DOTD FORM: 24-102

(Revised March 1, 2022)

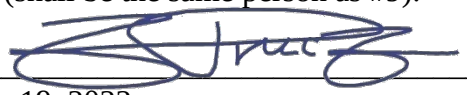
PROPOSAL TO PROVIDE CONSULTANT SERVICES

Prime consultant shall complete the DOTD Form 24-102 without altering the Form's text; however, the instruction and/or guidance for Sections 12 through 23 can be removed but do not remove Section title and number.

ANY CONSULTANT FAILING TO SUBMIT ANY OF THE INFORMATION REQUIRED ON THE DOTD FORM 24-102, OR PROVIDING INACCURATE INFORMATION ON THE DOTD FORM 24-102, MAY BE CONSIDERED NON-RESPONSIVE.

Prime consultant should enter the firm name in the footer at the bottom of this page. (It will carry over to subsequent pages.)

1. Contract title as shown in the advertisement	**Contract for LA 447 Corridor**
2. Contract number(s) as shown in the advertisement	**Contract Nos. 4400024641**
3. State Project Number(s), if shown in the advertisement	**H.005734**
4. Prime consultant name (as registered with the Louisiana Secretary of State where such registration is required by law)	**Modjeski and Masters, Inc.**
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	EF.0000570
6. Prime consultant mailing address	1100 Poydras St., Suite 900, New Orleans, LA 70163
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	1100 Poydras St., Suite 900, New Orleans, LA 70163
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Zolan Prucz, PhD, PE, Senior Vice President (504) 524-4344, zprucz@modjeski.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Zolan Prucz, PhD, PE, Senior Vice President (504) 524-4344, zprucz@modjeski.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: July 19, 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.	<u>Firm(s):</u> — <u>Firm(s)' %:</u> Urban Systems, Inc. (USI) — 4.40% Civil Design & Construction, Inc. (CD&C) — 2.00%

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.

The only past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other. The crosswalk from the old categories to the new categories can be found at the link below:
http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/General%20Information/CPPR%20Crosswalk%20to%20New%20Evaluation%20Disciplines.pdf. (same link as in the advertisement)

Evaluation Discipline(s)	% of Overall Contract	M&M (Prime)	USI (DBE)	CD&C (DBE)
Road	88%	95%	5%	
Bridge	10%	100%		
Survey	2%			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%	93.60%	4.40%	2.00%

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)
MODJESKI and MASTERS	Principal	1	7
	Supervisor - Eng	5	15
	Supervisor - Other	0	11
	Engineer	2	6
	Engineer - Other	0	21
	Engineer Intern	2	19
	Professional	0	1
	Senior Technician	1	3
	Technician	1	2
	CADD Technician	2	9
URBAN SYSTEMS inc.	Supervisor - Engr	1	2
	Engineer	1	2
	Engineer - Other	1	1
	Engineer Intern	1	1
	CADD Technician	1	1
	Technician	2	4

	Supervisor-Engineer	1	1
	Engineer Intern	1	1
	Surveyor	2	2
	Party Chief	3	5
	Instrument Man	2	3
	Rodman	2	2
	CADD-Operator	1	1
	Senior Technician	3	5
	Supervisor - Other	1	1

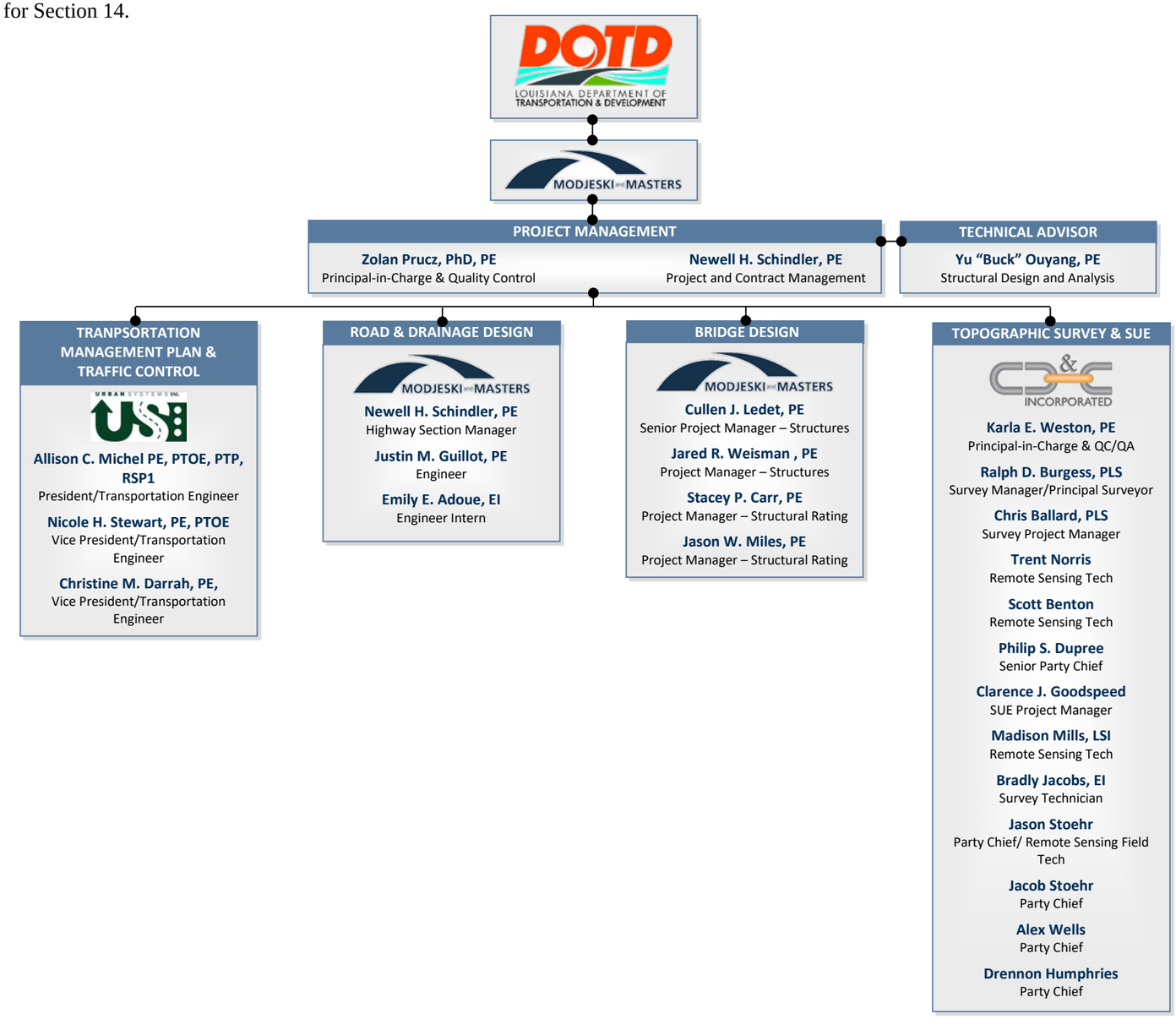
(Add rows as needed)

14. Organizational Chart:

Provide an organizational chart showing ALL **relevant** prime consultant and sub-consultant (if applicable) personnel assigned to the contract, area of project responsibility for each, and reporting lines for the purposes of this contract. An individual's role does not necessarily have to match their DOTD job classification identified in Section 13.

If applicable, identify all personnel performing traffic engineering analysis and/or QC of traffic engineering analysis by placing an asterisk next to their name. Include the certificates required by the Traffic Engineering Process and Report Training Requirements article of the Advertisement in Section 20.

It is acceptable to use an 11x17 format for Section 14.



Prime consultant name: **Modjeski and Masters, Inc.**

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. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license / certification & number	State of license	License / certification expiration date
1	Zolan Prucz	Modjeski and Masters, Inc.	Civil PE #24019	LA	3/31/2024
2	Zolan Prucz	Modjeski and Masters, Inc.	Civil PE #24019	LA	3/31/2024
	Newell H. Schindler	Modjeski and Masters, Inc.	Civil PE #24130	LA	3/31/2024
3	Newell H. Schindler	Modjeski and Masters, Inc.	Civil PE #24130	LA	3/31/2024
4	Yu “Buck” Ouyang	Modjeski and Masters, Inc.	Civil PE #26117	LA	9/30/2023
	Cullen J. Ledet	Modjeski and Masters, Inc.	Civil PE #33222	LA	9/30/2023
	Stacey P. Carr	Modjeski and Masters, Inc.	Civil PE #26796	LA	9/30/2023
	Jason W. Miles	Modjeski and Masters, Inc.	Civil PE #37773	LA	9/30/2023

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Zolan Prucz, PhD, PE**		Years of relevant experience with this employer		39
Title	Senior Vice President & Principal		Years of relevant experience with other employer(s)		7
Degree(s) / Years / Specialization			PhD 1984 Civil, Structural MS 1981 Civil, Structural BS 1976 Civil		
Active registration number / state / expiration date			24019 LA 3/31/2024		
Year registered	1988	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Dr. Prucz is the principal-in-charge of the Design Section for the New Orleans office. As such he oversees the design and preparation of plans and specifications for all projects, studies and ratings of bridges. Dr. Prucz has worked on bridge related projects since joining Modjeski and Masters, Inc. in 1983. His assignments ranged from design, evaluation and retrofit of fixed and movable bridges to evaluations of effects of vessel impact, seismic loads on bridges, the effects of fatigue and corrosion on steel bridges and bridge hydraulic and scour analysis and evaluation. Dr. Prucz was the principal investigator for developing the "Criteria for Design of Bridge Piers Against Ship Collision in Louisiana Waterways", which was used for bridge design in Louisiana and other states from 1985 to 1991, and he co-authored NCHRP 333, “Guidelines for Evaluating Corrosion Effects in Existing Steel Bridges”. One of his specialties is the design of bridge protection systems and investigation of ship collision accidents with bridges. Dr. Prucz will serve as Principal-in-Charge and fulfills MPR 1 and 2 for this contract.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., “designed drainage”, “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).
11/20 - Ongoing	**H.014564 Bayou Barataria Swing Bridge Allision Repairs. Lafitte, LA | LADOTD** In 2020, Modjeski and Masters provided emergency services in response to a vessel collision. A two-barge tow reportedly struck the 204’ steel swing span of the Bayou Barataria Bridge while traveling through the channel. Subsequently, the swing span was not operable and remained in the open position eliminating the only access across for the population of Ile De Barataria. Modjeski & Masters Inc. performed an initial damage inspection in addition to mechanical and electrical inspections of the structure. Previously in a separate task order, M&M developed and prepared a Navigation Impact Study in accordance with USCG requirements for the proposed crossing location over Bayou Barataria that would replace the existing structure. This study obtained and analyzed information related to present and future navigation uses and needs for the purposes of developing and evaluating alternatives for the new bridge. M&M is also providing a temporary fender repair design. Dr. Prucz served as the Principal-in-Charge for this project.
6/10 – 12/15	**Gilmerton Bridge Replacement, Chesapeake, Virginia | VDOT** M&M engineered a plan that involved building a new lift bridge above and below the existing structure, with the original bascule bridge remaining functional until the float-in of the new span. M&M completed preliminary and final design of the new 335-foot

	long and 85-foot wide lift span – one of the widest lift spans ever. Eight 12-foot diameter drilled shafts were designed to reach 120 feet below ground and are some of the largest ever constructed using the oscillating method. Dr. Prucz provided technical assistance and guidance in this project.
10/09 – 12/11	**EJ&E Swing Bridge 522 Replacement. Joliet, IL | Canadian National Railway:** The Illinois River Bridge, No. 552, was originally built as four 154-foot fixed through truss spans and was converted to a vertical lift bridge 80 years ago. Under the provisions of the "Truman-Hobbs Act" of 1940, the United States Coast Guard is funding alteration of the Illinois River Bridge, No. 552, to provide a 300-foot marine opening. M&M designed the replacement vertical lift span of 348 feet with a maximum lift vertical clearance of 56 feet. M&M also collected relevant data, evaluated alternatives, established design criteria, cost estimates, prepared project report, and provided the final vertical lift bridge design. M&M provided construction management services. Dr. Prucz provided QA/QC support and technical guidance for this project.
09/07 – 08/09	**Houma Vertical Lift Bridge to Freeport, TX | Union Pacific Railroad:** The existing railroad swing bridge at Freeport, TX is a 288 foot long through truss span and the existing railroad vertical lift located at Houma, LA is a 258 foot long through truss span with two 29 foot tower spans. The swing span is to be removed and replaced with the relocated and rehabilitated vertical lift span. The lift span, towers, counterweights and machinery are to be relocated. New piers and approach structures will be provided at Freeport and a complete electrical system replacement will be provided. M&M provided preliminary design services, final structural, electrical and mechanical design services and prepared permit applications for this project. Dr. Prucz administered QA/QC and technical guidance of this project.
01/01 – 04/04	**Florida Ave Bridge Replacement. New Orleans, LA | Board Of Comm., Port Of New Orleans:** The existing Strauss Trunnion Bascule Bridge crossing the Inner Harbor-Navigation Canal at Florida Avenue provides a 91-foot opening for marine traffic. Funding was provided to replace the bridge with a new vertical lift bridge providing a 300-foot marine opening. The replacement bridge is at a low-level grade carrying one railroad track and two-roadway lanes plus two sidewalks. The lift span is 340 feet long and has a maximum lift clearance of 156 feet. Dr. Prucz applied his expertise in the QA/QC support area and offered technical guidance for this project.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Newell H. Schindler, Jr., PE**		Years of relevant experience with this employer		2
Title	Supervisor Engineer – Highway Section Manager		Years of relevant experience with other employer(s)		38
Degree(s) / Years / Specialization			BS 1982 Civil		
Active registration number / state / expiration date			PE24130 LA 03/31/2024 Work Zone Training Compliant		
Year registered	1988	Discipline	Civil		

Contract role(s) / brief description of responsibilities:
Mr. Schindler has 40 years of experience in the management and design of infrastructure projects, 13 years of experience in the Road Design Section of LA DOTD, and 27 years of experience as a Consulting Engineer which has included Project Management and design of a multitude of infrastructure improvement projects. He has extensive knowledge of current LA DOTD and the American Association of State Highway & Transportation Officials' (AASHTO) policies and design procedures. In addition, Mr. Schindler supervised the design of a multitude of road and bridge improvement projects, including complex urban interstate, urban arterial, rural arterial, and minor bridge replacement projects. Projects included coordination with Traffic Engineers and the evaluation of traffic analyses to develop capacity and safety roadway improvements, including intersections and interchanges. He completed the course "National Environmental Policy Act (NEPA) and Transportation Decision Making," sponsored by the National Highway Institute. Mr. Schindler will serve as Project Manager and will fulfill MPR 2 and 3 for this contract.

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).
12/20-03/22	**Cline Ave Bridge. East Chicago, Indiana | United Bridge Partners** Mr. Schindler served as lead engineer for several post construction design tasks. Performed an independent technical review (ITR) of final roadway signing and striping plans prepared by others to determine conformance with AASHTO, IDOT, and IMUTCD design criteria and guidelines. 23 non-conformance Items were identified and documented in M&M's NCR Report. Also provided the Client with 17 additional recommendations to improve the operation and safety of the Cline Ave. Bridge facility. Subsequently, prepared final construction plans to address the NCR items and recommendations. Final plans included signing and striping layouts along with sign structure details. Also prepared final plans for the installation of Guide (Attraction) signs along Indiana SR 912 and I-90 in Indiana and Illinois. Plans were prepared in accordance with IMUTCD, MUTCD and Illinois and Indiana sign guidelines. Also Served as lead engineer developing conceptual geometric layouts for two (2) proposed new partial and fully directional interchanges. at Riley Road and Cline Ave. Bridge (SR-912) (CAB). Five (5) conceptual interchange layouts were developed for the proposed Riley Rd./CAB Interchange and Three (3) conceptual interchange layouts were developed for the proposed Riley Rd./CAB Interchange and presented in a feasibility report. Conceptual roundabout layouts were developed for the ramp intersections. Developed design criteria for the proposed ramps in accordance with AASHTO and IDOT Interchange guidelines.
02/17-05/20	**LA 37 (Sullivan Rd. – Liberty Rd.) Stage 0 Feasibility Study (S.P. No. H.00297.1). Baton Rouge, LA | LADOTD** Mr. Schindler served as the Project Manager and Principal-in-Charge for a Stage 0 Feasibility Study to evaluate the constructability and operational feasibility of various safety and operational roadway improvement alternatives along an 8.5 mile segment of LA 37. Included the evaluation of improvements for the major intersections. Phase 1 services consisted of the, initial project research and data collection, initial site investigations, developing the Preliminary Purpose and Need and performing a traffic study for the Existing and No-Build conditions and developing the proposed improvement to carry forward to the Phase 2 Services. Phase 2 services included

	developing the design criteria for the evaluation of proposed safety and capacity improvement alternatives, completing segments of the Stage 0 Feasibility Study and Environmental checklist.
05/12-08/16	**Baker Canal Bridge Replacement (S.P. No. H000698). Baker, LA | LADOTD** Mr. Schindler was Project Principal, Engineer of Record and Quality Control Officer. Project consisted of the design for the replacement of the northbound and southbound bridges over Baker Canal, along with reconstruction of the approach roadway and geometric improvements for the US 61//LA 964 interchange. Mr. Schindler performed technical quality control reviews for all aspects of the highway design in accordance with LA DOTD and AASHTO policies and criteria. He Performed technical quality control reviews of the horizontal and vertical design and quality control reviews of the H&H analyses in accordance with LA DOTD Hydraulics manual for drainage improvements (open ditch & sub-surface drainage). Mr. Schindler performed technical quality control reviews of the preliminary and final construction plans, which included typical sections, plan/profile sheets, traffic control plans, sequence of construction, and cross section sheets. Included guard rail in accordance with AASHTO's roadside design guide. He calculated construction quantities. He reviewed RFI and provided recommendations. He also reviewed and approved plan changes and provided construction support during the construction phase.
04/16-08/19	**Rossignol Road Bridge Replacement. Calcasieu Parish, LA | Calcasieu Parish Police Jury (CPPJ)** Principal-in-Charge and QA/QC officer overseeing the engineering design and construction for the replacement of an 80' timber bridge on Rossignol Road that crosses over Drainage Canal 8. Performed a Feasibility Study evaluating three (3) alternative bridge structures (Slab span, Geosynthetic Reinforced Soil Integrated Bridge System (GRS-IBS) with AASHTO Type II girders, and GRS-IBS with steel girders). HEC-RAS was utilized for hydraulic analysis of alternatives. Provided engineering services for the design and preparation of plans and specifications for a precast concrete slab span bridge replacement (3-spans), along with replacement of approach roadways. Construction was successfully completed in December 2019. Provided construction administration during construction.
03/10-09/12	**Central City Group A (FRC) (DPW P. No. 2017-RR021). New Orleans, LA | City of New Orleans - DPW** Mr. Schindler was Project Principal, Engineer of Record and Quality Control Officer. He performed technical engineering design QC reviews for full reconstruction (FRC) of several streets (13 blocks) in the urbanized Central City Neighborhood. Project was a complex urban design due to the number of underground utilities. Mr. Schindler performed technical quality control reviews of the hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with Louisiana (LA) DOTD Hydraulics Manual, along with technical quality control reviews of the design for the replacement of the existing water and sewer systems. He reviewed the designed profile grades to confirm conformance with AASHTO design criteria and LA DOTD sub-surface hydraulic criteria. He. performed technical analysis and quality control reviews of the proposed geometric details and joint layouts. Mr. Schindler reviewed calculations for quantities for all construction items. He performed quality control reviews of the final construction plans and specifications, including typical sections, plan/profile sheets, geometric detail, joint layouts and cross sections.
01/99-09/01	**Clayton - Greenville; LA 15 (S.P. Nos. 26-03-0024 & 26-04-0025), Catahoula & Concordia Parishes, LA | LADOTD** Mr. Schindler served as Project Manager. He designed an upgrade of seven (7) miles of existing two-lane rural arterial highway to a four-lane divided, which included both a 4-lane rural with depressed median and an urban couplet with sub-surface drainage. He designed all geometric details at intersections, median cross-overs, including design of the geometric details for the realignment of the major urban intersections at LA 566 and US 165. He performed a line and grade study for the required realignment of LA 566 in order to minimize required right-of-way impacts. Mr. Schindler performed hydrologic and hydraulic calculations for the drainage design in accordance with LA DOTD's Hydraulics Manual. He prepared complete sets of construction plans, which included typical sections, plan/profiles, signing and striping layouts, design drainage maps and cross sections. He calculated all construction quantities and prepared the engineers opinion of probable construction cost (OPCC).

