plan specified.

Print Name: _____ Date: _____

Design Firm: _____

PE Stamp (signed & dated)

CADD STANDARDS CERTIFICATION

By signing this section, I certify that the structure plans specified above comply with the UDOT Structures CADD Standards.

Signature: _____ Design Firm: _____ Date: _____

Notes: (1) Design Certification is required for permanent structures of all types, including Bridge, Box Culvert, Multi-Plate Arch, Retaining Walls, Overhead Sign Structures, and Traffic, Signal, and Camera poles. (2) Attach signed approval forms for any approved modifications to the Structures Design Quality Plan.
(3) Maintain all QC/QA records for a minimum of 3 years after project completion.

STRUCTURES FINAL DESIGN APPROVAL

6/30/10 FORM SA-3

SDR STRUCTURES
FINAL DESIGN APPROVAL

Project Number: _____ Project Name: _____

PIN: _____ Structure Number: _____ Structure Type: _____

Structure Description: _____

ATTACHED ITEMS

The following items are completed and attached:

- ☐ Completed Structure Plans (Signed & Sealed)
- ☐ Specifications (Special Provisions)
- ☐ Engineer's Estimate
- ☐ Final QA Review Checklist
- ☐ All Design Certification Forms (for Final Design)
- ☐ Design Criteria Summary
- ☐ Approved Design Exceptions
- ☐ Computer Design Software List
- ☐ Final Seismic Strategy Report
- ☐ Geotechnical Report
- ☐ Bridge Load Rating Report
- ☐ Structure Design Calculations*
- ☐ Independent Review Checklist, Letter Report and Calculations (when required)
- ☐ Previous Review Comments With Responses & Final Dispositions
- ☐ Any other final design documents and reports, as appropriate

LEAD STRUCTURAL DESIGNER

I certify that the attached Final Design Plans, Specifications and Estimate for the specified structure are complete, meet all applicable design requirements, and are ready for approval.

Signature: _____ Date _____

Design Firm: _____

APPROVAL

The submitted Final Design Plans, Specifications and Estimate for the specified structure are Approved for Construction.

Signature: _____ Date: _____

Note: Approval of Final Design plans is required prior to advertising the project. Approval requires the submittal of all items listed in the Attached Items box. *Design calculations are required for all structure designs.

CERTIFICATE OF COMPLIANCE

CERTIFICATE OF COMPLIANCE

TO: LADOTD Project Manager
Project Manager
LADOTD

DATE: Month XX, Year XXXX

RE: QUALITY ASSURANCE REVIEW

PROJECT IDENTIFIER #:	**XXXXXXXXXXXXXXXX**
PROJECT NAME:	**XXXXXXXXXXXXXXXX**
COUNTY:	**XXXXXXXXXXXXXXXX**
SUBMITTED DOCUMENT(S):	**XXXXXXXXXXXXXXXX**
CONSULTANT:	**SDR Engineering Consultants, Inc.**
SUBCONSULTANTS :	**XXXXXXXXXXXXXXXX**

This is to certify that I have monitored the Quality Control (QC) process and I have completed and documented the required Quality Assurance (QA) review during production of the above noted submittal. Draft writings, associated production and review check prints, and quality control documents for the referenced elements (including those of the sub-consultants) have been evaluated, initialed, and are available in our project files for review upon request.

This certificate is issued to document our reviews and to confirm that "due or ordinary care" processes were followed in producing the submittal documents. In our professional opinions, these documents meet the standards and requirements and are ready for your review. These requirements include those stipulated in the project Scope of Services performance criteria and the LADOTD policies, standards and preferences.

SIGNED: _____ Date: _____
Name, P.E.
SDR Project Manager

SIGNED: _____ Date: _____
Name, P.E.
Quality Assurance Manager

APPENDIX I

QC/QA FORMS FROM LADOTD BDEM

(To be included in submittals)

(LADOTD BDEM Chapter 3 - Appendix A)
Design Criteria Checklist

Design criteria for each project shall include, but not limited to, the following sections:

- **Cover sheet**

The following information must be included on the cover sheet:

— LADOTD project number
— Project name
— Revision date
— The Supervisor or Team Leader's signature and date

- **Governing Design and Construction Specifications and Other References**

— A list of governing design and construction specifications and other references used for the project shall be included in this section. The edition number, interim revisions, and/or publication date must be specified for each reference.

- **Design Assumptions and Design Exceptions**

— All design assumptions and design exceptions received must be included in this section along with supporting documents.

- **General Information**

The general information as listed below should be included in this section:

— Bridge information (no. of bridges, bridge clear width, length, no. of lanes, lane width, shoulder width, etc.)
— Road information (roadway classifications, design speed, traffic data, etc.)
— Vertical datum
— Vertical and horizontal clearances
— Other relevant information

- **Hydraulic Design Criteria**

— All hydraulic design criteria (design year, design water elevations, scour depth and scour elevation, etc.) shall be included in this section and the information shall be provided by the Hydraulic Engineer.

