





## CONTRACT FOR OFF SYSTEM HIGHWAY BRIDGE PROGRAM | MCHUGH ROAD OVER BRUSHY BAYOU

Contract No. 4400024591 State Project Number H.014992.5 August 3, 2022

# section **01–13**

Bayou Gardens Blvd. over St. Louis Bayou Houma, LA Engineer of Record: Dennis Hymel, Jr., PE

#### DOTD FORM: 24-102

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 OFF SYSTEM HIGHWAY BRIDGE PROGRAM MCHUGH ROAD OVER BRUSHY BAYOU
2. Contract number(s) as shown in the advertisement	4400024591
3. State Project Number(s), if shown in the advertisement	H.014992.5
<ol> <li>Prime consultant name (as registered with the Louisiana Secretary of State where such registration is required by law)</li> </ol>	Crescent Engineering & Mapping, LLC
<ol> <li>Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)</li> </ol>	Engineering: EF-0007140   Surveying: VF-0000871
6. Prime consultant mailing address	PO Box 370, Vacherie, LA 70090
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	1815 LA 18, Vacherie, LA 70090
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Dennis M. Hymel, Jr., PE, President/Engineering Manager 225.329.1742   Dennis.Hymel@crescentengla.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Dennis M. Hymel, Jr., PE, President/Engineering Manager 225.329.1742   Dennis.Hymel@crescentengla.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.
- 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.

Signature (shall be the same person as #9):

Date: August 3, 2022

<u>Firm(s):</u>

<u>Firm(s)' %:</u>



#### 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.

Evaluation Discipline(s)	% of Overall Contract	Crescent	ELOS	Each Discipline must total 100%
Survey	18%	100%		100%
Road (Incl. Hydraulics)	42%	100%		100%
Bridge	32%	100%		100%
Environmental	8%		100%	100%

Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.

	Percent of Contract	100%	92%	8%	
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\*The past performance evaluation disciplines are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other.

If sub-consultants are used, the prime consultant must perform greater than 50% of the work for the overall contract.



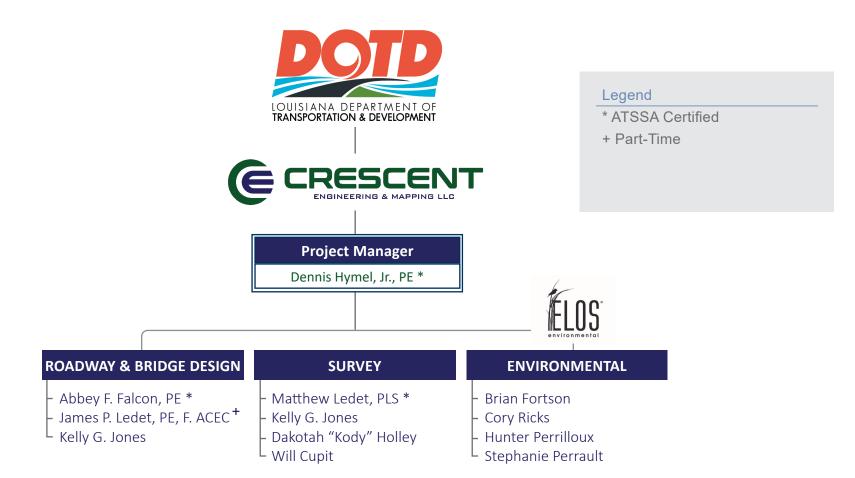
# 13. Firm Size:

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
Crescent Engineering & Mapping, LLC	Supervisor Engineer	1	1
	Engineer	1	2
	Sr. Technician	1	1
	Surveyor	1	1
	Technician	1	2
ELOS Environmental, LLC	Biologist/Wetlands	2	10
	Environmental Professional	2	11
FIOS	Environmental Manager	1	2
environmental	GIS Analyst	1	6



# section 14-16

S.P. No. H.011806 Gracie Lane Bridge over Bayou Sorrel Bayou Sorrel, LA Engineer of Record: Dennis Hymel, Jr., PE





# 15. Minimum Personnel Requirements:

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

MPR No.	Personnel being used to meet the MPR (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	Dennis Hymel Jr., PE		Civil Engineer PE-38172	LA	09/30/2023
2	Dennis Hymel Jr., PE		Civil Engineer PE-38172	LA	09/30/2023
3	Dennis Hymel Jr., PE		Civil Engineer PE-38172	LA	09/30/2023
4	Matthew J. Ledet, PLS		LA Registered Surveyor PLS - 5104	LA	09/30/2022
	Cory Ricks	le la	5 years' wetland delineation		
5	Brian Fortson		5 years' wetland delineation		
	Hunter Perrilloux	environmental	5 years' wetland delineation		