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc**.				
Name	**Yu Ouyang, PE**		Years of relevant experience with this employer	30
Title	Vice President		Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization MS / 1990 / Civil Engineering MS / 1985 / Structural Engineering BS / 1982 / Civil Engineering				
Active registration number / state / expiration date			26117 LA 9/31/2023	
Year registered	1994	Discipline	Civil	

Contract role(s) / brief description of responsibilities

Mr. Ouyang has been with Modjeski and Masters, Inc. since 1991, and has vast bridge engineering experience, ranging from conventional designs to special projects of high complexity, and from feasibility studies to construction services. He specializes in the design of fixed and movable highway and railroad bridges, and the rating and rehabilitation of existing bridges. His expertise also extends to analysis of complex bridge structures, vessel collision risk assessment and protection systems, seismic design, analysis and retrofit, and fatigue evaluations. He brings extensive experience in managing engineering and design efforts of varying sizes and difficulties, and in leading, coordinating and managing technical teams and subconsultants. His hands-on project management has led to successful and on-time completion of large and highly technical projects. Mr. Ouyang fulfills MPR 4 for this contract

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).
3/17 - ongoing	**LA 1 – Port Allen Bridge Replacement, Port Allen, LA | LADOTD** The ongoing project consists of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12' travel lanes and 2 - 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 - 12' travel lanes and 2 - 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 - 12' travel lane with 2 - 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. Mr. Ouyang serves as Project Manager for this project.
09/17 – 09/21	**LA 16 over Tangipahoa River, Tangipahoa Parish, LA | LADOTD** M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 16, between LA 51 and LA 1054, in Amite City, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that traffic shall be maintained during construction with an on-site diversion roadway and bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QC/QA was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going. Mr. Ouyang served as the Project Manager for this project.
09/17 – 03/21	**US 61 at Thompson Creek, West Feliciana Parish, LA | LADOTD**

	M&M provided all necessary preliminary and final plans for the rehabilitation of the northbound bridge and replacement of the southbound bridge on US 61 over Thompson Creek, between LA 10 and LA 964, near St. Francisville, LA. It was anticipated that traffic would be maintained during the construction of the new southbound bridge with temporary two-way traffic on the rehabilitated northbound bridge. The project also included the design and detailing of adding a helper bent to the northbound bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QC/QA was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going. Mr. Ouyang served as the Project Manager for this project.
09/17 – 02/20	**LA 1064 at Little Natalbany River, Livingston Parish, LA | LADOTD** M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 1064, near LA 43 and Hoover Road, in Albany, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that the roadway would be closed during construction and a detour route was detailed. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, DOTD Hydraulics Manual, and DOTD Location and Survey Manual. QC/QA was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was also provided. Mr. Ouyang served as the Project Manager for this project.
6/12 –12/16	**S.P. H.009933: MacArthur Drive Interchange. Harvey, Louisiana | LADOTD** The MacArthur Interchange Project consisted of the addition of two new ramps to the Westbank Expressway near MacArthur Drive, as well as the demolition of two existing ramps. M&M was responsible for the substructure design for Ramps 7 and 8 in a complex urban setting which included steel pile footings and reinforced concrete columns. M&M also provided construction related engineering support services. Mr. Ouyang was Principal-In-Charge for this project.
02/01-08/14	**S.P. 700-18-0014 – Huey P. Long Bridge Widening, Jefferson Parish, LA** The widening project for the H.P. Long Bridge included new vehicular approaches on both sides of the Mississippi River consisting of three lanes plus shoulders and ramps. The project entailed replacing existing approaches while maintaining traffic through the corridor. Included elements: existing foundations, pile and drill-shaft supported piers, prestressed concrete girder spans and multiple-span steel continuous units. Mr. Ouyang provided the primary analysis of the combined main span trusses under numerous loading conditions and stages of construction.
08/09-12/11	**S.P. 700-08-0109: LA 160 Bridges – Caney Creek and Bodcau Bayou | LADOTD** M&M developed final plans, permit drawings, construction cost estimate and special provisions for a new integral bridge design and analysis developed for the LADOTD. The two subject bridge sites that cross Caney Creek and Bodcau Bayou in Bossier Parish, LA were the first two fully integral bridges in the state. Strain gauge and other testing was conducted to follow the behavior of the bridge design over a period of time. Mr. Ouyang served as the project manager and supervised a team of engineers that performed the LUSAS analysis, bridge design and detailing, and construction services.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Cullen J. Ledet, PE**		Years of relevant experience with this employer		20
Title	Senior Project Manager		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			BS 2000 Civil Engineering		
Active registration number / state / expiration date			33222 LA 9/30/2023 Work Zone Training Compliant		
Year registered	2007	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Mr. Ledet has been employed as a Design Engineer in the New Orleans office of Modjeski and Masters, Inc. since 2002, after having interned two summers with the firm. During this period he has been engaged in the design of both fixed and movable highway and railroad bridges. Mr. Ledet has prepared designs, plans, and specifications for a number of projects both for improvements as well as complex projects. Mr. Ledet fulfills MPR 4 for this contract.

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).
3/17 - ongoing	**LA 1 – Port Allen Bridge Replacement, Port Allen, LA | LADOTD** The ongoing project consists of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12' travel lanes and 2 - 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 - 12' travel lanes and 2 - 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 - 12' travel lane with 2 - 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. Mr. Ledet serves as Deputy Project Manager for this project and is developing the General Plan and Elevation drawings while identifying any potential conflicts with utilities and existing structures.
12/15-02/17	**H.010620 US 90 from Albertson Pkwy to Ambassador Caffrey Pkwy – BNSF Frontage Road Bridges, Lafayette Parish, LA** M&M provided an independent QC review of the frontage road bridges over the BNSF Railroad. The bridges included construction of various continuous precast prestressed concrete girder spans supported on bent columns and pile footing foundations. Mr. Ledet performed the review of the structural plans and details at every submittal milestone.
6/12 –12/16	**S.P. H.009933: MacArthur Drive Interchange. Harvey, Louisiana | LADOTD** The MacArthur Interchange Project consisted of the addition of two new ramps to the Westbank Expressway near MacArthur Drive, as well as the demolition of two existing ramps. M&M was responsible for the substructure design

	for Ramps 7 and 8 in a complex urban setting which included steel pile footings and reinforced concrete columns. M&M also provided construction related engineering support services. Mr. Ledet provided peer review services of the original design. Mr. Ledet detailed the flared reinforced concrete columns and provided construction related engineering services for this project.
01/14-06/15	**US 90 (Future I-49) from Albertsons Pkwy to Ambassador Caffrey Pkwy, Lafayette Parish, LA** As a member of the Design-Build team with C.H. Fenstermaker & Associates, M&M provided an independent QC review of the structures over the BNSF Railroad and Albertsons Parkway. Both bridges included construction of various continuous precast prestressed concrete girder Spans supported on bent columns and pile footing foundations. The structures over the BNSF Railroad included a phased sequence of construction. Mr. Ledet performed the review of the structural plans and details at every submittal milestone.
12/01 – 12/02 12/08 – 10/09	**Illinois River Bridge. Elgin, Joliet & Eastern Railway Company (Devine, Illinois):** The Illinois River Bridge was originally built as four 154-foot fixed through truss spans. About 1932, Span 2 was converted to a vertical lift span and the adjacent spans fitted with lifting towers, counterweights, and an electro-mechanical operating system, providing a 120-foot clear opening. Under the provisions of the "Truman-Hobbs Act" of 1940, the USCG is funding alteration of the bridge to provide a 300-foot marine opening. The replacement vertical lift span will be 348 feet long and have a maximum lift vertical clearance of 56 feet. M&M collected relevant data, evaluated alternatives, established design criteria, cost estimates, prepared project report, and provided the final design. Mr. Ledet designed and detailed the framing for the operator house as well as the pier grillage structures.
09/08-02/11	**S. P. 701-65-1098 Replacement of LA3249 (Well Road) over I-20, Monroe, LA** This Project was the replacement of the Well Road Overpass using accelerated construction methods to construct replacement spans within the interchange R/W and over a weekend remove existing spans and install new spans. Mr. Ledet was the point of contact for Modjeski and Masters, Inc. He designed and detailed deck drainage; calculated quantities and generated construction cost estimate; construction services.
06/01-08/14	**S.P. 700-18-0014 Huey P. Long Bridge Widening at New Orleans, LA** This Project widens the existing bridge roadways through the widening of river piers using conventional and post-tension concrete, two new truss lines and 43' roadways to replace existing 18' roadways. The Project construction cost is $1.2B. This Project was a major complex design involving adding truss lines while maintaining existing traffic. Mr. Ledet assisted in the design and detail of the main river pier widening; designed and detailed plans and generated specifications for various components of the superstructure and substructure of the approaches, including steel and prestressed concrete girders; provided construction engineering support services for approaches contract.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Justin Guillot, PE**		Years of relevant experience with this employer		1
Title	Engineer – Highway Section		Years of relevant experience with other employer(s)		4
Degree(s) / Years / Specialization			BS 2017 Civil and Environmental		
Active registration number / state / expiration date			PE45792 LA 03/31/2024 Work Zone Training Compliant		
Year registered	2021	Discipline	Civil		

Contract role(s) / brief description of responsibilities:
Mr. Guillot has over 4 years of experience in the design of infrastructure projects. He has a broad knowledge of current Louisiana Department of Transportation and Development (LA DOTD) and the American Association of State Highway & Transportation Officials' (AASHTO) policies and design procedures. He has also served in project management roles and performed construction administration. In addition, Mr. Guillot has completed coursework by the Federal Highway Administration (FHWA) and National Highway Institute (NHI) in Roadside Safety Design, as well as the American Traffic Safety Services Association (ATSSA). He is certified as a Traffic Control Technician, Traffic Control Supervisor, and Flagger

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).
2/21 – 3/22	**Cline Ave Bridge. East Chicago, Indiana | United Bridge Partners** This project involves various tasks related to the recent construction of a privately-owned 1.7-mile segmental box girder toll bridge. Mr. Guillot served in a general engineering support role in performing an Independent Technical Review of final Signage and Striping Plans produced by another consulting firm for conformance with Indiana Department of Transportation (InDOT) Design Guidelines as well as the Indiana Manual on Uniform Traffic Control Devices (IMUTCD). He was also tasked with proposing recommendations to improve the safety and operation of the bridge and roadway approaches, including revisions to the pavement marking layout and the addition of various warning and regulatory signs as well as roadway delineation. He produced final construction plans which included corrections to the items found not in compliance as well as the proposed recommendations. He calculated construction quantities and compiled an opinion of probable construction cost. He also reviewed construction material submittals from the contractor for conformance with the project specifications. Another task was the creation of conceptual layouts for new interchanges along the bridge. Mr. Guillot's role included determining the appropriate ramp design criteria (design speed, travel lane and shoulder widths, cross slope, maximum grades, curve radii, etc.) and designing multiple horizontal and vertical geometries for a total of 8 ramps at 2 different interchange locations in accordance with InDOT and AASHTO's "A Policy on Geometric Design of Highways and Streets". These ramps required complex layouts due to vertical clearance issues caused by the presence of overhead utilities and at-grade railroad tracks as well as limited right-of-way availability. He also produced conceptual layout drawings to illustrate each alternative.
3/21 – 6/21	**Calcasieu River Bridge (Prien Lake) Rating (S.P. No. H.009859.5). Lake Charles, LA:** Mr. Guillot served in a general engineering support role, which included utilizing AASHTOWare BrR and other bridge rating

	software to perform the calculations necessary to rate the prestressed concrete girder sections of the bridge, concrete pile bent caps, and the pin & hanger connections within the steel girder sections. He also contributed to the compilation of the final Rating Report.
2016 – 2019	**Rossignol Road Bridge Replacement. Calcasieu Parish, LA | Calcasieu Parish Police Jury (CPPJ)** Mr. Guillot provided general Engineering support for the replacement of an 80' timber bridge on Rossignol Road with a precast concrete slab span bridge. He performed geometric design of the bridge alignment and roadway approaches in accordance with AASHTO design criteria. He performed hydrologic and hydraulic analyses of roadway drainage elements and designed the approach guardrails as well as the bridge abutment scour protection, all to LA DOTD standards. He calculated final construction quantities and compiled an OPCC. He also assisted in the development of final construction plans and specifications.
2017 - 2020	**Central City Group A (FRC) (DPW P. No. 2017-RR021). New Orleans, LA | City of New Orleans - DPW** Mr. Guillot served as Design Lead during the preliminary and final design phases then transitioned to Project Manager and Construction Administrator upon the start of the construction phase. He performed geometric design in accordance with AASHTO design criteria and ensured compliance with the Americans with Disabilities Act (ADA) for full reconstruction (FRC) of 9 city blocks in the urbanized Central City Neighborhood. The project was a complex urban design due to the number of underground utilities and limited Right-of-Way. Mr. Guillot performed hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with the LA DOTD Hydraulics Manual, along with design of the replacement of existing water and sanitary sewer systems. He oversaw development of the final construction plans and specifications, including typical sections, special details, plan/profile sheets, geometric details, joint layouts, and cross sections. Mr. Guillot calculated quantities for all construction bid items and compiled an Opinion of Probable Construction Cost (OPCC) which was ultimately within 1.1% of the winning contractor's bid. Upon the start of construction, Mr. Guillot was the primary point of contact for both the client and the contractor. He reviewed contractor material submittals and shop drawings for compliance with the plans and specifications. Lastly, he performed frequent site visits to ensure safe work practices were being followed and verify the contractor's implementation of proper temporary traffic control measures.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Stacey P. Carr, PE**		Years of relevant experience with this employer		30
Title	Project Manager - Structures		Years of relevant experience with other employer(s)		1
Degree(s) / Years / Specialization			MS 2004 Structural BS 1990 Civil		
Active registration number / state / expiration date			26796 LA 9/30/2022		
Year registered	1996	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Ms. Carr has extensive experience in the rating of highway, railroad, and combined highway/railroad structures, including large cantilever spans and movable bridges. Ms. Carr has overseen the gambit for rating bridges from small concrete slab spans to complex steel structures and gusset plates, as featured below. She is well experienced with AASHTOWare Bridge Rate (BrR) and is knowledgeable of both LFR and LRFR rating requirements. Ms. Carr fulfills MPR 4 for this contract.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/19 – 06/21	**H.009859.1: Load Rating of Fourteen Complex Bridges | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 14 complex bridges. The bridge types include swing spans, bascule spans, truss spans and curved steel spans. For the analysis and load rating task, M&M is generating a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, the "Girder System" in AASHTOWare BrR software is being used. For the complex bridges, a three-dimensional structural model is needed. M&M is also developing influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr is the Project Manager who oversees and performs primary QC/QA for the load rating of the bridges.
10/19 – 05/21	**H.012485.1: Load Rating of 354 Off System Bridges | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 354 off system bridges including prestressed concrete bridges. For the analysis and load rating task, M&M is generating a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, the "Girder System" in AASHTOWare BrR software is being used. For the complex bridges, a three-dimensional structural model is needed. M&M is also developing influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr is the Project Manager who oversees and performs primary QC/QA for the load rating of the bridges.

09/19 – 06/21	**H.000303.6: Danziger Bridge Repair and Rating | LADOTD** Modjeski and Masters, Inc. is performing repair and load rating services for the Danziger Bridge, a steel vertical lift structure with a steel girder superstructure supported by reinforced concrete piers, and the flanking approach structures. M&M is developing a LUSAS 3D model to evaluate main bridge and deck response to various conditions as well as for load rating purposes. AASHTOWare Bridge Rating BrR software will be used to perform load rating based on the present condition, capacity and loading of the bridge. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr is the Project Manager who oversees and performs primary QC/QA for the load rating and analysis of this structure.
10/17 - 08/19	**H.009859.5: Nineteen Complex Bridge Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, mainly steel vertical lifts. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr was the Project Manager who oversees and performs primary QC/QA for the load rating of the bridges.
02/16 - 10/17	**H.009859.5: Ten Truss Bridges Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr was Project Manager who oversaw and performed primary QC/QA for the load rating of the bridges.
07/15-12/16	**H.009859.5 (A): Rating and Posting of On-System State Bridges. Louisiana | LADOTD** M&M performed load rating analyses for 110 existing bridge structures using the Load and Resistance Factor Rating Method. Elements to be rated include superstructure and substructure components. Provisions in the 2011 AASHTO Manual for Bridge Evaluation as well as LADOTD Policies and Guidelines for Bridge Rating and Evaluation were followed. Ms. Carr was group leader, oversaw, and performed primary QC/QA for the load rating of the structures, including prestressed concrete bridges.

16. **Staff Experience:**

Firm employed by **Modjeski and Masters, Inc**.					
Name	**Jared Weisman, PE**		Years of relevant experience with this employer		12
Title	Project Manager - Structures		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization BS / 2008 / Civil Engineering MS / 2010 / Civil Engineering					
Active registration number / state / expiration date			43452 LA 9/31/2023		
Year registered	2019	Discipline	Civil		
Contract role(s) / brief description of responsibilities Mr. Weisman has been employed with Modjeski and Masters since August of 2010. He has experience in the design, inspection, rating, and rehabilitation of a number of new and existing highway and railroad bridges. He has worked on a variety of bridge types including deck and through plate girders, prestressed concrete girders, swing, fixed, and bascule trusses, and inclined steel arch bridges.					

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).
03/17 - Ongoing	**LA 1 – Port Allen Bridge Replacement, Port Allen, LA | LADOTD** The ongoing project consists of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12' travel lanes and 2 - 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 - 12' travel lanes and 2 - 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 - 12' travel lane with 2 - 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. Mr. Weisman serves as the Lead Engineer for this project.
09/17 – 05/19	**LA 16 over Tangipahoa River, Tangipahoa Parish, LA | LADOTD** M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 16, between LA 51 and LA 1054, in Amite City, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that traffic shall be maintained during construction with an on-site diversion roadway and bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going. Mr. Weisman serves as the Lead Engineer for this project.
09/17 – 01/20	**US 61 at Thompson Creek, West Feliciana Parish, LA | LADOTD** M&M provided all necessary preliminary and final plans for the rehabilitation of the northbound bridge and replacement of the southbound bridge on US 61 over Thompson Creek, between LA 10 and LA 964, near St. Francisville, LA. It was

	anticipated that traffic would be maintained during the construction of the new southbound bridge with temporary two-way traffic on the rehabilitated northbound bridge. The project also included the design and detailing of adding a helper bent to the northbound bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going. Mr. Weisman serves as the Lead Engineer for this project.
09/17 – 02/20	**LA 1064 at Little Natalbany River, Livingston Parish, LA | LADOTD** M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 1064, near LA 43 and Hoover Road, in Albany, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that the roadway would be closed during construction and a detour route was detailed. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, DOTD Hydraulics Manual, and DOTD Location and Survey Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was also provided. Mr. Weisman serves as the Lead Engineer for this project.
10/14-06/16	**S.P. 700-18-0014 Huey P. Long Bridge Widening at New Orleans, LA** This Project widens the existing bridge roadways through the widening of river piers using conventional and post-tension concrete, two new truss lines and 43' roadways to replace existing 18' roadways. The Project construction cost is $1.2B. This Project was a major complex design involving adding truss lines while maintaining existing traffic. r. Weisman helped produce ratings for the widened structure for a variety of vehicle types, performed gusset plate analysis and helped in the creation of the project report.
03/11-09/14	**I-74 Mississippi River Bridge Arch. Bettendorf, IA | Iowa and Illinois DOTs** The I-74 corridor in the Quad Cities is approximately seven miles long and crosses the Mississippi River between Bettendorf, Iowa and Moline, Illinois. Twin, 800' span basket handle true arch bridges are being constructed to replace the existing crossing. M&M, as part of the Alfred Benesch team, designed the twin arch superstructures. Mr. Weisman assisted in the design of the variable depth plate girder floorbeams and analyzed preliminary erection schemes for the basket handle arch superstructure. He also calculated quantities for cost estimation and checked calculations for the pedestrian railings.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Jason W. Miles, PE**		Years of relevant experience with this employer		13
Title	Associate - Structures		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization		BS 2008 Civil			
Active registration number / state / expiration date		37773 LA 09/30/2023			
Year registered	2013	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Mr. Miles attended the AASHTOWare Bridge Rate (BrR) meeting titled "AASHTOWare Bridge Design and Rating Software User Group Meeting" in August 2014 and 2016. He also completed NHI Course No. 130092, Fundamentals of LRFR and Applications of LRFR for Bridge Superstructures and NHI Course No. 130081, LRFD for Highway Bridge Superstructures. Mr. Miles also has experience with finite element analysis, in particular through the use of Lusas software to check AASHTOWare BrR results. He will serve as a Load Rating and Analysis Engineer. Mr.iles fulfills MPR 4 for this contract.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/19 – 06/21	**H.009859.1: Load Rating of Fourteen Complex Bridges | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 14 complex bridges. The bridge types include swing spans, bascule spans, truss spans and curved steel spans. For the analysis and load rating task, M&M is generating a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, the "Girder System" in AASHTOWare BrR software is being used. For the complex bridges, a three-dimensional structural model is needed. M&M is also developing influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Miles is providing technical guidance, QC/QA, and report review for a team of over 10 rating personnel.
10/18-03/19	**H.012343.6 Sunshine Bridge Collision – Emergency Response. Donaldson ville, LA | LADOTD** The Louisiana Route 70 Sunshine Bridge is a steel cantilever through truss bridge that carries four lanes of traffic over the Mississippi River near Donaldsonville, LA. The three main truss spans are each about 800 feet in length and provide up to 133 feet in vertical clearance above high water. On October 12, 2018, a barge mounted crane was traveling upstream in the western most channel of the river. There was insufficient clearance as the barge passed underneath the bridge, and the back-stay of the crane impacted the downstream bottom chord of the truss. The impact caused significant damage to a bottom chord member, tearing off the bottom plate of the box member and inducing severe out of plane distortion. The member in question was a primary load path compression member, designed to carry 1,700 kips of dead load. LADOTD closed the bridge to traffic directly after the incident and engaged Modjeski and Masters to perform an emergency hands-on inspection using technical rope access

	techniques. With the damage documented, work on repair concepts began. Mr. Miles served as a lead engineer and structural analyst for this emergency project.
10/17- 08/19	**H.009859.5: Nineteen Complex Bridge Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, mainly steel vertical lifts. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Miles participated in the load rating analysis and reporting for this project.
02/16 - 10/17	**H.009859.5: Ten Truss Bridges Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Miles participated in the load rating analysis and reporting for this project.
07/15 - 12/16	**H.009859.5 (A): Rating and Posting of On-System State Bridges. Louisiana | LADOTD** M&M performed load rating analyses for 110 existing bridge structures using the Load and Resistance Factor Rating Method. Elements to be rated include superstructure and substructure components. Provisions in the 2011 AASHTO Manual for Bridge Evaluation as well as LADOTD Policies and Guidelines for Bridge Rating and Evaluation were followed. Mr. Miles participated in the load rating analysis and reporting for this project.
06/2013 - 06/2014	**H.009479: LA 1 West Larose Vertical Lift Bridge over ICWW, Larose, LA** M&M was charged with the development of plans and specifications to rehabilitate and extend the life of this vertical lift bridge for 30-40 years. This includes structural, mechanical, electrical and architectural disciplines. Work included site inspections, scope development, preliminary and final design. Mr. Miles performed AASHTOWare Bridge Rate (BrR) ratings of the bridge.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Emily E. Adoue, EI**		Years of relevant experience with this employer		1
Title	Engineer Intern– Highway Section		Years of relevant experience with other employer(s)		2
Degree(s) / Years / Specialization			MS 2020 Civil and Environmental BS 2017 Biological Engineering		
Active registration number / state / expiration date			EI34558 LA 03/31/2023 Work Zone Training Compliant		
Year registered	2020	Discipline			

Contract role(s) / brief description of responsibilities:
Ms. Adoue is a Civil Engineer Intern with Modjeski and Master's New Orleans office. She has experience in providing engineering and CAD support for the development of roadway and bridge plans and specifications, inspections, and construction oversight. She has a broad knowledge of current Louisiana Department of Transportation and Development (LA DOTD), the American Association of State Highway & Transportation Officials'(AASHTO), and American Railway Engineering and Maintenance-of-Way Association's (AREMA) policies and design procedures. She is certified as a Traffic Control Technician and is proficient in utilizing MicroStation, InRoads, AutoCAD, Inventor, and HYDRWIN.