- **Design Factors**

— The ductility factor η_D, redundancy factor η_R, and operational importance factor η_I shall be listed in this section.

- **Design Loads**

— All design loads (dead load, live load, wind load, thermal loads, vessel collision loads, seismic load, wave loads, etc.) used for the project shall be included in this section.

- **Limit States**

— All applicable limit states for this project shall be listed in this section.

- **Bridge Barrier Railing**

— The design criteria, types, and test levels for bridge barrier railings shall be listed in this section. Standard Plans should be listed if they are utilized.

- **Guardrail**

— The design criteria, types, and test levels for guardrails shall be listed in this section. Standard Plans should be listed if they are utilized.

- **Approach Slab**

— Design criteria for approach slab shall be included in this section. Standard Plans should be listed if they are utilized.

- **Deck and Deck Drainage**

— All design criteria for deck and deck drainage design shall be included in this section. Standard Plans should be listed if they are utilized.

- **Bearing**

— All bearing types and design criteria for each bearing type shall be included in this section. Standard Plans should be listed if they are utilized.

- **Joint**

— All joint types and design criteria for each type shall be included in this section. Standard Plans should be listed if they are utilized.

- **Superstructure**

— All superstructure types and design criteria for each type shall be included in this section. Standard Plans should be listed if they are utilized.

- **Substructure**

— All substructure types and design criteria for each type shall be included in this section. Standard Plans should be listed if they are utilized.

- **Piles and Drilled Shafts**

— All pile types, sizes, and structural design criteria shall be included in this section. Standard Plans should be listed if they are utilized.

- **Geotechnical Design**

— All geotechnical design criteria shall be included in this section and the information shall be provided by the Geotechnical Engineer. Standard Plans should be listed if they are utilized.

- **Mechanical Design**

— All mechanical design criteria shall be included in this section if applicable. Standard Plans should be listed if they are utilized.

- **Electrical/Lighting Design**

— All electrical design criteria shall be included in this section if applicable. Standard Plans should be listed if they are utilized.

- **As-Designed Bridge Rating Criteria**

— All as-designed bridge rating criteria shall be included in this section.

- **Software**

— All software used for design and check shall be included in this section.

(LADOTD BDEM Chapter 3 - Appendix B)
Final Calculation Book Checklist

The final calculation book for each project shall include, but not limited to, the following sections:

__ Cover Sheet

The following information must be included on the cover sheet:

- LADOTD project number
- Project name
- The title of "Final Calculation Book"
- The EOR's seal with signature and date

— **Final Calculation Book Check List**
— **QC/QA Certifications**
— **Peer Review Resolution Agreement (if peer review is performed)**
— **Design Criteria**
— **Final Hydraulic Analysis Report from Hydraulic Engineer**
— **Final Geotechnical Analysis Report from Geotechnical Engineer**
— **Superstructure Design Calculations**
— **Substructure Design Calculations**
— **Quantity Calculations**
— **Special Provisions/NS-Items**
— **Construction Cost Estimate**
— **As-Designed Rating Report**
— **List of All Final Electronic Design Files and File Locations (ProjectWise directory name)**

Consultants shall submit the final calculation book to LADOTD bridge task managers; the submittal shall be on a CD or Flash Drive or placed to a designated ProjectWise folder including the following information:

— **A PDF File of the Calculation Book (Including the As-Designed Rating Report)**
— **All Electronic Design Files**
— **A PDF File of the As-Designed Rating Report Only**

The final calculation book for in-house projects shall include the same files listed above for consultant projects. The final calculation book and other final design documents for all projects including in-house and consultant projects shall be uploaded to the archiving location designated in the record retention policy within 30 calendar days after the stamped final plans are delivered.

(LADOTD BDEM Chapter 3 - Appendix D)
QC/QA Certification

Project No.:

Project Name:

We, the undersigned designers, detailers, checkers and reviewers for this project, have reviewed and accepted the calculations, plans, quantities, special provisions, and cost estimate prepared for the project. We certify that the work for which we are responsible has been completed in accordance with the LADOTD Bridge Design Section policy on QC/QA.

Team Members	Name	PE Registration No.	Responsible Plan Sheets	Responsible Special Provisions	Construction Cost Estimate	Signature
Designers						
Design Checkers						
Detailers						
Detail Checkers						
Reviewers						
Peer Reviewer						
Geotechnical Engineer						
Hydraulic Engineer						
EOR						

(LADOTD BDEM Chapter 3 Appendix I)
Consultant Submittal QC/QA Certification

Project No.:
Project Name:

I, the undersigned Supervisor or Team Leader for this project, certify that the information included in this submittal has been prepared in accordance with the QC/QA plan documents and LADOTD Bridge Design Section policy on QC/QA and the information presented is accurate and meets the requirements of this submittal. All CAD drawings meet LADOTD CAD standards.

_____
Submittal Description

_____	_____	_____
Supervisor or Team Leader Name	Signature	Date