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).
12/19 – 12/20	**LA 37 (Sullivan Rd. – Liberty Rd.) Stage 0 Feasibility Study (S.P. No. H.00297.1). Baton Rouge, LA | LADOTD** Ms. Adoue provided general Engineering support for a Stage 0 Feasibility Study to evaluate the constructability and operational feasibility of various safety and operational roadway improvement alternatives along an 8.5-mile section of LA 37, broken down into 3 segments. In Phase 1, Ms. Adoue performed initial project research, data collection, and site investigations to document and observe existing conditions. She assisted with the development of the Preliminary Purpose and Need Statement and contributed to the compilation of the Phase 1 report, which indicated significant safety and capacity deficiencies throughout the project area and thus justified moving to Phase 2.
12/19 – 12/20	**Central City Group A (FRC) (DPW P. No. 2017-RR021). New Orleans, LA | City of New Orleans - DPW** Ms. Adoue provided general Engineering support during the final design and construction phases for the full depth street repair project in the Central City Neighborhood of New Orleans. The project was a complex urban design due to the number of underground utilities and limited Right-of-Way. Ms. Adoue assisted with the development of the final construction plans and specifications, including typical sections, special details, plan/profile sheets, geometric details, joint layouts, and cross sections. Ms. Adoue contributed to the calculated quantities for construction bid items and compilation of an Opinion of Probable Construction Cost (OPCC) which was ultimately within 1.1% of the winning contractor's bid. She also prepared final bid tabulations. Upon the start of construction, Ms. Adoue reviewed contractor material submittals and shop drawings for compliance with the plans and specifications.

12/19 – 12/20	**Lower Ninth Ward Northeast Group C (FRC) (DPW P. No. 2019-RR105). New Orleans, LA | City of New Orleans - DPW (2019-2020)** Ms. Adoue provided general Engineering support during the preliminary design phase for full reconstruction of 12 city blocks in the urbanized Lower Ninth Ward Neighborhood. The project was a complex urban design due to the number of underground utilities and limited Right-of-Way. Ms. Adoue performed hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with the LA DOTD Hydraulics Manual, along with design of the replacement of existing water and sanitary sewer systems. She developed preliminary plans and specifications, including typical sections, plan/profile sheets, and geometric details. Ms. Adoue also contributed to the calculated quantities for construction bid items and the preliminary OPCC.
12/19 – 12/20	**Filmore South Group D (FRC) (DPW P. No. 2020-RR045). New Orleans, LA | City of New Orleans - DPW** Ms. Adoue provided general Engineering support during the preliminary design phase. She performed geometric design in accordance with AASHTO design criteria and ensured compliance with the ADA for full reconstruction of 4 streets (approx. 3800 linear feet) in the urbanized Filmore Neighborhood. The project was a complex urban design due to the number of underground utilities and limited Right-of-Way. Ms. Adoue performed hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with the LA DOTD Hydraulics Manual, along with design of the replacement of existing water and sanitary sewer systems. She developed preliminary plans and specifications, including typical sections, plan/profile sheets, and geometric details. Ms. Adoue also contributed to calculated quantities for construction bid items and the preliminary OPCC.
01/21 – 09/21	**Almonaster Avenue Railroad Bridge Over the Industrial Canal. New Orleans, LA | Port of New Orleans** Ms. Adoue provided general Engineering and CAD support for the bridge assessment and complete rehabilitative engineering design for the rehabilitation of the Almonaster Avenue Railroad Bridge. This project involves the partial replacement of the Almonaster Avenue Railroad Bridge, a movable Strauss-heel trunnion bridge. A 2019 assessment of the circa-1920 bridge revealed that improvements to the electrical and mechanical systems, superstructure, and counterweight were required to return this bridge to its full operating capability. Although the existing substructure could remain, modifications were deemed necessary to accommodate the rehabilitated superstructure. The necessary design plans were developed to replace the span drive and span lock machinery, operating strut, guide assembly, live load bearings, counterweight trunnion pin, and bushing. The main trunnion bearings were rehabilitated and repositioned.

16. Staff Experience:

Firm employed by **Urban Systems, Inc.**					
Name	**Alison C. Michel, P.E., PTOE, PTP, RSP1**		Years of experience with this firm/employer		21
Title	President / Transportation Engineer		Years of experience with other firm(s)/employer(s)		3
Degree(s) / Years / Specialization			B.S. / 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		Road Safety Professional		
Contract role(s) / brief description of responsibilities			Professional in Charge		

Ms. Michel has over twenty-four (24) years' experience in Traffic Engineering and Transportation Planning. Ms. Michel has extensive design experience that includes permanent and temporary traffic signals, traffic control devices for work zones, intelligent transportation systems, signage and striping She has also prepared construction documents and provided construction engineering services for roadway modifications at intersections, point repairs and roadway reconstruction. She has a wide array of experience with transportation studies including traffic impact, safety, corridor, feasibility/Stage 0, environmental/Stage 1, multi-modal and transit facilities. She has experience in the timing of coordinated signal systems and progression analyses. She is proficient in microscopic simulation modeling using VISSIM and CORSIM and also in analysis programs such as Highway Capacity Software (HCS), Tru-Traffic and SIDRA.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/10-08/11	**LA 447 and I-12 Interchange Stage 0 Feasibility Study** Ms. Michel was the supervising engineer of the team performing a traffic study for the Stage 0 Feasibility study of the LA 447 / I-12 Interchange. Roundabouts were considered for the two I-12 ramp intersections on LA 447 and at the intersection of Pendarvis Lane/Vera McGowan. For these intersections, data collection and analyses were conducted in accordance with the LADOTD EDSM. The traffic study included data acquisition, trip generation, traffic analyses, forecasting using TransCAD and crash data review. The roundabouts have since been designed and constructed by others
02/08-05/09	**LA 1088/I-12 Interchange** Ms. Michel updated the permanent signage plans for the interchange on I-12 at LA 1088 in St. Tammany Parish, LA to reflect the new alignment. Traffic control device plans were designed based on the sequence of construction drawings and two phases of construction. Specifications for required S-items and a construction cost estimate were provided.
01/14-08/19	**US 90 (I-49 South) Albertson's Parkway to Ambassador Caffery Design-Build Project** Ms. Michel was a member of the key personnel for this design-build project as the Traffic Engineer. The project included converting 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.
06/12-01/14	**Hooper Road Extension Stage 0, Hooper Road Widening Stage 0 and Hooper Road EA** Ms. Michel was the principal in charge of multiple studies for Hooper Road from Sullivan to Greenwell Springs in East Baton Rouge Parish and for a proposed extension over the Amite River to LA 16 in Livingston Parish. The studies included the development and analysis of multiple intersection alternatives at the termini of the extension and along the route. The alternatives analyzed included traditional intersections, roundabouts, SPUIs, partial cloverleaves, and flyovers. Ms. Michel was responsible for coordination with the prime consultant and numerous agencies as well as QA/QC.
07/11-06/12	**River Parish Community College** As the Principal in Charge for this project, Ms. Michel oversaw the preparation of the traffic impact study for the River Parish Community College located in the southwest quadrant of the I-10 at LA 44 (South Burnside Avenue) interchange, Gonzales, Ascension Parish, LA. She performed QA/QC of data collection, capacity analysis for existing conditions, estimation of future volumes, and identification of potential improvements. Ms. Michel prepared the traffic signal design plans for traffic signals on LA 44 at Edenborne Parkway, I-10 eastbound and I-10 westbound ramps. The plans included an interconnect layout between the closely spaced signals. Ms. Michel coordinated with LADOTD on the design of the fiber interconnect and its tie-in to the I-10 fiber backbone. The signals were constructed and are operational.
09/10-12/12	**I-12 Corridor Stage 0 Feasibility Study and Environmental Inventory** Ms. Michel was the project manager for this Stage 0 Feasibility study and Environmental Inventory for improvements on approximately 70 miles of Interstate Highway 12 from the town of Walker in Livingston Parish to the I-12/I-59 Interchange in St. Tammany Parish. The regional transportation modeling in TRANSCAD was used for projecting traffic volumes. The corridor study spanned multiple jurisdictions, therefore the Capitol Region Planning Commission's, Regional Planning Commission's and LADOTD statewide transportation models were all utilized for traffic forecasts with and without proposed improvements. Due to her training in TRANSCAD software, Ms. Michel oversaw the use of all three models. The project also included traditional capacity analysis to analyze existing conditions and projected traffic conditions with various alternatives.
01/06-06/07	**Intersection Improvements Livingston & St. John Parishes** Ms. Michel was project manager on intersection signal design for intersections on US 190, LA 3282 and LA 1030, where signalization was added or modified. A left turn lane was added to the eastbound approach of LA 64 and the westbound approach of LA 1026. A left turn lane was added on the eastbound LA 44 approach and separate right turn lanes on the LA 44 westbound and LA 3223 southbound approach.

16. Staff Experience:

Firm employed by **Urban Systems, Inc.**					
Name	**Nicole H. Stewart, P.E., PTOE**		Years of experience with this firm/employer	17	
Title	Vice President / Transportation Engineer		Years of experience with other firm(s)/employer(s)	1.5	
Degree(s) / Years / Specialization			BS / 2004 / Civil Engineering and 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	2009	Discipline	Professional Traffic Operation Engineer		
Contract role(s) / brief description of responsibilities			Transportation Engineer		

Ms. Stewart has seventeen (17) years of experience in Traffic and Transportation Engineering and is a certified Traffic Control Design Specialist. The plans and specifications included, but were not limited to, the proper placement of temporary Traffic Control Devices (signs, barricades, drums, roadway markings, etc.) to facilitate traffic safely and efficiently through the traffic control zone. Ms. Stewart has experience in Transportation/Traffic engineering including transportation studies, safety studies and the preparation of traffic control devices plans. She also has experience in signal design and timing of coordinated systems, traffic impact analysis, microscopic modeling using CORSIM software, geometric design, pavement design, and drainage. She has experience using Highway Capacity Software (HCS), Synchro, and TS/PP Draft in the timing and coordinating of traffic signals.

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).
09/10-08/11 and 03/12-11/13	**MacArthur Interchange** Signal Modification/ Signage & Striping / Traffic Control Devices Plans The traffic study to evaluate the existing and projected operating conditions of the lower Westbank Expressway was prepared by Ms. Stewart. In the Design Phase, Ms. Stewart designed the new traffic signals for the interchange and neighboring intersections. She prepared the striping and signage plans to accommodate the ramp changes and prepared Traffic Control Devices Plans for the various stages of construction
12/14-01/17	**LA 447 Corridor Study and Environmental Assessment** Ms. Stewart was the lead engineer for the Corridor Safety Study for improvements to LA 447 from north of Interstate 12 (I-12) to LA 16 that was included in the Environmental Assessment. She reviewed detailed crash reports obtained from the LADOTD database for the section south of Buddy Ellis Road. She oversaw the preparation of collision diagrams and the identification of crash trends. The predictive method was used per the Highway Safety Manual to estimate the crashes with and without potential improvements. Ms. Stewart conducted turn lane warrants and identified where left and right turn lanes should be considered. Her previous experience and familiarity with the subject corridor will be invaluable during the design process.
01/14-08/19	**US 90 (I-49 South) Albertson's Parkway to Ambassador Caffery Design-Build Project** Ms. Stewart was an integral team member for this Design-Build project. She prepared the Traffic Control Device Plans for all phases of construction. Ms. Stewart was responsible for the design of the permanent signage for the new portion of I-49

	within the project limits. Traffic Control devices and signage plans were prepared to be in accordance with the Manual of Uniform Traffic Control Devices and the most current LADOTD standards. Throughout construction, Ms. Stewart was available to meet with contractor and visit the construction site on an as needed basis. Ms. Stewart provided timely responses to RFI's and prepared plan changes to address concerns raised in the field. She also prepared as build plans once the project was complete in August 2019.
02/14-06/14	**LA 64 (Mount Pleasant Road) at High Plains Drive** A new traffic signal was designed for the LA 64 intersection with High Plains Drive in Zachary, Louisiana by Ms. Stewart. As a part of this project, a fourth approach was added to the T intersection. With the additional approach and projected traffic, signalization was required. Ms. Stewart conducted a site visit to identify locations for the traffic signal equipment. Ms. Stewart prepared the plans in accordance with East Baton Rouge Parish specifications and MUTCD requirements. The plans included and included types and locations of signal supports, traffic signal controller parameters, striping, signage and emergency vehicle preemption. Pay items and quantities were also provided.
10/15- 09/18	**MacArthur Interchange Completion Phase II TMP** The design team was led by Ms. Stewart for the preliminary traffic signal design and the Traffic Management Plan (TMP) for proposed interchange modifications on US 90 (Westbank Expressway). Tasks for this work include conducting capacity analysis, safety analysis, detour analysis and developing proposed mitigations where applicable. Ms. Stewart was responsible for the QA/QC for this stage of the project. Final design for this project began in September 2019.
09/17-01/20	**I-10/Loyola Interchange Improvements** Ms. Stewart's role in this study was to prepare the conflict points, signage and striping layouts for the two different types of interchanges were considered for the I-10 at Loyola Avenue Interchange. One interchange type included multiple fly over ramps and the other was a diverging diamond. Once prepared, Ms. Stewart compared and ranked the conflict points, signage and striping of both alternatives to determine the need for further evaluation.
04/10-08/11	**LA 447 and I-12 Interchange Stage 0 Feasibility Traffic Study** This traffic study was conducted by Ms. Stewart along with other team members to develop and analyze seven intersections along LA 447 in the vicinity of the I-12 interchange in Livingston Parish. In this study, roundabouts were considered for three intersections. Ms. Stewart managed the data collection efforts that included vehicle classification, speed, and crash data. Ms. Stewart was ultimately responsible for the QA/QC for traffic assignments, forecasting and the traffic analyses using Highway Capacity Software, (HCS) Plus and SIDRA.

16. Staff Experience:

Firm employed by **Urban Systems, Inc.**					
Name	**Christine M. Darrah, P.E.**		Years of experience with this firm/employer		8
Title	Vice President / Transportation Engineer		Years of experience with other firm(s)/employer(s)		19
Degree(s) / Years / Specialization			BS / 1994 / Civil Engineering		
Active registration number / state / expiration date			25828 / Louisiana / 09/30/2023		
Year registered	2009	Discipline	Professional Engineer: Civil Engineering		
Contract role(s) / brief description of responsibilities			Transportation Engineer		

Mrs. Darrah has experience in Transportation/Civil Engineering including maintenance of traffic, plan and specification preparation, geometric design, construction management and quality control. She is proficient in the use of AutoCAD, Adobe Illustrator, and Highway Capacity Software (HCS). She also has experience using MicroStation and TransCAD. She has experience developing temporary striping and signage plans for various conditions including lane closures, road closures, flagging operations and full detour plans. Ms. Darrah also has experience in traffic signal design, warrants analysis, timing/phasing analysis, wiring diagrams, interconnect layouts, construction quantities, specifications and cost estimates.

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).
09/14-10/14	**SELA 26 Widening of Florida Ave. Canal Phase II and III** Ms. Darrah designed Traffic Control Devices Plans to meet US Army Corps of Engineers, LADOTD and MUTCD standards. The plans and specifications included, but were not limited to, the proper placement of temporary Traffic Control Devices (signs, barricades, drums, roadway markings, etc.) to facilitate traffic safely and efficiently through the traffic control zone. Haul routes were designated when necessary.
08/19-01/20	**Citrus Boulevard Turn Lane** Ms. Darrah was the lead engineer and project manager for the new turn lane on Citrus Boulevard for the Amazon Distribution Facility in Harahan, Louisiana. The purpose of the project was to provide an eastbound left turn lane and reduce the existing median opening at the facility main entrance. Plans and specifications included typical sections, geometric layout, grading, and required signage and striping. Tasks included design, Auto-turn analysis, construction administration, and coordination with Jefferson Parish, utility companies, surveyors, and geotechnical engineer.
03/14- Current	**Entergy New Orleans, Transmission Line Reconductoring Projects** Ms. Darrah designed numerous Traffic Control Devices Plans for over 100 miles of transmission line replacement to meet US Army Corps of Engineers, LADOTD, parish and MUTCD standards. The plans and specifications included, but were not limited to, the proper placement of temporary Traffic Control Devices (signs, barricades, and drums, etc.) for city street, highway and interstate closures to facilitate traffic and oversized equipment safely

	and efficiently through the traffic control zones. Interstate projects included lane closures, intermittent full closures and rolling closures of the interstate system. Ms. Darrah assisted Entergy with permit preparation for work on state routes and road closure request with local entities.
09/15- Current	**Picardy-Perkins Traffic Signal** Ms. Darrah was the design engineer for two (2) traffic signals for the Picardy-Perkins Connector Project. In this role she worked closely with the prime consultant, DOTD, and East Baton Rouge Parish to design the traffic signal operation and identify locations for signal equipment for the permanent signal plans. Signal requirements included video detection, pedestrian accommodations, and advanced warning due to limited sight distance at the railroad underpass. The 98% plans are currently under review by Baton Rouge City-Parish and LADOTD.
10/10- 09/15	**Pecue Lane / I-10 Interchange Environmental Assessment** Ms. Darrah assisted with the design and QA/QC for the traffic signals at the Pecue Lane / I-10 Interchange and at the intersection of Pecue Lane at Reiger Road. The signal plans were prepared on the latest LADOTD TSI format. The interstate ramp terminal intersection signals were designed per LADOTD standards and the Reiger Road signal was designed per East Baton Rouge Parish standards. This required coordination to obtain LADOTD pay item numbers for East Baton Rouge equipment. She reviewed the opinion of probable cost.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Karla E. Weston, PE**		Years of relevant experience with this employer	17
Title	President		Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization			Bachelor of Science / 1999 / Civil Engineering	
Active registration number / state / expiration date			31010 / Louisiana / March 31, 2024	
Year registered	2004	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities			Mrs. Weston will oversee the firms' role as a sub-consultant and make sure the work is completed to LADOTD standards.	

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).
02/16-09/19	**H.003047 Pecue Lane/I-10 Interchange, Baton Rouge, LA** Mrs. Weston's served as Principal-in-Charge for the firm's role as a sub-consult for the engineering design services of the West Bound on Ramp to I-10, the West Bound Off Ramp from I-10, the extension to Rieger Road and Pecue Lane Extension. She has worked to oversee the firms design, coordinate with the prime consultant and government agencies.
12/13 – 10/19	**H.02960 Gramercy Bridge, St. James Parish, LA** Mrs. Weston served as Principal-in-Charge for the firm's role as a subconsultant for the engineering design elements of the plans including Hydraulic Analysis and Design, Typical Sections, and Graphical Grades for the project
02/14 - 02/15	**H.010620 I-49 Design Build, Lafayette, LA** Mrs. Weston provided QA/QC review for the Roadway Design Plans on this Design-Build Project for part of the I-49 South Corridor.
05/13 – 05/14	**H.009288.5 LA 1 Railroad Bridge at DOW, WBR Parish, LA** Mrs. Weston served as Principal-in-Charge for the firm's role as a sub-consult for the engineering design elements of the plans including Hydraulic Analysis and Design, Typical Sections, and Graphical Grades for the project. She has worked to oversee the firms design, coordinate with the prime consultant and government agencies.
01/06 – 12/12	**EBR City/parish Project No. 06-CS-HC-0018, Fairchild-Badley Roadway, EBR Parish, LA** Mrs. Weston served as Principal in Charge for this project that was approx. 1.25 miles in length along Fairchild-Badley Road and also included approximately 600 linear feet of Elm Grove Garden Dr. CD&C designed the upgrade to the existing narrow roadway to a typical section of 2-11' lands with a 2' barrier curb and gutter, and a 6' adjacent sidewalk. This included the design of a new sub-surface drainage system throughout the length of the project as well.
03/12 – 07/12	**H.009104.5 - Sunshine Bridge Phase 2**

	Ms. Weston served as Project Manager and Engineer for CD&C's portion of this Bridge Rehab Retainer Contract project which included the Traffic Management plans for the project. CD&C provided the Traffic Control design plans including detour maps of local road network for the repairs and widening to the Sunshine Bridge.
05/11 – 04/12	**Red River – Jackson Street Bridge, Alexandria, LA** Ms. Weston served as Project Manager and Engineer for CD&C's portion of this Bridge Rehab Retainer Contract project which included the Traffic Management plans for the project. CD&C provided the Traffic Control design plans including detour maps of local road network for the replacement of the Jackson Street Bridge over the Red River.
06/12 – 10/12	**H.009986 – Paths 2 Progress. Jefferson, Orleans, Plaquemines, St. Bernard and St. Tammany Parishes – Group 33** Ms. Weston served as the Principal-in-charge/Project Manager for this roadway rehabilitation project of roads in Jefferson Parish. This included field reconnaissance to determine severity of inundated roadways due to Hurrican Katrina, preparation and detailing of roadway rehabilitation plans, typical sections, providing quantity calculations, etc.
12/11 – 4/12	**H.005902.5 - Consulting Services for the Permanent Repair to Federal Aid Eligible Roads as a Result of Damage due to Hurricane Katrina in 2005. Jefferson, Orleans, Plaquemines, St. Bernard and St. Tammany Parishes – Group 29** Ms. Weston served as the Principal-in-charge/Project Manager for this project which included survey, field reconnaissance to determine severity of inundated roadways due to Hurricane Katrina in the City of New Orleans, preparation and detailing of roadway rehabilitation plans, typical sections, providing quantity calculations, etc.
01/06 – 07/06	**Picardy Avenue Extension–City/Parish of East Baton Rouge** Mrs. Weston served as Principal-in-Charge for this extension of Picardy Avenue, connecting Bluebonnet Blvd. with I-10 West. Duties included project layout and design as wells as subsurface drainage design for approximately ½ mile.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Ralph Burgess, PLS**		Years of relevant experience with this employer	11
Title	Principal Land Surveyor		Years of relevant experience with other employer(s)	12
Degree(s) / Years / Specialization			BS / 2004 / Industrial Design & Supervision, Southeastern LA University	
Active registration number / state / expiration date			31010 / Louisiana / March 31, 2024	
Year registered	2004	Discipline	Land Surveyor	
Contract role(s) / brief description of responsibilities			Mr. Burgess serve as the Survey Manager for this project. He will work to oversee the project progress stays on schedule, aide in both crew coordination and office production, and provide final QC on the firms' deliverable to the Prime Consultant. Mr. Burgess has an extensive background in providing topographic surveys for LADOTD in accordance with Location and Survey policies and procedures. He has overseen projects utilizing traditional means and methods of collecting data as well as those that include the use of 3D Terrestrial Scanning.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/20 – 04/21	**H.001352.5 and H.002273.5 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge, East Baton Rouge Parish** Burgess was the Survey Manager for this project. CD&C as a sub-consultant on this project was responsible for topographic surveying the LA 67 and LA 19 sites of the Comite River Diversion project. This included merging of data from a previous survey on one portion of the site and field verifications of that data. The topographic data for this project was collected traditionally.
01/18-01/20	**H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA** Burgess was the surveying Manager for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415 including work on Tributaries of the Intercoastal Canal. This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every 500' for control verification and incorporation of the Mobile Lidar for the I-10 pavement.
7/17-12/18	**H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA** Mr. Burgess served as Survey Manager for the project. Duties included meeting with LADOTD & Cardno, Inc for utility locations, coordination of crews and 3D terrestrial scanning crew along with office personnel, coordination. Special duties were merging of two state projects with project survey for final submittal to combine all projects together.
01/16-08/16	**H.005733.5 US 190 Superstreet, St. Tammany Parish, LA** Mr. Burgess served as Survey Manager for the project. Duties included complete topographic survey and drainage map for this project including all utility coordination. The survey began at the intersection of US 190 and Holiday Square Frontage Road. From this point, the survey proceeded in a northerly direction along US 190 for approximately 2.9 miles to a point that is 700 feet South of Intersection of US 190 and E. Boston St. in Covington, LA. This project also included work in the Abita River and utilized 3D Terrestrial Scanning for the main route.

10/15-12/18	**H.011235 I-49 South at Verot School Road, Lafayette, LA** Mr. Burgess served as the Survey Manager for the project. Duties included meeting with LADOTD, and all consultants on the team, coordination of both traditional crews and 3D terrestrial scanning crew, coordination of survey crews with Cardno, Inc, utility locations on the project, met and review right of entry with landowners for project, review of drainage map, merging of existing topographic survey of the I-49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data
07//14-10/15	**H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA** Mr. Burgess served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area.
04/17-07/17	**H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA** Mr. Burgess served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying.
03/14-06/14	**H.008369 Cleo Road Roundabout, St. Tammany Parish, LA** Mr. Burgess served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included 500 ft. of Cleo Road and 175 ft. of Avenue D.
05/13-07/13	**H.009288 LA 1 Railroad Bridge at DOW, West Baton Rouge, LA** Survey Manager for this project located in West Baton Rouge Parish. The intent is to create a grade separation at the intersection of LA 1 and the R/R spur for DOW. CD&C is performing all of the topographic survey for this project including utility coordination and R/R coordination and permits so that CD&C can survey the spur and parallel line.
10/14-12/14	**H.011088.5 West Prien Lake, Lake Charles, LA** Mr. Burgess served as the Survey Manager for this project. This project was to provide topographic survey for a new route to be constructed. Topographic survey and DTM was required along the proposed alignment including all utilities and all drainage with the survey limits.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Chris Ballard, PLS**		Years of relevant experience with this employer	6
Title	Principal Land Surveyor		Years of relevant experience with other employer(s)	19
Degree(s) / Years / Specialization			BS / 2004 / Biological Science / Southeastern LA University	
Active registration number / state / expiration date			5033 / Louisiana – September 30, 2022	
Year registered	2010	Discipline	Land Surveyor	
Contract role(s) / brief description of responsibilities			Mr. Ballard serve as the Survey Project Manager for this project. He will work to oversee the project progress stays on schedule, aide in both crew coordination and office production, and provide final QC on the firms' deliverable to the Prime Consultant. Mr. Burgess has an extensive background in providing topographic surveys for LADOTD in accordance with Location and Survey policies and procedures. He has overseen projects utilizing traditional means and methods of collecting data as well as those that include the use of 3D Terrestrial Scanning.	

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).
09/18-01/20	**H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA** Mr. Ballard is the Surveying Project Manager for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415 including work on Tributaries of the Intercoastal Canal. This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every 500' for control verification and incorporation of the Mobile Lidar for the I-10 pavement.
04/17-07/17	**H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA** Mr. Ballard served as the firms Survey Project Manager on this project which included a complete topographic survey, utility coordination, channel cross sections, and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying.
02/19-09/19	**Bridge Replacements in East Feliciana Parish, Rural East Feliciana Parish, LA** Mr. Ballard is serving Survey Project Manager for this project for East Feliciana Parish Police Jury. It includes the replacement of 2 bridges which were damaged from flooding and the repairs to many rural roadways throughout the parish. These projects are being funded thru FEMA and all documentation has to be in accordance with FEMA's policies and procedures.
01/17-12/17	**East Baton Rouge Parish Bridges, East Baton Rouge Parish, LA** In 2017, CD&C has performed topographic surveys for at least 4 Bridge Replacement Projects throughout East Baton Rouge Parish. Mr. Ballard served as Survey Project Manager on each of these projects which included cross-sectioning and tracing the channel at each location. These included bridges over Dawson Creek, Claycut Bayou, Copper Mill Bayou, and Cypress Bayou.

10/16 - 11/16	**H.012728.5 LA 443: Tangi River Bridge Replacement, Tangipahoa Parish, LA** Mr. Ballard served as the Project Manager for this Project. Among the duties performed for the project were review of the crew work conditions, review & processing of the survey data, verification and review of final submittal. CD&C completed a topographic survey which included all utilities with depths, all drainage, all building information including finish floor elevations, and all super/substructure of the bridge over the Tangipahoa River. Additional information regarding the river was located by traditional means upstream and downstream for the engineer's design of the new bridge. To utilize data collection of the failed bridge, **3D Terrestrial Scanning** was incorporated in conjunction with traditional means to complete the topographic survey. Due to the nature of the project being an Emergency Bridge replacement all staff worked on this project non-stop until field work was completed in less than 3 weeks.
09/17 -09/17	**H.012650.5-1 District 62 Bridges, Livingston and Tangipahoa Parishes, LA** Mr. Ballard served as a Survey Project Manager for this project which included 5 bridge sites in District 62. In addition to all of the existing data for the bridge and roadway at each site, each channel was cross-sectioned both upstream and downstream of the bridge. These included bridges over the US 190 Bridge over Gray's creek, 2 bridges on LA 442 both crossing East Hog Branch, LA 1063 over the Natalbany River, and US 51 over Ponchatoula Creek. Several of these bridges including the US190 one was surveyed utilizing **3D Terrestrial Scanning**.
10/15 - 12/18	**H.003184.5 I-10 Texas State Line – East of Coone Gully, Calcasieu Parish, LA** Mr. Ballard served as the Survey Project Manager on this project which is a 6-lane widening of I-10. Duties performed on this project included the review of the survey information from crew, verification of project delivery schedule, processing of data and final review of submittal of project. 3D Terrestrial Scanning was used in conjunction with traditional means and methods for the completion of this project.
01/16 - 08/16	**H.005733.5 US 190 Superstreet, St. Tammany Parish, LA** Mr. Ballard served as the Survey Project Manager on this project. CD&C provided a complete topo survey & drainage map along with utility coordination for the project. Project duties included **processing** of data, review of field notes and weeklies, & performing final punch list. This project also included work in the Abita River utilized **3D Terrestrial Scanning** for the main route.
10/15 - 01/16	**H.011773 Hanks Dr/Landis Drive Pedestrian Improvements, East Baton Rouge Parish, LA** Mr. Ballard served as the Survey Project Manager on this project that included a topographic survey and establishment of the ROW for Hanks Dr. for installation of new sidewalk.
06/11 - 09/13	**260-01-0028, H.002372 LA 42 Widening and Improvements, Ascension Parish, LA** Mr. Ballard worked as a PLS on this project which included boundary and topography, establishing the existing ROW and acquisition of additional ROW.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Philip Dupree**		Years of relevant experience with this employer	10
Title	Survey Party Chief		Years of relevant experience with other employer(s)	30
Degree(s) / Years / Specialization				
Active registration number / state / expiration date			NSPS Certified Survey Technician, Level III, Boundary Cert. No. 0799-1106 Nationwide; ATSSA Certified as Registered Flagger ATSSA Certified Traffic Control Tech & Traffic Control Supervisor	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Mr. Dupree is the Senior Survey Party chief who will work to oversee a crew as well as aide in coordinating all crews with Survey PM to ensure field work is being completed timely and accurately.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/20 – 04/21	**H.001352.5 and H.002273.5 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge, East Baton Rouge Parish** Mr. Dupree was the Senior Party Chief & Field Coordinator for this project. CD&C as a sub-consultant on this project was responsible for topographic surveying the LA 67 and LA 19 sites of the Comite River Diversion project. The topographic data for this project was collected traditionally.
01/18-02/20	**H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA** Mr. Dupree is the Survey Party Chief for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415.
07/17-12/18	**H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA** Mr. Dupree is serving as Field coordinator on this project by working specifically to set the control on the job and overseeing field crews as they work to complete the topography.
10/15-12/18	**H.011235 I-49 South at Verot School Road, Lafayette, LA** Mr. Dupree served as Field coordinator on this project. He resurrected the original control set on the project and oversaw the checking of it. Mr. Dupree was the field coordinator with the R/R and also the SUE contractor on the project. He oversaw all field crews and ensured that the project was completed accurately and timely.
01/16-08/16	**H.005733.5 US 190 Superstreet, St. Tammany Parish, LA** Mr. Dupree served as Field coordinator on this urban roadway topography project that included 3D scanning in addition to traditional topography. He oversaw the daily progress of both traditional field crews and scan crews and completed the project accurately and on schedule.
10/16-11/16	**H.012728.5 LA 443: Tangi River Bridge Replacement, Tangipahoa Parish, LA**

	Mr. Dupree served as Field coordinator on this project. CD&C completed a topographic survey which included all utilities with depths, all drainage, all building information including finish floor elevations, and all super/substructure of the bridge over the Tangipahoa River. Additional information regarding the river was located by traditional means upstream and downstream for the engineer's design of the new bridge. To utilize data collection of the failed bridge**,** 3D Terrestrial Scanning was incorporated in conjunction with traditional means to complete the topographic survey.
07/14/10/15	**H.010319.5 I-110 North St. to Plank Road, Baton Rouge, LA** Mr. Dupree served as Field coordinator on this heavily traveled Interstate project that included 3D scanning in addition to traditional topography. He oversaw the daily progress of both traditional field crews and scan crews and completed the project accurately and on schedule. He also coordinated with the district and state police to oversee the rolling lane closure that was required to obtain the drainage invert data.
05/13-07/13	**H.009288 LA 1 Railroad Bridge at DOW, West Baton Rouge, LA** Mr. Dupree served as Senior Party Chief for this project located in West Baton Rouge Parish. The intent is to create a grade separation at the intersection of LA 1 and the R/R spur for DOW. CD&C is performing all of the topographic survey for this project including utility coordination and R/R coordination and permits so that CD&C can survey the spur and parallel line.
10/14-12/14	**H.011088.5 West Prien Lake, Lake Charles, LA** Mr. Dupree served as the Senior Party Chief for this project working to collect all field data as required by the project. This project was to provide topographic survey for a new route to be constructed. Topographic survey and DTM was required along the proposed alignment including all utilities and all drainage with the survey limits.
02/14-03/17	**H.010620 I-49 Design Build** Mr. Dupree served as the Senior Party Chief for this project working to collect all field data as required by the project. CD&C also produced ROW maps for the project. Mr. Dupree also was the lead Party Chief for the property surveys on this project.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Jacob Stoehr**		Years of relevant experience with this employer	7
Title	Survey Party Chief		Years of relevant experience with other employer(s)	1.5
Degree(s) / Years / Specialization				
Active registration number / state / expiration date			ATSSA TCS, TCT, Flagger	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Mr. Stoehr will serve as a Survey Party Chief managing a crew to collect topographic data in the field in accordance with LADOTD Location and Survey means and methods.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/18-01/20	**H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA** Mr. Stoehr served as a Survey Party Chief for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415.
07/17-12/18	**H.010960.5-2, LA 30 Roundabouts at Tanger I-10, Ascension Parish, LA** Mr. Stoehr served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
08/16-01/18	**H.011235 I-49 Verot School Road, Lafayette, LA** Mr. Stoehr served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
05/17-07/2017	**H.011909.5-2 Roundabout US 171 at Boone Street, Vernon Parish, LA** Mr. Stoehr served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
01/16-08/16	**H.005733.5 US 190 Superstreet, St. Tammany Parish, LA** Mr. Stoehr served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
10/15 – 12/18	**H.003184.5 I-10 Texas State Line East of Coone Gully** Mr. Stoehr served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
10/16 – 11/16	**H.012728.5 LA 443 Emergency Bridge Replacement, Tangipahoa Parish, LA** Mr. Stoehr served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Jason Stoehr**		Years of relevant experience with this employer	5
Title	Survey Party Chief		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization				
Active registration number / state / expiration date			ATSSA TCS, TCT, Flagger	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Mr. Stoehr will serve as a Survey Party Chief managing a crew to collect topographic data in the field in accordance with LADOTD Location and Survey means and methods.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/20 – 04/21	**H.001352.5 and H.002273.5 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge, East Baton Rouge Parish** Mr. Stoehr was a Party Chief on this project. CD&C as a sub-consultant on this project was responsible for topographic surveying the LA 67 and LA 19 sites of the Comite River Diversion project. The topographic data for this project was collected traditionally.
08/16-01/18	**H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA** Mr. Stoehr is the Survey Party Chief for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415.
07/17-12/18	**H.010960.5-2, LA 30 Roundabouts at Tanger I-10, Ascension Parish, LA** Mr. Stoehr served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
08/16-01/18	**H.011235 I-49 Verot School Road, Lafayette, LA** Mr. Stoehr served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
02/19 - 09/19	**Bridge Replacements in East Feliciana Parish, Rural East Feliciana Parish, LA** Mr. Stoehr served as a Jr. Party Chief this project for East Feliciana Parish Police Jury. It includes the replacement of 2 bridges which were damaged from flooding and the repairs to many rural roadways throughout the parish. These projects are being funded thru FEMA and all documentation has to be in accordance with FEMA's policies and procedures.
7/17 – 12/18	**H.003184.5 I-10 Texas State Line East of Coone Gully** Mr. Stoehr served as an instrument man on this project by aiding the crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Trent Norris**		Years of relevant experience with this employer	8
Title	Senior Technician		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization				
Active registration number / state / expiration date			NSPS Certified Survey Technician, Level I Boundary Certificate No.: 0418-5963 ATSSA Traffic Control Supervisor, Technician & Flagger	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Mr. Norris serves as the firm's 3D Scanning Technician who will aide in field data collection as well as process all 3D scan data in the office and assist in any other processing to complete the submittal.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/18 – 01/20	**H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA** Mr. Norris was the #3D Scanning Technician for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415.
07/17 – 12/18	**H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA** Mr. Norris served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary topographic data from them thru TopoDot to put into InRoads.
04/17 – 07/17	**H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA** Mr. Norris served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary topographic data from them thru TopoDot to put into InRoads.
08/16 – 01/18	**H.011235 I-49 Verot School Road, Lafayette, LA** Mr. Norris served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary topographic data from them thru TopoDot to put into InRoads.
10/16 – 10/16	**H.012728.5 LA 443 Emergency Bridge Replacement, Tangipahoa Parish, LA** Mr. Norris served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary topographic data from them thru TopoDot to put into InRoads.
10/15 – 12/18	**H.003184.5 I-10 TX State Line-E of Coone Gully, Calcasieu Parish, LA** Mr. Norris served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary topographic data from them thru TopoDot to put into InRoads.
01/16 – 07/16	**H.005733.5 US 190 Superstreet, St. Tammany Parish, LA** Mr. Norris served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary topographic data from them thru TopoDot to put into InRoads.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Scott Benton**		Years of relevant experience with this employer	5
Title	Senior Technician		Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization				
Active registration number / state / expiration date			ATSSA Traffic Control Supervisor, Technician & Flagger	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Mr. Benton serves as a Senior Technician specializing in 3D Terrestrial Scanning, processing, and extraction.	

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).
12/19 – 01/20	**H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA** Mr. Benton served as a #3D Scanning Technician for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415.
03/14 – 06/14	**H.008369 Cleo Road Roundabout, St. Tammany Parish, LA** Mr. Benton served as a Senior Technician on this project processing survey field data. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included 500 ft. of Cleo Road and 175 ft. of Avenue D.
05/13 – 07/13	**H.009288 LA 1 Railroad Bridge at DOW, West Baton Rouge, LA** Mr. Benton served as a Survey Crew Instrument Man and later as a technician on this project processing survey field data. The intent is to create a grade separation at the intersection of LA 1 and the R/R spur for DOW. CD&C is performing all of the topographic survey for this project including utility coordination and R/R coordination and permits so that CD&C can survey the spur and parallel line.
02/13 – 06/13	**H.005693 LA 447, Walker, LA** Mr. Benton served as a Survey Crew Instrument Man and later as a technician on this project processing survey field data. CD&C's responsibilities included all field work, utility coordination, review of existing survey data provided by LADOTD and all office work to produce the final product; this includes merging of supplied survey from LADOTD and survey by CD&C. CD&C also performed the tie-in of the new survey to the existing survey provided by LADOTD to produce an overall deliverable to be utilized in this design.
10/14 – 12/14	**H.011088.5 West Prien Lake, Lake Charles, LA** Mr. Benton served as Survey technician on this project processing survey field data. This project was to provide topographic survey for a new route to be constructed. Topographic survey and DTM was required along the proposed alignment including all utilities and all drainage with the survey limits.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Madison Mills, LSI**		Years of relevant experience with this employer	1+
Title	Land Survey Intern		Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization			BS / 2016 / Civil Engineering	
Active registration number / state / expiration date			0000716 Land Surveyor Intern/Louisiana	
Year registered	2021	Discipline	Land Surveyor Intern	
Contract role(s) / brief description of responsibilities			Mr. Mills joined CD&C in 2021 as a Land Surveying Intern. Madison will be taking his PLS exam in 2022. He serves as a Survey Technician for CD&C working to manage field crews, process field crew data, and finalize deliverables.	

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).
02/21 - Ongoing	**H.013958 Carpenters Bridge Rd. Whiskey Chitto Creek** Mr. Mills worked as a LSI on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client. He also worked on property surveys and ROW mapping.
02/21 - Ongoing	**H.013955 LA 961 Bride at Sandy Creek, West Feliciana Parish, LA** Mr. Mills worked as a LSI on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client. He also worked on property surveys and ROW mapping.
02/21 - Ongoing	**H.013956 LA 961 Bridge at Beamon Rd. Bayou Maringouin, Pointe Coupee Parish, LA** Mr. Mills worked as a LSI on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client. He also worked on property surveys and ROW mapping.
07/21 – 11/21	**H.009290.5 Safe Routes to Schools – LSU Sidewalk Improvement near LSU Lab School, Baton Rouge, LA** Mr. Mills worked as a LSI on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client.
02/21 – 05/21	**H.010108 Safe Routes to Schools – Independence Sidewalks, Baton Rouge, LA** Mr. Mills worked as a LSI on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client.
07/21 – 12/21	**H.0014560.5 LA 94 Vermillion River, St. Martin Parish, LA** Mr. Mills worked as a LSI on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Alex Wells**		Years of relevant experience with this employer	2.5
Title	Survey Party Chief		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization				
Active registration number / state / expiration date			ATSSA TCS, TCT, Flagger	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Mr. Wells joined CD&C in 2020 as a Rodman and has worked his way up to a Party Chief. He will work managing a crew to collect topographic data in accordance with LADOTD code book and standard procedures.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/20 – 10/21	**H.013958 Carpenters Bridge Rd. Whiskey Chitto Creek** Mr. Wells worked as Survey Party Chief on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
07/20 – 10/21	**H.013989 Greybow Rd. Palmetto Creek** Mr. Wells worked as Survey Party Chief on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
07/20 – 04/21	**H.001352.5 and H.002273.5 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge, East Baton Rouge Parish** Mr. Wells was an Instrument Man on this project. CD&C was a sub-consultant on this project was responsible for topographic surveying the LA 67 and LA 19 sites of the Comite River Diversion project. The topographic data for this project was collected traditionally.
02/21 – 05/21	**H.009290.5 Safe Routes to Schools – LSU Sidewalk Improvement near LSU Lab School, Baton Rouge, LA** Mr. Wells worked as Survey Party Chief on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.
10/20 – 01/21	**H014302 US 165 Lighting, Monroe, LA** Mr. Wells was an Instrument Man on this project. CD&C was a sub-consultant on this project was responsible for topographic surveying of US 165 south of Monroe for a highway lighting improvement. The topographic data for this project was collected both traditionally and with the use of 3D Terrestrial Scanning.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Clarence J. Goodspeed**		Years of relevant experience with this employer	1+
Title	Utility Coordinator		Years of relevant experience with other employer(s)	30
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities * Dates not included as work was done at previous Employer			*****Mr. Goodspeed has 30 years' experience in underground utilities. Mr. Goodspeed has been involved in almost every aspect of underground utilities and His knowledge of reading multiple utility companies prints and understand how their systems are installed makes him a great asset to managing CD&C Sue department. The following is a list of companies and job roles.	

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).
	Byers Engineering Damage prevention tech, responsible for accurately locating multiple clients underground plant which was, AT&T (Bell South), Entergy Elec, Cox Communications, several companies that owned fiber loops in the greater Baton Rouge area, Eatel, and Koche Gateway Pipeline are just some of the companies he was responsible for locating their underground facilities.
	BHA Engineering Damage prevention tech (Underground Locator) contracted to Demco Electric to locate their underground facilities.
	Wave Tech Geophysical Engineering Conducted SUE work, vacuum excavation, ground penetrating radar, road pavement GPR, leak detection, researching utility prints, and conducting locates on military facilities and airports.
	Bron Construction Assisted in maintenance, and new construction of Entergy Electric underground and some overhead lines.
	UtiliQuest LLC Supervisor, Damage Investigator, State Claims Manager, and Operations Manager. Also, took part in negation of contracts.
	Fibore Filled in as supervisor for burying Charter Communication service drop crews, installation of main and service drops with directional boring rig, assisted in settling property damage claims, and assisted in pointy of contact with Charter Construction personal.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Bradley Jacobs, EI**		Years of relevant experience with this employer	1+
Title	Engineering Intern		Years of relevant experience with other employer(s)	9
Degree(s) / Years / Specialization			BS / 2015 / Civil Engineering	
Active registration number / state / expiration date			No. 0032456 / Louisiana / 09/30/2023	
Year registered	2015	Discipline	Engineering Intern	
Contract role(s) / brief description of responsibilities * Dates not included as work was done at previous Employer			Mr. Jacobs will process field crew data and finalize deliverables.	

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).
	Albany Annex Worked on the boundary survey for extending the town limits of Albany, Louisiana. I went to the courthouse and did title research for the properties that were obtained for the annex. I set the new boundary lines for the new town limits. I also drew the map showing the boundary of the properties that were obtained.
	Pecue Lane Worked on Right of Way maps and the Traverse Control Sketch. For the Right of Way maps, I set where the monuments will be in the office. I also calculated the bearings and distances between each right of way monument. I also wrote the legal descriptions for the Right of Way and verified that it matches the maps. I also created the control sketch based off the traverse. All drawings were created up to DOTD Standards.
	Essen Lane Control Worked on Right of Way maps in the office and helped set monuments in the field. I set the points for all the right of way monuments in the office and then went to the field to assist the crews in staking out and setting the monuments 2021 Bellacosa Residential Subdivision - Generate Point file for the survey crew to stakeout the property corners for each lot within the subdivision.
	Pollard Branch Wrote the legal descriptions for three different tracts. The legal descriptions reflected the overall boundary survey maps. Topographic Surveys
	Jefferson and Corporate Interchange Survey Created the GPS control sketch that shows the traverse for the survey.
	I-12 to Bush Worked as a rodman. We cut cross sections every 100 feet for road improvements and did a topographic survey using total stations.

16. Staff Experience:

Firm employed by **Civil Design & Construction, Inc. (CD&C)**				
Name	**Drennon Humphreys**		Years of relevant experience with this employer	2
Title	Engineering Intern		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization				
Active registration number / state / expiration date			Flagger, TCT	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities * Dates not included as work was done at previous Employer			Mr. Humphreys will serve as a Survey Party Chief managing a crew to collect topographic data in the field in accordance with LADOTD Location and Survey means and methods.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/21 – 06/21	**H.013959 Reeds Bridge Rd. Calcasieu River Relief, Allen Parish, LA** Mr. Humphreys served as a Instrument Man for this project. CD&C was a sub-consultant on this project is responsible for topographic and ROW surveying for this rural bridge replacement project.
02/21 – 05/21	**H.013958 Carpenters Bridge Rd. Whiskey Chitto Creek, Allen Parish, LA** Mr. Humphreys served as a Instrument Man for this project. CD&C was a sub-consultant on this project is responsible for topographic and ROW surveying for this rural bridge replacement project.
02/21 – 01/22	**Move BR: Lee Drive – Highland Rd. to Perkins Rd., Baton Rouge, LA** Mr. Humphreys served as a Instrument Man for this project. CD&C was a sub-consultant on this MoveBR widening project is responsible for topographic and ROW surveying for this 1.8 mile road improvement project as part of the Move BR infrastructure initiative.
04/21 – 12/21	**Move BR: Hennessy Blvd. –Perkins Rd. to Picardy Ave., Baton Rouge, LA.** Mr. Humphreys served as a Instrument Man for this project. CD&C was a sub-consultant on this MoveBR widening project is responsible for topographic and ROW surveying for this 0.4 mile road improvement project to create an underpass at the R/R crossing. This project is a part of the Move BR infrastructure initiative.
01/22 – On-Going	**4400017091 Louisiana Watershed Initiative Region 5 – Task Order 2** Mr. Humphreys is working as a Instrument Man and now a Party Chief on this Louisiana Watershed Initiative project. He has been responsible for collecting topographic data at various bridge locations that will go into the watershed model for this area. CD&C is a sub-consultant on this project.
01/22 – 05/22	**H.013956 Beamon Rd. Bayou Maringouin, Pointe Coupee Parish, LA** Mr. Humphreys served as a Instrument Man for this project. CD&C was a sub-consultant on this project is responsible for topographic and ROW surveying for this rural bridge replacement project.

17. Firm Experience:

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge, Road	
Project name	**Huey P. Long Bridge Widening**		Firm responsibility (prime or sub?)	Prime	
Project number	700-18-0014	Owner's name	Louisiana Department of Transportation and Development		
Project location	Jefferson Parish, LA		Owner's Project Manager	Ray Mumphrey, PE	
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802, (225) 379-1067, Ray.Mumphrey@la.gov				
Services commenced by this firm (mm/yy)	12/1986	Total consultant contract cost ($1,000's)		$25,864	
Services completed by this firm (mm/yy)	08/2012	Cost of consultant services provided by this firm ($1,000's)		N/A	

The Huey P. Long Bridge is a high-level, combination highway and railroad bridge which crosses the Mississippi River in New Orleans, Louisiana. The total structure length, including approaches, is approximately 23,000 ft. The main span unit is 3,524 ft. long, consisting of a 750-ft. cantilever through truss span, two 530-ft. anchor truss spans, one 530-foot simple through truss span, and four deck truss spans. All consist of riveted steel construction. The firm designed the structure and provided construction supervision from 1925 until 1936. The original design called for two 9' vehicular lanes (in each direction) to be bracketed from the trusses.

PROJECT FEATURES:

Phase 1 – Conceptual study of the widening including: line and grade studies, geometric design, corridor upgrading. The widening was to provide three 11 ft. vehicular lanes and shoulders in each direction.

Phase 2 – For the Structure (approaches, main bridge and substructure) preliminary and final design for new auxiliary trusses, main river pier top widening, drilled shaft and pile supported approach piers and modifications to railroad approach superstructure to accommodate vehicular lane shifts, and cost estimates.

Phase 2A – For the Interchanges (East and West Bank) line and grade plans, geometric design, road design, drainage, preliminary and final plans and cost estimates.

Phase 3 – Construction Engineering Office support was provided to check thousands of shop drawings, handle RFI's and consult as needed in support of a construction monitoring team By Others for the project.

Phase 4 – Bridge rating

Personnel Involved: ***Zolan Prucz, PhD, PE, Ralph Eppehimer, PE, Dave A. Kanger, PE, Cullen J. Ledet, PE, Lance V. Borden, PE, Jeff W. Newman, PE, Stacey P. Carr, PE, Jon Gerhart, PE***

17. Firm Experience:

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge, Road	
Project name	**LA 16 over Tangipahoa River Bridge Replacement**		Firm responsibility (prime or sub?)	Prime	
Project number	H.013183	Owner's name	Louisiana Department of Transportation and Development		
Project location	Tangipahoa Parish, LA		Owner's Project Manager	Stephanie Doolittle, P.E.	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-1329, Stephanie.Doolittle@la.gov				
Services commenced by this firm (mm/yy)	09/17	Total consultant contract cost ($1,000's)		$454	
Services completed by this firm (mm/yy)	03/21	Cost of consultant services provided by this firm ($1,000's)		$380	

M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 16, between LA 51 and LA 1054, in Amite City, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that traffic shall be maintained during construction with an on-site diversion roadway and bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QC/QA was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going.

M&M developed and delivered the following project documents:

- Final Roadway plans
- Final bridge design
- Final bridge plans
- Final temporary diversion and bridge plans
- Transportation Management Plan (TMP) Level 2
- Construction Signing Plans
- Design Waivers and Exceptions
- Final Roadway and Bridge Quantities
- As Design Ra**ting**
- Construction Cost Estimate
- Special Provisions

PERSONNEL: ***Zolan Prucz, PhD, PE, Yu Ouyang, PE, Jared Weisman, PE, Lindsey Woolverton, PE,, Cullen J. Ledet, PE***

17. Firm Experience:

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge, Road	
Project name	**US 61 at Thompson Creek Bridge Replacement**		Firm responsibility (prime or sub?)	Prime	
Project number	H.013193	Owner's name	Louisiana Department of Transportation and Development		
Project location	St. Francisville, LA		Owner's Project Manager	Stephanie Doolittle, P.E.	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-1329, Stephanie.Doolittle@la.gov				
Services commenced by this firm (mm/yy)	09/17	Total consultant contract cost ($1,000's)		$502	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$436	

M&M provided all necessary preliminary and final plans for the rehabilitation of the northbound bridge and replacement of the southbound bridge on US 61 over Thompson Creek, between LA 10 and LA 964, near St. Francisville, LA. It was anticipated that traffic would be maintained during the construction of the new southbound bridge with temporary two-way traffic on the rehabilitated northbound bridge. The project also included the design and detailing of adding a helper bent to the northbound bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QC/QA was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going.

M&M developed and delivered the following project documents:

- Final Roadway design & plans
- Final bridge design & plans
- Final temporary detour roadway and bridge plans
- Transportation Management Plan (TMP) Level 2
- Construction Signing Plans
- As Design Rating
- Construction Cost Estimate
- Final Roadway and Bridge Quantities
- Special Provisions
- Design Waivers and Exceptions

PERSONNEL: ***Zolan Prucz, PhD, PE, Yu Ouyang, PE, Jared Weisman, PE, Lindsey, Woolverton, PE, Cullen J. Ledet, PE***

17. Firm Experience:

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge, Road	
Project name	**Cline Avenue Bridge**		Firm responsibility (prime or sub?)	Prime	
Project number	N/A	Owner's name	United Bridge Partners		
Project location	East Chicago, IN		Owner's Project Manager	Ken Szeliga	
Owner's address, phone, email	7800 E. Union Ave., Suite 525, CO 80237, (303) 257-4745, kszeliga@unitedbridgepartners.com				
Services commenced by this firm (mm/yy)	04/2020	Total consultant contract cost ($1,000's)		$6,000	
Services completed by this firm (mm/yy)	12/2021	Cost of consultant services provided by this firm ($1,000's)		$6,000	

The Cline Avenue Bridge is a 6,236-foot long precast segmental bridge that spans over several rail lines, Riley Road, and the Indiana Harbor Canal in East Chicago, IN. The new structure consists of 29 cast-in-place concrete columns that support 685 post-tensioned concrete single cell box girders segments which form the bridge's deck. Completion of this project restored entrance into the Northwest Indiana area.

The Bridge was designed by another engineering firm and when the construction of the bridge was approximate 70% complete Modjeski and Masters, Inc. was contacted by United Bridge Partners to perform a fully independent review on the design, review of construction documents, and provide an on-site presence for completion of construction of the 1.2 mile long segmental bridge. The bridge was opened to traffic on December 23, 2021.

M&M's New Orleans Highway Section developed temporary traffic control plans to improve traffic flow and safety for the initial bridge opening and performed and independent technical review (ITR) of the permanent striping, pavement markings and signage for the bridge and approaches to evaluate conformance with DOT, MUTCD and AASHTO design guidelines and criteria. (total project length = 3 mi.) M&M Prepared roadway striping and signage plan to improve the safety and operational efficiency of the facility. M&M also performed a feasibility study for two (2) proposed new interchanges which included conceptual exit/entrance ramp geometric layouts, roundabouts and structural bridge concepts. Prepared plans for the installation of Supplemental Guide Signs in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).

PERSONNEL: ***Ralph J Eppehimer, PE Cullen J. Ledet, PE, Newell H. Schindler, PE, Justin M. Guillot, PE Matthew J. Miller, PE, Michael D. House, PE***

17. Firm Experience:

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*		Bridge
Project name	**LA 1 Port Allen Bridge Replacement**		Firm responsibility (prime or sub?)		Prime
Project number	H.001234.6	Owner's name	Louisiana Department of Transportation and Development		
Project location	Port Allen, LA		Owner's Project Manager	Brian Delatte, PE	
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802, (225) 379-1823, Brian.Delatte@la.gov				
Services commenced by this firm (mm/yy)	01/2021	Total consultant contract cost ($1,000's)			$1,300
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)			$1,300

The project consisted of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 – 12' travel lanes and 2 – 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 – 12' travel lanes and 2 – 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 – 12' travel lane with 2 – 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB –ridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans.

M&M is responsible for the design, plans, quantities and cost estimate of the bridge structures from abutment to abutment including:engineering support was also included as part of this project.

1. Foundation Design, Plans and Details
2. Substructure Design including Piers, Columns and Bent Caps
3. Prestressed Girder Approach Spans including Exit Ramp
4. Main Channel Spans including Haunched
   Three Span Continuous Steel Plate Girder Main Span Unit over the ICWW
5. Abutments, wingwalls and approach slabs
6. Bridge Deck Drainage

PERSONNEL: ***Zolan Prucz, Ph.D., PE, Cullen J. Ledet, PE, Stacey Carr, PE, Jared Weisman, PE***

17. Firm Experience:

Firm name	**Urban Systems, Inc.**		Past Performance Evaluation Discipline(s)*	Traffic	
Project name	**LA 447 and I-12 Interchange Stage 0 Feasibility Study**		Firm responsibility (prime or sub?)	sub	
Project number	S.P. No.700-99-0440/701-65 1404	Owner's name	Louisiana Department of Transportation and Development		
Project location	Livingston Parish, LA		Owner's Project Manager	Connie Porter Betts, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-1297, Connie.Porter@la.gov				
Services commenced by this firm (mm/yy)	05/10	Total consultant contract cost ($1,000's)		$64	
Services completed by this firm (mm/yy)	01/11	Cost of consultant services provided by this firm ($1,000's)		$64	

The objective of this study was to identify safety and capacity improvements along LA 447 between the Winn-Dixie/Walmart Drive and Buddy Ellis Road/Quail Run Avenue including the diamond interchange of LA 447 at I-12. The close proximity between the I-12 westbound ramps and the intersection of Pendarvis Lane/Vera Mc Gowan caused difficulty merging and weaving to access the left turn lanes on LA 447. The proposed Our lady of the Lake Hospital was expected to significantly increase the traffic demand within the study area.

Urban Systems collected twenty-four (24) hour counts including vehicle classification data, turning movement counts and speed data. Speed data was reported to determine if speeding was a factor in intersection crashes and if speed limits are appropriate.

Urban Systems reviewed detail crash reports for the abnormal roadway sections and intersections with the study area and trends in the crash data were identified.

Urban Systems utilized existing traffic volumes, LADOTD growth rates and the Capital Regional Planning Commission travel demand model output to develop traffic projections.

Potential improvements to the corridor included widening; constructing a raised median; reconfiguring lanes at intersections; and improving traffic signal timing. Interchange configurations considered included:

- Modified Diamond interchange
- Single point urban interchange
- Partial cloverleaf interchange
- Roundabouts at the I-12 eastbound and/or westbound ramps
- Diverging diamond interchange

PERSONNEL: **Alison C. Michel, PE, Nicole H. Stewart, PE**

17. Firm Experience:

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	Louisiana Department of Transportation and Development		
Project location	Lafayette Parish, LA		Owner's Project Manager	Peggy Jo Paine, PE	
Owner's address, phone, email	PO Box 94245 Baton Rouge, LA 70804-9245, (225) 379-1065, Peggy.Paine@la.gov				
Services commenced by this firm	01/14	Total consultant contract cost ($1,000's)	unknown		
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. The project included upgrading a portion of US 90 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. These plans were updated during the construction phase of the project as unforeseen issues arose. 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. Additional traffic control plans were developed during the construction phase of the project as required by the contractor. 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 unique part of this TMP is that the initial models developed will continue to be modified throughout construction to analyze the not only each phase of construction, but also for any changes to the originally proposed sequence.

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. Mitigation strategies were also identified to minimize work zone impacts for incident management to increase construction zone safety.

PERSONNEL**: Alison C. Michel, PE, Nicole H. Stewart, PE**

17. Firm Experience:

Firm name	**Urban Systems, Inc.**		Past Performance Evaluation Discipline(s)*	Traffic	
Project name	**LA 1088 Interchange Route I-12**		Firm responsibility (prime or sub?)	Sub	
Project number	S.P. 700-26-0076	Owner's name	Louisiana Department of Transportation and Development		
Project location	St. Tammany Parish, LA		Owner's Project Manager	James E. Simmons	
Owner's address, phone, email	PO Box 94245 Baton Rouge, LA 70804-9245, (225) 379-1065				
Services commenced by this firm (mm/yy)	02/08	Total consultant contract cost ($1,000's)		Unknown	
Services completed by this firm (mm/yy)	05/09	Cost of consultant services provided by this firm ($1,000's)		$54	

Urban Systems was contracted to perform traffic analyses and permanent signage for the interchange of I-12 and LA 1088.

Traffic Analysis

Urban Systems conducted Level of Services (LOS) analyses using HCS 2000 for the Intersections of I-12/LA 1088; I-12/LA 59 and I-12/LA 434 for implementation and design years 2007 and 2027. Improvements to the analyzed section of I-12 as well as the respective interchanges/intersections were developed. Geometric improvements for the two intersections at I-12/LA 59 ramps were developed

A ramp merge/diverge junction analysis was done on I-12/LA 1088 for a proposed interchange. Urban Systems developed schematics of AM and PM peak hour traffic volumes at each of the following interchanges: I-12/LA 1088; I-12/LA 59 and I-12.LA 434.
Ramp diverge junction Level of Services (LOS) analyses were run on both the eastbound and westbound merge/diverge ramps for I-12/LA 59 and I-12/LA 434

Permanent Signage

The permanent signage design incorporated a review of existing interstate signage on I-12 from LA 59 to LA 434. Coordination with LADOTD was required to determine the sign legends for the new guide signs for the interchange.

The permanent signage plans were prepared for the interchange in accordance with DOTD Specifications and Standard Details using the latest version of GuidSIGN. The design of each sign included size, color, sign supports and placement.

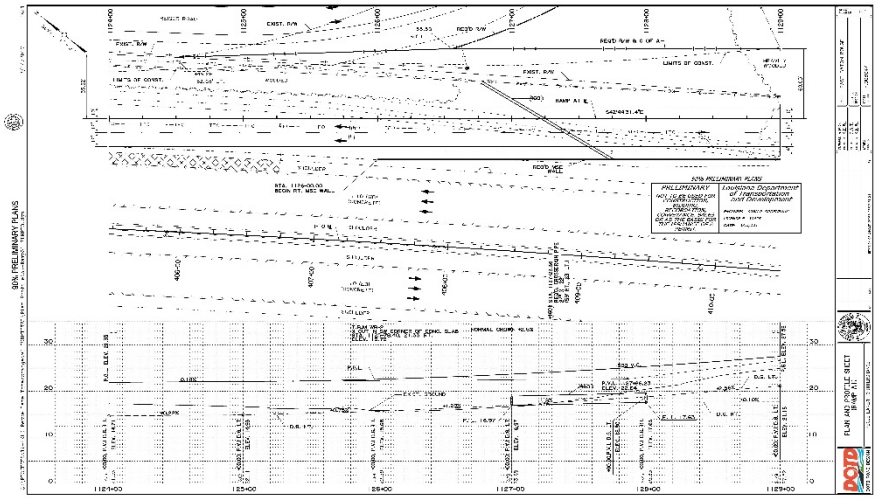
PERSONNEL: **Alison C. Michel, PE, Nicole H. Stewart, PE**

17. **Firm Experience:**

Firm name	**Civil Design & Construction, Inc.**		Past Performance Evaluation Discipline(s)*	Road	
Project name	**Pecue Lane I-10 Interchange, Baton Rouge, LA**		Firm responsibility (prime or sub?)	Sub	
Project number	H.003047	Owner's name	Louisiana Department of Transportation and Development		
Project location	Baton Rouge, LA		Owner's Project Manager	Brian Kendrick, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-1356, Brian.Kendrick@la.gov				
Services commenced by this firm (mm/yy)	02/16	Total consultant contract cost ($1,000's)		N/A	
Services completed by this firm (mm/yy)	06/19	Cost of consultant services provided by this firm ($1,000's)		#330	

Project Description:

The scope of this project includes the construction of an interchange with multiple through and turn lanes on Pecue Lane and entrance and exit ramp on both eastbound and westbound Interstate 10, replacing the current two-lane overpass bridge, replacing the Pecue Lane at Wards Creek Bridge, and extension of Reiger Road to a new intersection with Pecue Lane, Pecue Lane Extension connecting Reiger road with Old Pecue Lane and other work with the limits of the project.



CD&C's Role:

CD&C is providing engineering design services for Preliminary and now Final Plans of the West Bound Entrance-Ramp to I-10, the West Bound Exit-Ramp from I-10, the extension to Reiger Road and Pecue Lane Extension.

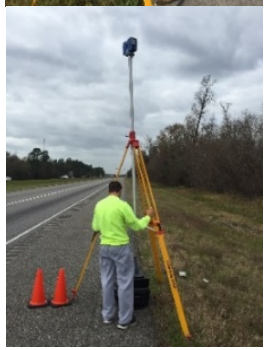
PERSONNEL: ***Karla Weston, PE***

17. **Firm Experience:**

Firm name	**Civil Design & Construction, Inc.**		Past Performance Evaluation Discipline(s)*	Survey	
Project name	**I-10 TX State Line East of Coone Gully**		Firm responsibility (prime or sub?)	Sub	
Project number	H.003184.5	Owner's name	Louisiana Department of Transportation and Development		
Project location	Calcasieu Parish, LA		Owner's Project Manager	Stanley Ard, PLS	
Owner's address, phone, email	1201 Capital Access Rd., Baton Rouge, LA70802/225-379-1232/Stanley.Ard@la.gov				
Services commenced by this firm (mm/yy)	10/15	Total consultant contract cost ($1,000's)		N/A	
Services completed by this firm (mm/yy)	12/18	Cost of consultant services provided by this firm ($1,000's)		$443	

Project Description: This was a 6-lane widening project on I-10 in Calcasieu Parish. The project limits extended from the foot of the Sabine River Bridge (approximately 0.5 miles east of the state line) to a point approximately 2000 feet east of the beginning of the existing 6-lane section (located East of Coone Gully). The survey width of the project was from apparent right of way to apparent right of way and 500 feet past the gore along each of the on and exit ramps.

- In 2018, CD&C was supplemented to extend the original limits of this survey approximately 1500' and to pick up several other areas of additional topographic updates.



CD&C's Role: CD&C performed a complete topographic survey in accordance with the Location and Survey Manual and all current accepted Location and Survey Automation Procedures for this project. A topographic survey was already completed at all bridge sites located within the limits. The survey included all utilities with depths and information, all drainage structures, and all survey DTM and improvement features that fell inside the survey limits. Due to traffic concerns **3D Terrestrial Scanning was utilized for the location of roadways and traditional means and methods were used to complete the topographic survey on this project.** The final submittal of the survey was a combination of the supplied data from LADOTD for the bridges with the current survey that was completed for this project.

PERSONNEL: *Karla E. Weston, P.E.; Ralph Burgess, PLS, Chris Ballard, Phil Dupree, Jacob Stoehr, Trent Norris, John Ewing, Scott Benton*

17. Firm Experience:

Firm name	**Civil Design & Construction, Inc.**		Past Performance Evaluation Discipline(s)*	Survey	
Project name	**I-10: LA 415 to Essen Lane on I-10 and I-12**			Firm responsibility (prime or sub?)	Sub
Project number	H.004100	Owner's name	Louisiana Department of Transportation and Development		
Project location	West and East Baton Rouge, LA		Owner's Project Manager	Nicholas Olivier	
Owner's address, phone, email	1201 Capitol Access Rd, Baton Rouge, LA 70802; (225) 379-1232, Brian.Kendrick@la.gov				
Services commenced by this firm (mm/yy)	01/18	Total consultant contract cost ($1,000's)		N/A	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$296	

Project Description: This project located in West Baton Rouge and East Baton Rouge Parishes in the cities of Port Allen and Baton Rouge, LA. A complete Topographic survey including all utilities (ASCE 38-02, QL "B") with depths and all drainage is required, along with Finish floor elevations of all buildings that fall within the survey limits. The survey begins 1,500 feet West of the western most entrance/exit ramps of the LA 415 and I-10 Interchange. From the I-10, I-12 split the survey shall proceed in southerly and easterly directions along the existing main alignment of I-10 for approximately 1.5 miles & I-12 for approximately 1.5 miles to end the route limits. **CD&C's Role:**

CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415. **This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every 500' for control verification and incorporation of the Mobile Lidar for the I-10 pavement.**

PERSONNEL: *Karla E. Weston, P.E.; Ralph Burgess, PLS, Christopher Ballard, PLS; Phil Dupree, Party Chief; Jacob Stoehr, Trent Norris, John Ewing*

18. Approach and Methodology:

Modjeski and Masters (M&M) has reviewed the Draft Report Stage 1 – Environmental Assessment, dated March 28, 2022 and we have a thorough understanding of the proposed improvements for the LA 447 Corridor as outlined below:

1. Widening of the LA 447 from I-12 East Ramp to Buddy Ellis Road to create a four-lane divided section providing access management.
2. Construction of a limited access intersection at Milton Lane/Miller Road as well as the realignment of Milton Lane and Miller Road.
3. Construction of roundabouts at the LA 447 intersections of O'Donovan Road and Buddy Ellis Road.
4. Construction of a three-lane section from Buddy Ellis Road to Joe May Road, along with the addition of a right turn lane at Joe May Rd.
5. Replacement of a 60' long bridge structure approximately 1,400' south of the Buddy Ellis and LA 447 intersection. (Structure No. 62322680106971)

M&M has assembled a highly qualified team for the LA 447 Corridor improvement project. As indicated in the Organizational Chart in Section 14 along with the resumes in Section 16, M&M has a highly experience staff with extensive LADOTD experience in road and bridge design. M&M's staff proposed for this project easily fulfill the four (4) Minimum Personnel Requirements. Joining the M&M Team for this project are the highly respected DBE Firms of Urban Systems, Inc. (USI) and Civil Design and Construction, Inc. (CD&C). CD&C will be responsible for acquiring any additional topographic survey required as determined by the design team. CD&C will also provide SUE services if required. USI will be responsible for preparing the Level 2 Transportation Management Plan (TMP) in accordance with EDSM No. VI.1.1.8 and providing assistance in the development of the traffic control.

Mr. Schindler will serve as Project Manager. Mr. Schindler has 40 years of experience in the management and design of infrastructure projects, 13 years of experience in the Road Design Section of LADOTD, and 27 years of experience as a Consulting Engineer which has included Project Management and design of a multitude of transportation improvement projects. He has extensive knowledge of current LADOTD and the American Association of State Highway & Transportation Officials' (AASHTO) policies and design procedures. In addition, Mr. Schindler supervised the design of a multitude of road and bridge improvement projects, including complex urban interstate, urban arterial, rural arterial, and minor bridge replacement projects. Projects included coordination with Traffic Engineers and the evaluation of traffic analyses to develop capacity and safety roadway improvements, including intersections and interchanges. He completed the course "National Environmental Policy Act (NEPA) and Transportation Decision Making,"

Survey

M&M will review the topographic survey provided by LADOTD. During the development of preliminary plans if it is determined additional survey is required, M&M's sub-consultant CD&C will acquire the additional survey data. CD&C will also be responsible for any required SUE services.

CD&C will ensure that the topographic survey shall adhere to all modern survey theory, practice, and procedures, and follow the latest version of the LADOTD Location and Survey Manual including typical surveying methods as applied by LADOTD. This includes all accepted horizontal and vertical control standards as stated in the manual. The LADOTD feature table code list and symbols shall be utilized and met with those included in the latest edition of the survey feature code guidebook produced by the LADOTD Location and Survey Section and Automation. 3D Terrestrial Scanning may be utilized in conjunction with traditional means and methods to capture topography as applicable for each site and will adhere to all LADOTD Standards as related to Terrestrial and Mobile Scanning. All deliverables will adhere to the Electronic standard as set forth by LADOTD.

Preliminary Plans

M&M will perform preliminary and final roadway and bridge design with support provided for traffic control from USI. The projects will be designed to new construction standards following AASHTO and LADOTD requirements. Services to be provided may include but are not limited to roadway horizontal and vertical alignment, pavement geometrics, drainage design, alternatives analysis as required, erosion control, ADA design compliance, guardrail layout, utility coordination, and quantity calculations. Temporary traffic control plans will be developed to ensure traffic safety for workers and roadway users during construction activities. Early in the design process, the design criteria to use for a project will be developed, with input from LADOTD, prior to initiating design activities. Roadway Engineers will assist in managing the flow of information between survey, roadway, utility, and right-of-way design. Roadway engineers` will also work in conjunction with the bridge engineer of record and other disciplines to ensure that all issues relating to the project are evaluated successfully. Plan preparation will adhere to LADOTD's drafting and software standards. Bentley Inroads and MicroStation software will be used for roadway design. ProjectWise will be used as the document management software for plan development to ensure integration with LADOTD and foster collaboration between different disciplines. The consultant team will develop a Level 2 Transportation Management Plans (TMP) in accordance with EDSM VI.1.1.8. The Consultant Team will coordinate closely with the LADOTD DTOE and District Staff to ensure a mutual understanding of local needs and that proposed mitigation measures are appropriate for the area. The Preliminary Plan flow is outlined below.

1. Upon contract execution and subsequent notice-to-proceed, M&M will begin gathering and reviewing all existing project data. This includes the topographic survey to be provided by LADOTD along with the Environmental Assessment (EA).
2. At the project Kick-off meeting M&M will provide the following:
    a. Draft Road Design Report based on the 2017 "Minimum Design Guidelines

b. Draft Bridge Design Criteria based on Chapter 3 of BDEM
c. Detailed proposed schedule in a GANTT Chart format

3. M&M will provide LADOTD with meeting minutes within one week of the kick-off meeting
4. 30% Preliminary Plan submittal will include:
    a. Title Sheet
    b. Preliminary Typical Sections
    c. Plan & profile sheet with existing topo
5. 60% Preliminary Plan submittal will include:
    a. Preliminary Design Reports
    b. Title Sheet
    c. Typical Sections
    d. Plan /Profile with Horizontal and vertical alignments
    e. Geometric Details
    f. Hydraulic Design
    g. General Bridge Plan
    h. Cross Sections
6. 95% Preliminary Plan (Plan-in-Hand) submittal & the 100% Preliminary Plan Submittal will include:

ROADWAY	BRIDGE
• Title Sheet • Typical and Details • Summary of Estimated Quantities • Misc. Details & General Notes • Reference Points and Bech Mark Elevation Sheets • 1”=20’ Plan/Profile Sheets (with subsurface drainage) Four-lane segment • 1”=20’ Plan/Profile Sheets (open ditch drainage) Three-lane segment • Existing & Design Drainage Maps • Temporary Erosion Control • Geometric Details • Temp. Const. Signs, Suggested Seq. of Construction • Cross-Sections (Earthwork)	• Bridge Index • General Notes • General Plans • Typical Sections • Superelevation Diagram • Construction Phasing Details • Traffic Control Details • Foundation/Pile Layout • Pile Loads and Details

ROADWAY	BRIDGE
• Geometric Details	

Prior to all submissions, design and production documents will be thoroughly checked in accordance with the M&M QC/QA policy included in Section 21 of this submittal and the LADOTD Bridge Design Section policy on QA/QC.

Additional Services

It is our understanding that the scope of services and compensation for Stage 3: Final Plans and Stage 5: Construction Support Services (CRS) will be established by supplemental agreements to this contract. Our Team's extensive portfolio and expertise cover all of the tasks required in the Stage 3 Final Plans and Stage 5 CRS phases.

Proposed Schedule

Stage 3 Services: Preliminary Plans - 52 Weeks after NTP
Stage 3 Services: Final Plans – 52 Weeks after NTP
Stage 5 Services: Construction Time + 90 Days

19. Workload:

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

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

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

Firm(s)	Past Performance Evaluation Discipline(s) *	State project number	Project name	Remaining Unpaid Balance**
Modjeski and Masters, Inc.		**S.P. 700-66-0461 H.005358.5**	**Bridge Scour Analysis Statewide**	
		S.P. 700-66-0486	**Engineering Services for Bridge Preservation Retainer 440000668, Statewide**	
	Bridge	H.009479	West Larose Vertical Lift Bridge Rehabilitation - Supplement No. 2	$332
	Bridge	JN 3144	Expert witness services in bridge design, construction, repair and forensic analysis	$274,617
		Retainer Contract 4400002538	**Engineering Services for Bridge Preservation Retainer Statewide**	
	Bridge	H.010882.5	LA 18: 4th Street Bridge Rehabilitation (Supplement No. 2) Construction Services Jefferson Parish	$0

	Bridge	H.010882.6	4th Street Bridge Rehabilitation Paint (Supplement No. 3) Route LA 18	$7,136
	Other	H.003014.6	I-10: LA 347 to Atchafalaya Fldwy Bridge (Const. Svcs.)	$16,430
Modjeski and Masters, Inc.		**Retainer Contract 4400005395**	**Construction Engineering and Inspection with Painting Statewide**	
	CE&I/OV	H.011705.6	US 11 Lake Pontchartrain Bridge Rehabilitation - Phase 2	$0
	CE&I/OV	H.011494.6	US 90 Atchafalaya River Bridge Rehabilitation	$29,341
		Retainer Contract 4400004921	Complex Bridge Rating (on-system trusses and other complex bridges) Statewide	
	Bridge	H.009859.5	Ten Truss Bridges - Load Rating and Evaluation	$63,337
	Bridge	H.009859.5	Sunshine Bridge Load Rating after Collision Repair - Task Order 4	$13,605
	Bridge	H.012485.1	Load Rating of 354 Off-System Bridges - Task Order 6	$0
	Bridge	H.009859.5	Load Rating of 14 Complex Bridges	$291,984
		Retainer Contract 4400005774	**Retainer Contract for Bridge Preservation Statewide**	
	Bridge	H.001234.5	Port Allen Canal Bridge	$64,231
	Other	H.010601.6	I-10: LA 328 to LA 347 - CRES	$47,334
	Other	H.011137.5	I-12: LA 1077 to US 10 Roadway and Navigation Lighting	$38,002
		IDIQ Contract 4400012382	**ID/IQ for Bridge Preservation Statewide**	
	Bridge	H.011705.6	US 11: Lake Pontchartrain Bridge Rehab Phase 2 (HBI)	$0
	Bridge	H.012343.6-1	LA 70: Mississippi River Bridge Phase III	$25,598
	Bridge	H.013179.6	LA 1064: Little Natalbany River Bridge Replacement - Construction Svcs.	$14,727
	Bridge	H.013183.6	LA 16: Tangipahoa River Bridge Replacement - Construction Svcs.	$33,963
	Bridge	H.013193.6	US 61: Thompson Creek Bridge - Construction Svcs. Rehabilitation and Replacement	$804
	Bridge	H.013829.5	I-10 and LA 47: Overhead Sign Upgrade	$0
	Bridge	Task Order No. 2	LG Bridge Design Example and Parametric Studies	$74,644

	Bridge	H.012343.6	LA 70: Mississippi River Bridge Phase III - Legal	$13,787
	Bridge	H.000303.6	Danzinger Bridge Rating and Repair	$54,259
	Bridge	H.009859.5	Strengthening of US 90 Bridge 201810	$81,310
Modjeski and Masters, Inc.	Bridge	H.003144.6-2	Luling Bridge Cable Stay Replacement Project	$463,624
	Other	H.011235	Subconsultant: I-49 South at Verot School Road - Lighting	$32,989
		H.004791	Subconsultant: Belle Chasse B7T Replacement P3 - Electrical and Structural	$52,786
		IDIQ Contract 4400017263	**ID/IQ for Bridge Preservation Statewide**	
	Bridge	H.010603.6	I-20 Mississippi River Bridge at Vicksburg - Monitoring	$0
	Other	H.013866.6	I-12: LA 21 to US 190 Navigation Lighting & Roadway Lighting	$74,084
	Other	H.003184.6	I-10: Texas State Line - E. of Coone Gully - CRES	$70,639
	Bridge	H.011485.6	LA336-1: Bayou Teche Bridge Rehabiliation	$118,284
	Other	H.012889.5	I-20 Rehabilitation - Roadway Lighting (Pines Road to I-220)	$117,659
	Bridge	H.000263.5	Chef Menteur Pass Bridge & Approach	$27,466
	Bridge	H.011965.5	LA 47: IWGO Bridge Rehabilitation (HBI) LA 47: Over the Intercoastal Waterway Gulf Outlet (IWGO)	$15
	Bridge	H.009859.5	Prien Lake Bridge Structural Rating	$18,259
	Bridge	H.004420.5	Barataria Preliminary Fender Design	$2,120
	Bridge	H.014280.5	Bayou Ramos Bridge Girder Study	$48,779
	Bridge	H.014673.5	I-49 US 165 Debonded PPC Girder Rehab	$178,849
	Bridge	H.014587	LA 302: Kerner Ferry Bridge Repairs PH 2 - Constr Support	$74,912
	Bridge	H.013946.6	Sunshine Bridge Fender Construction - 2021	$74,536
	Bridge	H.009859.5-2	Load Rating of two existing bridges	$166,483
	Bridge	H.004420.5	Bayou Barataria Bridge at Jean Lafitte - Supp 1	$681
	Bridge	H.014406.6	Houma Navigation Canal Swing Bridge - Electrical Repair CRED	$27,778
	Bridge	H.014673.5-2	NSFRP Specification Review	$9,926

	Bridge	H.004100	Subconsultant: LA 415 to Essen Lane on I-10 and I-12 CMAR RCP Plans	$1,596,996
	Bridge	H.001234.6	LA 1: Port Allen Canal Bridge Replacement - Phase 1 CRES	$227,569
Modjeski and Masters, Inc.		**IDIQ Contract 4400020063**	**ID/IQ for Electrical Services Statewide**	
	Bridge	H.014212.6	I-10 Atchafalaya Bridge Navigational Lights Repl	$71,114
USI	Traffic	H.011309.5	Mac Arthur Final Design	$30,687
	Traffic	H.012812	US 190: Northshore and Camp Villere	$11,014
	Traffic	H.004891	Reserve to I-20 Connector	$50,137
	Traffic	H.010571	Williams Traffic Signal Design	$19,499
Civil Design & Construction, Inc.	Survey	4400017597	Rural Bridge Replacement Initiative (Districts 03, 07, 61, & 62)	$4,335
	Survey	4400017091/ TO-2	LWI Statewide Modeling R5 – Task Order #2	$96,970
	Survey	4400017091/ TO-3	LWI Statewide Modeling R5 – Task Order #3	$246,123

(Add rows as needed) DO NOT SUM

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

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

20. Certifications/Licenses:

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

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.

CONTRACT NO. 4400024641
LA 447 CORRIDOR
STATE PROJECT NO. H.005734
F.A.P. NO. H005734
ROUTE LA 447
LIVINGSTON PARISH

QUALITY CONTROL / QUALITY ASSURANCE PLAN FOR BRIDGE DESIGN

Prepared For:

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Prepared By:

MODJESKI and MASTERS

July 19, 2022

M&M QUALITY CONTROL / QUALITY ASSURANCE PLAN

GENERAL

Quality is obtained when design and/or rating calculations, plans, specifications and reports, correspondence, invoices and oral communication, related to a particular project, are delivered to the owner in an accurate, error-free, professional, and timely manner, and in a presentation consistent with the owner's requirements.

Modjeski and Masters Quality Management Plan relates to both the technical and administrative aspects of the full engineering service life cycle of a project, including proposal preparation, staffing, design activities, field activities, internal and external communication, project review, field operations, including inspection and construction observation, and document storage. The plan is applicable to all engineering services offered by the firm including: bridge design, bridge rating, highway design, bridge rehabilitation, bridge inspection, mechanical design, electrical design, instrumentation, geotechnical investigations/design, construction consultation, inspection of construction, research and code development. Checklists and forms are often developed to monitor special needs of the owner and/or a specific engineering activity.

PROJECT

The work in this project shall consist of providing engineering and related services to design roadway improvements along LA 447 between I-12 East Ramps and Joe May Road.

The improvements are listed below:

- Widening of LA 447 from I-12 East Ramps to Buddy Ellis Road to create a four-lane divided section.
- Construction of a limited access intersection at Milton Lane/Miller Road as well as re-alignment of Milton Lane and Miller Road.
- Construction of roundabouts at the intersection of O'Donovan Blvd at LA 447 and Buddy Ellis Road at LA 447.
- Construction of a three lane section on LA 447 from Buddy Ellis road to Joe May Road and adding a southbound right turning lane at Joe May Road.

o Replacement of an existing 60' long bridge structure approximately 1,400' south of the Buddy Ellis and LA 447 intersection.

Consultant shall develop a Level 2 Transportation Management Plan (TMP) in accordance with EDSM No. VI.1.1.8.

The scope of work will include all engineering services necessary for Stage 3, Design: Preliminary Plans.

Stage 3, Design: Final Plans and Stage 5, Construction Support will be initiated by a supplemental agreement in the future if necessary.

INITIAL SERVICES

STAGE 3, DESIGN

- Preliminary Plans

The services to be performed by the Consultant under this contract are described more specifically as follows:

Preliminary Plans

Preliminary Plans shall consist of all engineering services required for the completion of Preliminary Plans and cost estimates for the Project. Specifically, the work under this section consists of the following major items:

1. Prior to submitting any document to DOTD for review and comment, the Consultant shall complete detailed checks of all work product and peer reviews of substantial deliverables and specialized analyses. Detailed checks shall be completed by a staff person who is not directly associated with the development of the work product.
2. The Consultant shall review the topographic survey provided by DOTD. If the consultant determines that additional topographic survey is required, the consultant shall notify DOTD prior to beginning plan development.
3. The preparation of location plans for subgrade soil borings that, in the judgment of the Consultant, may be necessary for design of the Project. The Consultant shall also prepare additional location plans as may be required by DOTD for conducting additional borings deemed necessary by DOTD.
4. Project kick off meeting, design/production meetings, site visit(s) as required.
5. Preparation and submittal of design criteria, QA/QC plan document, and Preliminary Plans
6. The preparation of Preliminary Plans for the Project shall be in accordance with the requirements outlined in the current editions of DOTD's Roadway Design Procedures and Details Manual and Hydraulics Manual. Design for Preliminary Plans shall be done in English units of measurement. Statements in the Manuals which may be in conflict with requirements specified in the main body of this contract shall be considered as superfluous information and not applicable to this contract. At the 30%, 60%, 90%, and 100% Preliminary Plans stages, plans shall be submitted to the Project Manager through ProjectWise upload for preliminary examination and comments after they have been developed to show all information required for inspection. Upon receipt of any such comments, the Consultant shall revise the plans accordingly. The Consultant shall submit to the Project Manager all computer-generated original reproducibles of the Preliminary Plans. The Plans shall be dated and stamped "Preliminary" for further review, and for DOTD's use in developing the prints necessary for a complete Plan-in-Hand field inspection with members of DOTD and other interested parties, when so named herein, at a time and date mutually agreed to in advance by all parties.
   Subsequent to the Plan-in-Hand inspection, the Consultant shall make all changes in the plans, as necessary, to reflect agreements reached at this Stage. The plans shall show the existing right-of-way and any taking lines required for additional right-of-way, and shall be referenced to the centerline of the Project. The Consultant shall then submit revised computer-generated original reproducibles of the plans to the Project Manager.
   Specifications for the Project shall be in accordance with the latest edition of Louisiana Standard Specifications for Roads and Bridges, amended to comply with the current practices of DOTD.
7. The preparation and submittal of (but not limited to) the following:
   a. Engineer's Estimates based on estimated quantities developed for each submittal of Preliminary Plans.
   b. Special Provisions and Non-Standard Pay Items (if required).
   c. Design Report and QA/QC Certification (with all signatures).
   d. Documentation of all Required and Approved Design Waivers and/or Exceptions.

8. The design format for this improvement shall comply with the criteria prescribed in 23 CFR 625, Design Standards for Highways. The format of the plans shall conform to the standards used by DOTD in the preparation of its contract plans for items of work of similar character, including plans for all drainage and utilities affected.
9. The Consultant shall conduct an in-depth field investigation of the existing conditions of the structure and have a clear understanding of the structure health and its serviceability. Take note of any site conditions that may hinder construction of the new structure.
10. The Consultant shall prepare bridge design criteria and submit it to DOTD for approval prior to proceeding with the bridge design.
11. The Consultant shall prepare preliminary bridge plans in accordance with approved design criteria and determine how traffic will be maintained during construction.

Roadway Plan Development

The Consultant shall provide preliminary roadway plans for the project including, but not limited to:

- Title Sheet
- Typical Section and Details
- Summary of Estimated Quantities
- Misc. Details & General Notes
- Reference Points and Bench Mark Elevation Sheets
- 1”=20’ Plan/Profile sheets (with subsurface drainage and open ditch drainage)
- Design Drainage Maps
- Temporary Erosion Control
- Geometric Details
- Temp. Const. Signs, Suggested Seq. of Construction
- Cross-Sections (earthwork)
- Geometric Details

Bridge Plan Development

The Consultant shall provide preliminary bridge plans for the project including, but not limited to:

- Bridge Index
- General Notes
- General Plans
- Typical Sections
- Superelevation Diagram (if necessary)
- Construction Phasing Details
- Traffic Control Details
- Foundation/Pile Layout
- Pile Loads and Details

ADDITIONAL SERVICES

The scope of services, compensation and contract time for future engineering services to provide the following services will be authorized by Supplemental Agreement(s). **The Consultant cannot proceed to final plans until environmental has been cleared.**

- Stage 3, Final Plans, if required, shall be authorized by Supplemental Agreement.
- Stage 5, Construction

Construction Support, if required, shall be authorized by Supplemental Agreement.

QC/QA POLICY

Modjeski and Masters' Team QC/QA policy is to meet or exceed the QC/QA requirements of the following documents, in addition to those described in this document.

1. LADOTD Bridge Design and Evaluation Manual, Published on November 17, 2014 and latest revisions.
2. "Guidance on QC/QA in Bridge Design in Response to NTSB Recommendation (H-08-17)" (FHWA/AASHTO Guidance), which was published by FHWA and AASHTO in August 2011
3. LADOTD Construction Plans Quality Control / Quality Assurance Manual
4. EDSM No. Volume I. 1.1.24 on Plan Quality
5. Bridge Design Technical Memoranda (not part of the LADOTD BDEM)
6. Louisiana Standard Specifications for Roads and Bridges, Latest Edition
7. LA DOTD Illumination & Electrical Standards
8. LADOTD "A Guide to Constructing, Operating, and Maintaining Highway Lighting Systems"
9. ANSI/IES RP-8, Latest Edition
10. LADOTD Electrical Plan Layout and Presentation
11. National Electrical Code (NFPA 70)
12. Standard for Electrical Safety in the Workplace (NFPA 70E)
13. AASHTO Design Guides

QC/QA requirements for bridge design and preparation of plans and specifications are described in detail in the LADOTD Bridge Design and Evaluation Manual and the LADOTD Bridge Design Section QC/QA, and these policies will be fully adhered to by all team members. This document is consistent with and complements the LADOTD Bridge Design and Evaluation Manual and the LADOTD Bridge Design Section QC/QA.

A Quality Assurance Certification will be provided at the completion of each task using the Department's QC/QA Certification Form (LADOTD BDEM Chapter 3, Appendix D) and Certification Form (LADOTD BDEM Chapter 3, Appendix I). See Attachments 5 and 3, respectively.

DEFINITIONS

Quality Control (QC): A process of applying systematic procedures to ensure accuracy and consistency during electrical design calculation, electrical inspections, analyses and ratings and their documentations. It includes procedures for checking the accuracy of the calculations and consistency of design drawings, detecting and correcting design omissions and errors before the drawings are finalized, and verifying the design criteria have adequately been applied, and any past changes to the electrical system have been considered. QC is to be applied to all stages of the electrical analysis, design, including plan and document reviews related inspections and instrumentations. QC is to be applied also to verifying the specifications for the electrical service equipment are adequate for the service and operations loads.

Quality Assurance (QA): A systematic process aimed to ensure that the quality control process was followed during the development of electrical design plans, specifications, inspection and instrumentation reports. It includes procedures of reviewing the work to ensure that quality control is in place and effective in preventing mistakes and providing consistency in the development of electrical design plans, specifications and reports.

Supervisor or Team Leader: Project Manager or task assignee, responsible for overseeing the project and the personnel assigned to the project.

Design Engineer: Engineer, licensed by the State of Louisiana as a professional engineer or certified as an engineering intern, directly responsible for the development of design calculations, reports, drawings and other related documents with a level of technical skills and experience commensurate with the complexity of the subject structure.

Detailer: Engineer or technician directly responsible for the creation and development of CAD drawings.

Design Checker: Engineer responsible for performing a full technical review of the electrical analyses, design calculations, reports, drawings, specifications and cost estimate with a level of technical skills and experience commensurate with the complexity of the subject structure. If the information being checked was developed by an engineering intern, the design checker shall be an engineer licenses by the State of Louisiana as a professional engineer.

Detail Checker: Engineer or technician responsible for performing a full review of the CAD drawings ensuring that the drawings are in accordance with the design information and CAD standards.

Reviewer: Engineer, licensed by the State of Louisiana as a professional engineer, responsible for performing QA procedures for assuring that QA procedures have been performed as outlined in this policy and in accordance with LADOTD Bridge Design practices, policies and

procedures. The Reviewer must have substantial technical skills and experience in the design of similar electrical systems and be independent of production.

Engineer of Record: The Engineer of Record, licensed by the State of Louisiana as a professional engineer, is responsible for the design shown on the plans and/or other deliverables and whose seal appears on the title sheet of the plans and/or deliverables. He typically ensures that the QC/QA certifications are signed by all parties, all design calculations and reports are included, and the names of all personnel are correctly shown.

Independent Technical Reviewer: Engineer who completes an independent review of the design calculations and is part of the consultant team. Independent Technical Reviewer must have experience reviewing tasks that meet or exceed those of the designer and or checker.

Peer Review: Engineering group with no prior involvement in the project, performing an independent check of the design calculations and results. Peer reviewers may not be employed by the same consultant.

RESPONSIBILITY AND AUTHORITY

Modjeski and Masters (M&M), as the Prime Consultant, will be fully responsible for QC/QA of their work as well as the work of all Sub-consultants. All project submittals will include a QC/QA certification that the submittals meet the requirements of the QC/QA plan document. The LADOTD shall not perform QC/QA of the consultant's work and the responsibilities of the LADOTD for consultant projects shall be limited to those listed in the LADOTD Bridge Design and Evaluation Manual.

The Principal-In-Charge (PIC) and Project Manager (PM) assigned to the Retainer will be responsible to ensure that the requirements of this QC/QA Plan are met by all members of the M&M Team. M&M will be assisted by four (4) Sub-consultants for this work:

Sub-Consultant	**Services Provided**
Urban Systems, Inc.	Transportation Management Plan and Traffic Control
Civil Design & Construction, Inc.	Surveying & SUE

Principal-In-Charge (PIC) in consultation with the Project Manager (PM) will assign a Supervisor/Team Leader, Design Engineer, Detailer, Design Checker, Detail Checker and Reviewer to each task order, with a level of technical skills and experience commensurate with the complexity of the structures included.

A specific organizational structure will be developed for each task order outlining responsibilities for every role of the project. See Attachment 1 for the overall organization structure.

Sub-consultants are required to follow the same QC/QA Plan. Modjeski and Masters will assist the Sub-consultants with their QC/QA activities by:

- Meeting with each Sub-consultant to go over this QC/QA Plan and its implementation
- Conducting technical meetings
- Providing and coordinating technical assistance
- Providing training materials
- Developing checklists and standard forms specific to each task order
- Performing quality audits

QC/QA PROCESS CONTROLS

a. Project Initiation

During the initial identification and proposal phase of each task order the Principal-in-Charge (PIC) and Project Manager (PM) determine the personnel that will be assigned to the project and their responsibilities. When possible, these individuals will participate in the initial conceptualization of the project and manpower estimating, as these initial activities identify the path to project completion. Design tasks shall be assigned to engineers qualified by virtue of education and/or experience commensurate with the complexity of the subject project.

At the immediate initiation of the project, the PM will prepare a project schedule indicating the major milestone dates and deliverable dates on the project and, if required, submit it to the LADOTD for approval.

The staff assigned to the project will include an appropriate Supervisor/Team Leader, Design Engineer, Detailer, Design Checker, Detail Checker and Reviewer. Additional senior staff with experience related to the project will be assigned where appropriate. As additional staff joins the project, they will have a designated mentor among the senior staff to act as the first source for advice and counsel on technical and administrative matters. The technical scope of work contained in the Agreement will be made available to all individuals working on the project.

b. Project Design Criteria

Design criteria specific for each project will be developed by the PM prior to initiating the design process and will be submitted to the LADOTD for review and approval. Any design

assumptions made or design exceptions obtained will be listed in the design criteria and referenced in the design calculations and drawings as appropriate. A design criteria checklist as developed by the LADOTD is included in Attachment 7.

c. Development of Designs and Plan Details

During the design phase, the design engineer will follow the design criteria established for the project. Electrical/Photometric analyses and preliminary plans will be developed first and approved by the PM prior to proceeding with the design of structural components. The design calculations will be organized and maintained in a standard calculation book format. The calculation book checklist as developed by the LADOTD is included in Attachment 8. The design engineer will communicate and coordinate with the detailer and supervise the detailing work to ensure that the drawings adequately and accurately present the design information.

d. Quality Control of Designs and Plan Details

All work will be checked in order to minimize errors. If the design engineer is an engineer intern, the design checker will be a professional engineer registered in the State of Louisiana. The design checker will verify the accuracy of the designer's calculations, pay items, quantities, special provisions including Non-Standard Items, and cost estimate and will also ensure that the drawings adequately and accurately present the design information. The designer's calculations are considered the calculations of record and will be updated to correct any errors or omissions discovered by the design checker.

The detail checker will ensure that the drawings are in accordance with the design information and CAD standards. In addition, all dimensions and quantity calculations will be verified.

After the completion of the design and detail check (which shall be completed no later than the 95% Final Plans stage), the designer will prepare and provide to the Reviewer a QA information package which includes the following:

- QA information package check list (see Attachment 9)
- Calculation Book(s)
- Plans
- Special provisions including Non-Standard Items
- Cost Estimate
- Any other relevant documents (checklists, review comments, etc.)

e. Quality Assurance of Designs and Plan Details by the Reviewer

The Reviewer for M&M will perform a cursory review of all documents in the QA information package focusing on the following items:

- Constructability of the Plan Details
- Areas of Critical Importance
- Areas where mistakes are typically found
- Areas that are new to the design practice

After all issues discovered during the QA process are rectified, the design calculations, plan details, special provisions and cost estimate shall be considered as final and the QC/QA certification (see Attachment 5) shall be signed by the designer, design checker, detailer, detail checker, and reviewer.

f. Peer Review

When requested by the LADOTD Bridge Design Engineer Administrator, M&M will conduct peer reviews by team members or engage the services of a Sub-consultant licensed by the State of Louisiana as a professional engineer to perform a peer review. The Sub-consultant chosen for the peer review will have no prior involvement in the project but will have substantial experience in the design of similar structures. All peer review comments will be submitted to the LADOTD and the design team for evaluation and resolution. All resolutions agreed upon by the designer, peer reviewer and the LADOTD will be incorporated into the final design. A Peer Review Resolution agreement (see Attachment 10) will be signed by the peer reviewer, the PM and an LADOTD representative.

g. Sealing of Design Calculation Book and Plans by the Engineer of Record (EOR)

In addition to the previously defined requirements for the Engineer of Record, the Engineer of Record shall be responsible for the following tasks:

- Ensure the QC/QA certification is signed by all responsible parties.
- Ensure the geotechnical design information shown on the plans is co-stamped by a Geotechnical Engineer and the hydraulic information shown on bridge plans is co-stamped by a Hydraulic Engineer. When more than one engineering stamp is required on a sheet, the responsibilities for each engineering stamp shall be clearly defined.
- Assemble design calculations from all designers including the final geotechnical analysis report and the hydraulic report from the geotechnical engineer and the hydraulic engineer, finalize the calculation book, and seal the cover sheet of the calculation book.
- Ensure the names of the designer, design checker, detailer, detail checker, and reviewer are correctly shown on the title block of each plan sheet.
- Stamp all plan sheets or designate a designer, design checker, or reviewer who shall be licensed by the State of Louisiana as a professional engineer to stamp the sheets developed under their supervision.
- The EOR must stamp the general notes sheets.

- Ensure all special provisions are accurately shown on the construction proposal. The special provisions are typically stamped by the Specification Engineer as part of the construction proposal; however, if the Specification Engineer is not qualified or not willing to stamp the special provisions, the EOR will stamp these provisions.
- Archiving all bridge design files including calculation books, plans, special provisions, cost estimate and other pertinent documents in accordance with the LADOTD Bridge Design Section records retention policy.

i. QC/QA for Design Activities after Final Plans are Signed by the Chief Engineer

The same QC/QA process above shall be applied to all design activities such as plan revisions, change orders, etc. occurring after the final plans are signed by the Chief Engineer.

j. Archiving Electrical Design Files

The PM will deliver all electrical design files to the LADOTD Bridge Task Manger no later than 30 calendar days after the stamped final plans are delivered. Any revisions made to these documents due to plan revisions and change orders will be delivered with the signed plan revisions or change order sheets. The final calculation book and other final design documents for all projects including in-house and consultant projects will be uploaded to the archiving location designated in the record retention policy within 30 calendar days after the stamped final plans are delivered.

k. Project Monitoring and Coordination

The PM will monitor the state of the project's progress, any unique technical issues that need to be resolved, and anticipated needs for increased or decreased staffing and report to the PIC.

The PM will be responsible to see that M&M internal minutes are kept at meetings with the LADOTD, Sub-consultants, and in-house project meetings. All the technical information in the minutes will be made available to all individuals working on the project. Where action is required, an individual will be identified as having been assigned that responsibility and a place shall be provided for the PM to indicate when that action has been completed.

All telephone contacts with the LADOTD, fellow design team members or Sub-consultants which lead to decisions or assignments will be recorded on a telephone log sheet. The telephone log sheet will be circulated to all individuals involved, and will become part of the correspondence file for the project (See Attachment 2 for an example telephone log). The log's project title and task order number will be edited as required for each project.

The PM will be responsible for establishing and maintaining a task list, which will identify the anticipated tasks, the team leaders, design engineers, detailers, design checkers, detail checkers and reviewers.

The PIC and the PM are responsible for being current with the project as it develops and for resolving all comments made by the LADOTD and document the resolution.

The PM, or his/her discipline reviewer designee, is responsible for overall quality assurance of the project deliverables.

All calculations and reports, which become superseded during the course of the project, will be clearly identified as being superseded and will be filed separately from the current work. Superseded work will not be discarded until the end of the project.

State-of-the-art computer hardware and software will be used to monitor and track the project development process. The software packages to be used are Microsoft Excel and Deltek Vision.

l. Communication Plan

All project team communication will flow through the PM or his/her team leader designee. This includes all communication with the LADOTD and Sub-consultants.

The methods of communication to be used, listed in order of decreasing preference, include: face to face (not feasible in many cases), telephone, e-mail, express mail and regular mail.

m. Electrical Related Inspections and Instrumentations

All field activities will be conducted by certified inspectors and will be supervised by a Registered Professional Engineer. The PM will identify one member of a field party to serve as a Safety Officer. It will be the Safety Officer's responsibility to:

- Identify local emergency services prior to the start of field work
- Review inspection and field safety requirements of the client, OSHA and Modjeski and Masters, Inc. with the field crew prior to the start of work,
- Verify that safety equipment is being properly used, and
- Supervise any accident reporting that may be necessary.

All field activities will be summarized in a report. Depending on the type of project, this report may be a memorandum to the files or a formal report to be submitted to a client. All reports will contain sufficient descriptions, measurements, sketches, or photographs to document conditions found and will undergo QC/QA reviews.

n. Construction Support Phase

All design activities in the construction support phase will also adhere to the requirements and policies described in this document. These activities include but are not limited to the following:

- Providing responses to Requests for Information (RFI)
- Reviewing Shop Drawings
- Development of Plan Changes/Change Orders

M&M will ensure timely responses to RFIs submitted by the Contractor and/or the LADOTD. M&M will also ensure that the design engineers and/or design checkers from the design phase will participate in the RFI response process.

M&M will ensure that the design engineers and/or design checkers from the design phase will participate in the shop drawing review process. Shop drawings will be reviewed to ensure compliance with design details and project requirements included in the plan drawings. M&M will also review the submitted shop drawings for compliance with the requirements set forth in the Louisiana Standard Specifications for Roads and Bridges. All comments will be returned to the Contractor for agreement, resolution and drawing revisions. Stamps to be applied to shop drawings during the intermediate and final review will adhere to the policies set forth in Bridge Design Technical Memorandum No. 75 and the Louisiana Standard Specifications for Roads and Bridges, Latest Edition.

M&M will also distribute the final shop drawings according to the distribution list provided by the LADOTD Project Manager or LADOTD Bridge Task Manager. Shop drawing distribution letters as provided in BDTM.75 will be used for each distribution.

Plan changes will adhere to all requirements and policies set forth in this document including the CAD Standards and Electronic Deliverables Policy.

SUB-CONSULTANTS

The Sub-consultants for a given task order and their general responsibilities under the contract are to be listed in Attachment 4 of this document.

Upon receipt of Notice-To-Proceed from the LADOTD, the PM will provide and confirm with each Sub-consultant, the scope of services and upper budget limit for the work. Invoicing procedures will be provided to expedite the billing process.

Each Sub-consultant will be asked to provide monthly status reports, which will include a summary of the progress to-date, and which will identify any issues encountered with its work during the period, any decisions or information from M&M that is delaying completion of its

work, and the anticipated work for the next reporting period. Each Sub-consultant will be asked to provide interim results of their work, so that M&M can assess the information completed to-date, and either confirm that the task is being completed as scoped, or make the necessary adjustments to ensure that the work is being performed as scoped. All results provided by the Sub-consultants will be reviewed by the appropriate M&M staff prior to the information being used for preparation of deliverables to the LADOTD.

Internal team meetings will be held on a routine basis, and may or may not include all Team members, depending on the major tasks underway at that point in the schedule. Meeting minutes will be recorded and distributed by M&M to the Sub-consultants as deemed appropriate.

Information provided by the LADOTD will be assessed by M&M, and forwarded to the Sub-consultant as necessary for information and action.

ELECTRONIC DELIVERABLES

M&M will produce all electronic deliverables in conformance with the DOTD Software and Deliverables Standards for Electronic Plans document (see Attachment 11). In addition, M&M will ensure that all Sub-consultants submit their electronic deliverables in conformance with the same standards.

M&M and all Sub-consultants will upload or check-in electronic deliverables directly into the LADOTD ProjectWise repository at each plan delivery milestone. In addition, M&M will perform the following operations at each milestone:

- Upload or check in CAD plan deliverables to the discipline “Plans” folder
- Apply and maintain indexing attributes to CAD plans (and other deliverables as needed)
- Publish to PDF format plan submittals in ProjectWise using automated publishing tools
- Digitally sign PDF format plan submittals in ProjectWise according to LADOTD standards and procedures. Signatures will be applied in the appropriate signature blocks with electronic seals and Title Sheets.
- Provide ControlCAD reports in ProjectWise and utilize these reports to correct indexing attributes and CAD standards of all electronic .DGN files.

M&M will apply patches to CAD Standard Resources and install updates to software as needed. In addition, M&M will install major updates to software versions and CAD Standard Resources in a timely manner or as directed by the LADOTD.

IDENTIFYING NON-CONFORMING WORK

The Project Manager or his/her designee will monitor day-to-day activities of the Design Team to confirm that the work is being performed as described in the scope of services and maintains the quality level expectations for the project, and it is within the established budget constraints. Discipline team leaders and reviewers will conduct quality control reviews at regularly scheduled intervals between and up to major milestone submissions throughout the course of the project. The schedule for these reviews will be established at the beginning of each major phase of the project by the Project Manager and the quality assurance reviewers based upon the agreed upon task schedule. Regular staff meetings will be held to discuss interim results, and to quickly identify work that may be considered non-conforming to the requirements of the project. Meeting minutes will indicate the extent of the non-conforming work, and action taken to correct the work and prevent re-occurrence for the remainder of the project. The impact of any non-conforming work on external parties will be assessed, and affected parties will be notified as required. Corrected information will be provided to the affected parties as soon as practical. The results of non-conforming work will be sent to a "dead" file, and disposed of at the completion of the project. With day-to-day monitoring of activities, and regular staff meetings, the potential for, and associated costs of, non-conforming work will be minimized.

M&M's Sub-consultants will also be asked to monitor their activities for non-conforming work in a similar fashion, either identified internally, or through reviews of their work by M&M.

SCHEDULES / DELIVERY DATES / BUDGETS

The Project Manager will establish accounting phase codes for the project that follow the task designations included in the technical and price proposal. The associated budget for each phase based on negotiated man-hours will also be developed. Task codes will be established for each subtask within a particular designated proposal task. This information is then provided to the Accounting Department in order to track project man-hours used and job costs.

In addition, when deemed expedient by the Project Manager, project specific progress spreadsheets will be used to monitor efforts, and provide a second weekly means to track progress and project percent complete.

Quality assurance reviews will be conducted at regular intervals within each major phase of the project. Milestone submission dates will be used to develop the quality assurance review schedule to provide quality deliverables, and to ensure that sufficient time is included to perform the review, as well as permit the design team to respond and/or correct non-conforming work without compromising the overall submission schedule.

M&M will provide a project schedule to the LADOTD for record that identifies key deliverables and their milestone dates. This schedule will conform to the milestone dates established by the LADOTD at the project's start unless a revised schedule has been agreed upon by the LADOTD subsequent to the project start date. The schedule will be updated on a monthly basis to confirm that the project is proceeding as originally anticipated.

In the event a task order falls behind the projected schedule, an assessment will be made by the Project Manager or his designee on how to correct the issue. Potential corrective actions will include more staff added to the task, re-assignment of more specialized staff to the task, or perhaps a re-assessment of the schedule to determine if adjustments can be made to accommodate the delay in the task under concern, without impacting future project milestones.

ADMINISTRATIVE QUALITY MANGEMENT PROCEDURES

The PIC and PM are responsible for the preparation of the technical and price proposals for the project, including both the original agreement and subsequent supplements/work orders. The PIC will review all proposals prior to submission to the LADOTD. A copy of the executed agreement(s) is kept on file in the Accounting Department. This file is readily available to management staff.

Estimation of percent completion and invoice costs will be performed by the PM, with assistance from the discipline team leaders. Using project specific progress tracking spreadsheets, and input from senior staff on completion of work for the various tasks performed for the period under consideration, a project percent complete will be established. This information will be compared against the projected percent compete per the design schedule at that time to determine if the project is on or ahead of schedule, or what corrective actions are necessary to get back on schedule.

DOCUMENT CONTROL

a. Input

Project specific files are to be established at the beginning of the project. Information is to be filed using the project number as the primary element followed by numerals set up for the project (for example 3000-1 with 3000 being the job number and the numeral 1 being general correspondence and so on) or in accordance with a file numbering system established by the LADOTD.

Information received by the PM is assessed and a copy forwarded to appropriate staff primarily responsible for the task. All senior staff will be provided with the file copy for review and information purposes, in order to keep them aware of associated tasks being performed in conjunction with their work. Electronic documents, including e-mail, are kept on our secure server that all staff can access using the same file naming convention.

All staff will be provided access to current design codes, and addendums which are provided by the Firm when available. Staff will be notified of project specific design criteria and standards, either at staff meetings, or by receipt of memorandum, or by e-mail.

Comments received from the LADOTD or Sub-consultants are reviewed by the PM or his designee, and the appropriate staff made aware of the comments for their response. If a date of response is not included with the comment document, the Project Manager will establish a date, and follow-up with the appropriate staff to make certain that resolution is occurring in a timely manner. The PM will provide M&M's response to the LADOTD and await a follow-up reply.

b. Output

The PM or his designee will confirm that the design staff have been supplied and are using the most current project information, project specific design criteria, design specifications and standards during the course of the project. Staff will be notified either through face-to-face meetings, inter-office mail or electronic mail of updates to information/specifications/criteria that will impact their work.

Quality assurance reviews will be conducted to confirm that the assigned project staff is using the correct project information, design criteria, specifications and standards for completion of their work.

TECHNICAL QUALITY MANAGEMENT PROCEDURES

Specific design procedures for this QC/QA Plan include the following:

- The PM or his team leader designee will identify the design criteria established for each task order, and ensure that the staff is kept updated on any changes or additions to the criteria as the project progresses. Project specific exceptions to standard design specifications discussed with the LADOTD will be documented. Reports and technical documents will be reviewed by the PM or his team leader designee to confirm that the results and/or recommendations utilize the current criteria. Reports and documents will be provided to the quality assurance reviewer to assess the results and recommendations of the design team.

- Continuing training is part of M&M's culture. M&M Design Engineers are constantly being trained by the more senior staff and by attending relevant courses and conferences, and these efforts shall continue. The training materials and references collected are readily available in the office, and will also be made available to the Sub-consultants.

- Design Engineers shall perform self-checking as the work progresses using in-house developed self-checking guidelines. They shall also perform cross checking as needed as the work progresses, when any team member is unsure of the results.

- Design engineers shall provide calculations for formal checking that include assumptions, design criteria and all reference material used to develop the calculations. Calculations shall be in a neat and orderly format. Individual sheet (or sheets) considered as trial designs, or no longer valid, shall be marked to prevent checking of preliminary or superseded work. All formal design calculation sheets will be checked, initialed and dated by the originator and the checker. The quality assurance reviewer will confirm that the established checking procedures and Quality Review Color Codes contained in Attachment 6 have been followed, and that the calculations are complete.

- Any and all LADOTD approved computer programs to be used for a project will have been checked independently by M&M as part of the approval process. Program input is checked to confirm that the appropriate geometry, section properties and material properties have been used, and the output assessed to make certain that the results are trending in the right direction, based on both the current project, as well as past experience, prior to the results being used to complete the design. It is of utmost importance that the designer understands when computer results are reasonable. Checks are made using hand calculations or different computer programs used in parallel. Two engineers working in parallel may be needed when using software that requires a high degree of accuracy and detail. Spreadsheets are checked to confirm that the appropriate design criteria and specifications are being utilized, and that the results of the analysis programs are being transferred correctly and appropriate load factors are being applied.

- Drawings for the design will be developed by qualified technicians and reviewed and checked by engineers or qualified technicians and will meet the requirements of the LADOTD. Drawings will be initialed and/or signed, as applicable, by the originator and the checker. Drawings marked up with changes and/or corrections resulting from the review process are returned to the designer for action. Upon completion of the revisions, the team leader will compare the revised drawings with the marked up review drawings to ensure that all comments have been incorporated into the plans. The completed drawings and mark up's will be provided to the quality assurance reviewer to confirm that the necessary corrections have been completed, the Quality Review Color Codes contained in Attachment 6 have been followed, as well as assess the drawings for overall completeness and clarity.

- Special provisions for non-standard items will be reviewed by the PM or discipline lead for clarity, as well as consistency with the contract plans. Conformance to the LADOTD's standard specifications (content and format) will also be checked. The quality assurance reviewer will assess the special provisions for completeness and compatibility with contract plans.

- Construction cost estimates will be developed based on estimated quantities for the various pay items associated with the design and in accordance with the LADOTD's requirements. An in-house cost estimate will be determined based on M&M plan details. In addition, industry experts (suppliers, fabricators and contractors) may be consulted in development of the estimates. Current bid price (averages) and similar recently bid and/or completed projects will also be reviewed to confirm that the estimate is reasonable. The PM will review the information used to create the cost estimate. The completed cost estimate will be provided to the quality assurance reviewer to assess if the costs appear reasonable for the work included in the contract plans and specifications.

- The PM or a qualified reviewer designee will review all calculations, drawings and specifications to determine that work is being completed in accordance with applicable specifications and the requirements of the LADOTD. This is not to be a number-by-number, line-by-line review, but is to be sufficiently in-depth to identify significant shortcomings in content or presentation, and to determine that the intent of design specifications is being met. This review also includes checking the constructability of the project.

- Completed LADOTD quality assurance certification forms will be submitted for the project. A copy of the certification forms are attached (see Attachments 3 and 5.)

- The PM will be responsible to determine that the project is successfully and completely finalized. This will include:
  - the filing and indexing of design calculations and record copies of drawings,
  - confirmation that the correspondence file and accounting files are in their proper locations,
  - confirmation of the delivery of all required drawings, calculations, reports, correspondence and other documentation to the LADOTD., and
  - confirmation that quality assurance records and certification forms have been filed.

- Records will include the following items:
  - non-conformance and corrective action reports
  - drawings, procedures and the QA/QC plan
  - design input, output and verification
  - certification records

- All files, storage boxes or other containers shall be clearly identified with the proper name of the project, the colloquial name, if applicable, the year completed, the LADOTD's project

identification number and M&M's project number. These will be transmitted to the LADOTD if required. The accounting office will be notified that the project is complete and that final invoicing may take place.

INTERNAL QUALITY AUDITING

An internal QA audit schedule for each project will be developed. The schedule will be a function of the length of the Task order; shorter task orders will require more frequent audits versus longer projects. Individuals named by the PIC will be performing quality assurance reviews, and will be primarily responsible for confirming that the QC/QA plan is being implemented by the PM on the project. The results of these quality assurance audits will be provided to the PM. If any deficiencies are noted, the PM will be responsible for taking corrective action, follow-up and providing documentation of the actions taken.

Frequency of review meetings for the following items is anticipated to be as follows:

- Schedules – monthly
- Scope – monthly
- Budget – monthly
- Team organization adjustments – bi-weekly (max), or as needed by the project schedule
- Approvals – as needed
- Coordination – at the discretion of the Design Team

During the course of the project, periodic reviews of the policies and procedures in QC/QA Plan will be reviewed by the PM and the quality assurance reviewers to ensure usability and compatibility with interfacing procedures.

Assigned project staff and new staff as they are assigned to the project will be made aware of the specific QA/QC controls established for the project by the PM or his designee. Senior staff will mentor new staff on policies and procedures used to ensure a quality deliverable. The quality assurance reviewers will also monitor the staff to confirm that the quality management plan has been properly communicated to the assigned staff, and that modifications to the plan are communicated to all staff throughout the course of the project.

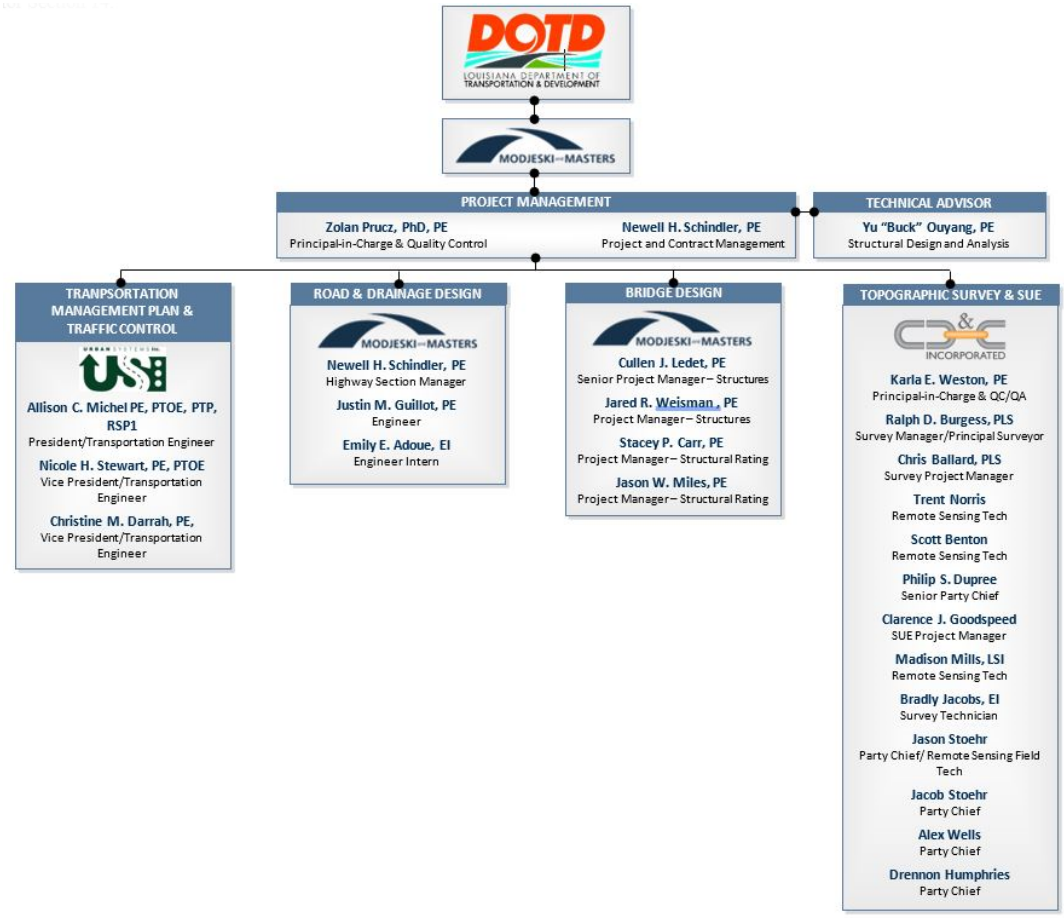
EXTERNAL AUDITS

M&M will accommodate and facilitate LADOTD audits at various times throughout the duration of the project if required.

QC/QA CERTIFICATION

At the end of each project the Department's QC/QA Certification Form (LADOTD BDEM Chapter 3, Appendix D) will be completed and submitted along with the Certification Form (LADOTD BDEM Chapter 3, Appendix I). See Attachments 5 and 3 respectively.

ATTACHMENT 1 - QUALITY CONTROL / QUALITY ASSURANCE PLAN ORGANIZATION CHART



ATTACHMENT 2 – TELEPHONE LOG

TELEPHONE LOG

DATE:	TIME:	☐	URGENT	☐	OUTGOING CALL
		☐	INCOMING CALL	☐	RETURNING YOUR CALL

YOUR NAME:
CALLER/PERSON CALLED:
PHONE NO:
PN: **XXXX**
PROJECT: **XXXXX** **Bridge Task Order #: XXXXXXX**

SUBJECT DISCUSSED	ACTIONS TO BE TAKEN

ATTACHMENT 3 – CERTIFICATION FORM

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

ATTACHMENT 4 – LIST OF SUB-CONSULTANTS AND FUNCTION

Sub-Consultant	Services Provided
Urban Systems, Inc.	Transportation Management Plan and Traffic Control
Civil Design & Construction, Inc.	Surveying & SUE

ATTACHMENT 5 – QC-QA CERTIFICATION

Appendix D
QC/QA Certification

Project No.:
Project Name:

We, the undersigned designers, raters, 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						

ATTACHMENT 6 – QUALITY REVIEW COLOR CODE

The originator will generate printed or copied reports, calculations, drawings, or other similar originals.

The checker will:

Highlight in YELLOW everything that is correct.

incorrect
Strike in RED everything that is incollect or needs to be deleted.

Write all additions and corrections in GREEN.

The originator will then:

Back-check in BLUE.

All comments that do not require edits are to be made in BLACK ink or pencil.

ATTACHMENT 7 – EXAMPLE OF DESIGN CRITERIA CHECKLIST

(This is an illustrative example as provided by the LADOTD. Specific checklists and forms will be developed for each bridge type and task order)

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**

The design criteria, types, and test levels for bridge barriers shall be listed in this section. Standard plans and special details 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 and special details should be listed if they are utilized.

__ **Approach Slab**

Design criteria for approach slab shall be included in this section. Standard plans and special details 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 and special details 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 and special details 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 and special details 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 and special details 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 and special details 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 and special details 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 and special details should be listed if they are utilized.

__ **Mechanical Design**

All mechanical design criteria shall be included in this section if applicable. Standard plans and special details should be listed if they are utilized.

__ **Electrical/Lighting Design**

All electrical design criteria shall be included in this section if applicable. Standard plans and special details 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.

ATTACHMENT 8 – 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**

__ **Photometric Analysis Report**

__ **Final Hydraulic Analysis Report from Hydraulic Engineer**

__ **Final Geotechnical Analysis Report from Geotechnical Engineer**

__ **Electrical Design Calculations**

__ **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.

ATTACHMENT 9 – QUALITY ASSURANCE INFORMATION PACKAGE CHECKLIST

Project No.:

Project Description:

_____ Calculation Book

_____ Plans

_____ Special Provisions

_____ Cost Estimate

_____ Other Documents _____

ATTACHMENT 10 – PEER REVIEW RESOLUTION AGREEMENT

Project No.:

Project:

Name:

We, the undersigned Peer Reviewer, Supervisor or Team Leader of the design team, and LADOTD Representative for this project, have reviewed and accepted the attached peer review resolutions. We certify that the peer review has been performed in accordance with the LADOTD Bridge Design Section policy on QC/QA.

Team Members	Name	Signature
Peer Reviewer		
Supervisor or Team Leader		
LADOTD Representative		

ATTACHMENT 11 – LADOTD SOFTWARE AND DELIVERABLES STANDARDS FOR ELECTRONIC PLANS

LaDOTD Software and Deliverable Standards for Electronic Plans

Revised May 2018

Function	LaDOTD Software Standards	Consultant Software Standards	Deliverables	Comments
CAD Drafting	Bentley MicroStation V8i V8.11.07.443 (SS2) or V8.11.09.832 (SS4)	Bentley MicroStation V8i V8.11.07.443 (SS2) or V8.11.09.832 (SS4)	MicroStation DGN	• Consultants must upload MicroStation plan submittals directly into the ProjectWise discipline "Plans" folder.
CAD Standards Management	Altiva CADconform V8.00.70 (MicroStation)	Altiva CADconform V8.00.70 (MicroStation)	MicroStation DGN (with valid CADconform certification stamp)	• Certify the DGN files as DOTD CAD Standard Compliant (indicated by valid compliance stamp) using CADconform running on MicroStation.
CAD Standards Quality Authentication	Altiva DMSconform "Check CAD Standards" (Administered by LaDOTD in ProjectWise)	Altiva DMSconform "Check CAD Standards" (Administered by LaDOTD in ProjectWise)	Approved ControlCAD Microsoft Excel report	• DOTD reviewers use the DMSconform "Check CAD Standards" function to check for valid CADconform certification stamps and for several other compliance factors. • Status reports must reflect 100% compliance by 60% Final Plans (or sooner if specified by the Project Manager). Substandard deliverables must be approved and documented (as to reason) by the Project Manager.
CAD Attributes Quality Authentication	Altiva DMSconform "Check Attributes" (Administered by LaDOTD in ProjectWise)	DMSconform "Check Attributes" (Administered by LaDOTD in ProjectWise)	Approved ControlCAD Microsoft Excel report	• DOTD reviewers use the DMSconform "Check Attributes" function to check for completed indexing attribute values. • Status reports must reflect 100% compliance by 60% Final Plans (or sooner if specified by the Project Manager). Substandard deliverables must be approved and documented (as to reason) by the Project Manager.
CAD Plotting	Bentley ProjectWise InterPlot Organizer V8i V8.11.11.XX (SS4)	Bentley ProjectWise InterPlot Organizer V8i V8.11.11.XX (SS4)	Paper format drawings (InterPlot can also be used to create PDFs)	• Full Size Submittals: Full size submittal sheets shall have an outside edge measuring 22" X 34". Provide a 0.50" margin on the top, bottom and right hand side of the sheet and a 2" margin on the left hand side of the sheet. • Half Size Submittals: Half size submittal sheets shall have an outside edge measuring 11" X 17". Drawings shall be an exact 50% reduction of the full size scale drawing. Provide a 0.25" margin on the top, bottom and right hand side of the sheet and a 1" margin on the left hand side of the sheet. • Letter Size Submittals: Letter size submittal sheets shall have an outside edge measuring 8.5" X 11".
Electronic Plans Publishing	Bentley Publish to PDF (Integrated with ProjectWise)	Bentley Publish to PDF (Integrated with ProjectWise)	PDF drawings in ProjectWise	• PDF format drawings are the formal electronic deliverable. • Consultants must import (managed refresh) MicroStation format drawings into the appropriate ProjectWise discipline "Plans" folder (for each plan delivery milestone) in order to be able to publish PDF plan submittals. • A **.MSI** setup file is needed to use the Publish to PDF tool. ProjectWise External PDF Publishing Downloads For Consultants
Road Design	Bentley Inroads V8i V8.11.07.615 (SS2)	Bentley Inroads V8i V8.11.07.615 (SS2)	InRoads DGN graphics, ALG, DTM	• DOTD only allows InRoads that runs on the MicroStation platform. • InRoads SS4 and OpenRoads Designer are not supported at this time.
Hydraulic Design Drafting (Optional)	Bentley Inroads Storm & Sanitary V8i V8.11.07.615 (SS2)	Bentley Inroads Storm & Sanitary V8i V8.11.07.615 (SS2)	Hydraulics DGN Graphics	• Bentley Storm and Sanitary is recommended for generating graphics only. • DOTD only allows InRoads Storm & Sanitary that runs on the MicroStation platform. • The current design standard is HYDR, which is used to check hydraulic designs.
Electronic Survey	Bentley Inroads Survey V8i V8.11.07.615 (SS2)	Bentley Inroads Survey V8i V8.11.07.615 (SS2)	Survey DGN Graphics, FWD, DTM, ALG, TXT	• Any data collection tool and method that produces the required deliverable content and accuracy are acceptable. • DOTD feature codes must be used during data collection to enable output of CAD survey graphics and associated Tag Data. •DOTD only allows InRoads Survey that runs on the MicroStation platform.
PDF Plan Reader	Adobe Acrobat Reader	Adobe Acrobat Reader	N/A	
Digital Signatures	N/A (Now Process In Development)	N/A (Now Process In Development)	N/A (Now Process In Development)	N/A (Now Process In Development)
Collaboration Platform	Bentley ProjectWise Explorer V8i V8.11.11.XXX (SS4)	Bentley ProjectWise Explorer V8i V8.11.11.XXX (SS4)	Project plans and associated documents	• Consultants are required to manage their plan submittals within DOTD's ProjectWise system. • Use the managed Export>Export (Locks File) and managed import functions to manage CAD development between PDF submittals. This prevents unauthorized changes and loss of attribute indexing. • The ProjectWise Explorer application is provided free of charge for consultants working on LA DOTD projects. The Bentley Passport License required to run ProjectWise will be the Consultant's responsibility to purchase.

Software versions posted herein are the latest supported version as of this document publishing. We will seek to keep this document as up to date as possible as we move forward.

Contact Ryan Felder at ryan.felder@la.gov (225-379-1366) for general information and assistance regarding LaDOTD electronic standards, ProjectWise workflow and electronic plan delivery, authentication and publishing.

Contact David Ringuette at david.ringuette@la.gov (or call 225-379-1880) for general information and assistance regarding ProjectWise .PDF publishing setup.

Browse to http://www.dotd.la.gov and then select Doing Business with LaDOTD > Electronic Standards for Plans for links to all DOTD electronic standards and software downloads.

Browse to http://www.altivasoft.com/downloads/CADconform for the latest CADconform software downloads and related CADOS platform compatibility information.

Contact support@altivasoft.com (or call 281-295-2254) for information and assistance regarding installation of LaDOTD CAD Resources and Altiva CADconform software.

Contact Altiva Software to purchase CADconform. **Contact Bentley Systems** to purchase MicroStation, ProjectWise InterPlot Organizer and Inroads products.

Bridge Design Section
Pre-Approved Software List
Updated: March 10, 2021

Developer	Software Name
AASHTO, Inc.	AASHTOWare Bridge Design
AASHTO, Inc.	AASHTOWare Bridge Rating
AASHTO, Inc.	AASHTOWare PS Design Tool
Acuity Brands Lighting, Inc.	Visual
Bentley Systems, Inc.	CONBOX
Bentley Systems, Inc.	CONSPAN
Bentley Systems, Inc.	CONSPLICE
Bentley Systems, Inc.	GEOMATH
Bentley Systems, Inc.	Microstation
Bentley Systems, Inc.	OPEN Bridge Modeler
Bentley Systems, Inc.	RCPier
Bentley Systems, Inc.	RM Bridge
Bentley Systems, Inc.	STAAD
Bentley Systems, Inc.	STAAD Beava
Bentley Systems, Inc.	STAAD Section Wizard
Bridge Software Institute	FB-Pier
Computers and Structures, Inc.	CSiBridge
Computers and Structures, Inc.	CSiCOL
Computers and Structures, Inc.	SAP 2000
CSI, Ltd.	DDM
DOTD In-House	COMPSTIL
DOTD In-House	TimberC
Drive Systems Technology, Inc.	Power Gear
Elite Software	CHVAC 8
Ensoft, Inc.	L-Pile
Finite Element Analysis, Ltd.	LUSAS
LARSA, Inc.	LARSA 4D Bridge Plus
Lighting Analysts, Inc.	AGi32
MDX Software, Inc.	MDX
MIDASoft	Midas Civil
Operating Technology, Inc.	ETAP
PTC, Inc.	MathCAD

Smart Bridge Technology	Smart Bridge Suites
SolidWorks Corporation	SOLIDWORKS
Structure Point, LLC	spColumn
University of Maryland	Sabre
Vista Data Vision	VDV
Wyoming DOT	BRASS-Culvert

Notes:

1. If any other software is required for unique applications for which pre-approved software cannot be used, a synopsis of the software shall be submitted to the Bridge Design Engineer Administrator for approval prior to use. The synopsis shall include the name of the software and the developer, a general description of the functions, a certification from the software developer stating that it is maintained in accordance with the latest AASHTO LRFD Bridge Design Specifications, and an account of the requester's experience and the experience of other organizations or agencies that use the software. Data/results from in-house software will not be accepted as part of the deliverable.

2. The cost of software shall be included in the overhead cost of the firm and not a direct expense for the projects.

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**
Urban Systems, Inc.	2000 Tulane Ave., Suite 200 New Orleans, LA 70112	Allison C. Michel, PE acmichel@urbansystems.com	(504) 569-3958
Civil Design & Construction, Inc.	PO Box 857 3251 Southern Pacific Railroad Port Allen, LA 70767	Karla E. Weston, PE kweston@cdcbr.com	(225) 765-1802

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.