Den	Crescent Engineering & nnis M. Hymel, Jr., PE gineering Manager			Years of relevant experience with this employer Years of relevant experience with other	1	
	gineering Manager		ENDINEERING & MAFFING LLC	employer(s)	1/	
Degree(s) / Years /	Specialization		Bachelor of Science/2009/Civil	Engineering		
Active registration	number / state / expir	ation date	38172 / LA / 09/30/2023			
Year registered	2013	Discipline	PE/Civil Engineering			
Contract role(s) / b	rief description of resp	onsibilities		will serve as the Project Manager, oversee road and bridge ars' of experience meet <b>MPRs #1-#3.</b>	design	
Experience dates (mm/yy–mm/yy)	Experience and qualit intersection", etc. Ex	fications relev perience date	ant to the proposed contract; s should cover the time specif	i.e., "designed drainage", "designed girders", "designe ied in the applicable MPR(s).	d	
05/20 – 08/21 (previous employer)	<b>Contract 44-17598 – Rural Bridge Replacement Initiative Phase I (47 bridge structures), Districts 04, 05, 08, 58 (LADOTD)</b> – Project Manager/Engineer of Record. Performed QC review of topographic surveys, served as the EOR for roadway, geometrics, and bridge design elements including hydraulics analysis, scour, horizontal/vertical alignments, Level 1/2 TMP's, bridge design & LRFR (non-standard structures) including RC Slab Span and LG-25 girders, oversight of geotechnical services and environmental, SOV's, CE document preparation and permit applications for the spot replacement of <b>47 bridge structures in northern Louisiana containing nine (9) Off-System Bridges.</b>					
03/18 – 04/21 (previous employer)	roadway and bridge de	sign including g	• • • • • • •	ADOTD) – Project Manager/Engineer of Record – Responsil hydraulics, foundation layout, roadway and bridge plan pr		
03/22 – Ongoing	Tangipahoa Parish Off-System Bridge Replacement (4 Sites), Tangipahoa Parish (Tangipahoa Parish Government) – Project Manager/Lea					
05/15 — 03/18 (previous employer)	S.P. No. H.011788, Oak St. Bridge/Poydras Bayou, West Baton Rouge Parish, LA (LADOTD) – Project Manager & Engineer of Record. Responsible for topographic surveys, roadway and bridge design, special LRFD bent and span design to accommodate hydraulic conditions, 25' slab spans, LRFR, hydraulic analyses, steel bulkhead design and detailing, preliminary and final plans for the 3-span Off-System Bridge replacement.					
06/15 — 04/18 (previous employer)	and bridge design inclu	uding geometr		<ul> <li>Project Manager/Engineer of Record – Responsible for all indation layout, SOV's, guardrail layout, roadway and bri</li> </ul>		



•	S.P. No. H.011767, Bayou Crab Road Bridge, Assumption Parish, LA (LADOTD) – Project Manager/Engineer of Record – Responsible for
03/15 – 01/17 (previous employer)	all roadway and bridge design including geometrics, bridge TS&L, hydraulics, foundation layout, special bridge spans (25'), LRFR, roadway and bridge plan production for the <b>3-span Off-System bridge replacement</b> project.
04/13 – 03/16 (previous employer)	S.P. No. H.010559, Bayou Mercier Road/Berard Canal Bayou, St. Martin Parish, LA (LADOTD) – Project Manager/Engineer of Record – Responsible for all roadway and bridge design including geometrics, bridge TS&L, SOV's, hydraulics, foundation layout, Quad-Beam Superstructure and Substructure, Bearing design, LRFR, roadway and bridge plan production for the 200' long, 5-span Quad Beam Off- System bridge replacement project near Catahoula, LA.
03/15 – 08/20 (previous employer)	S.P. No. H.010867, Jude & Placide Road Bridges, Vermilion Parish, LA (LADOTD) – Project Manager/Engineer of Record – Responsible for all roadway and bridge design including geometrics, bridge TS&L, hydraulics, SOV's, foundation layout, special guard rails, special bridge spans and bents (25'), LRFR, roadway and bridge plan production for the replacement of two (2) Off-System Bridges, 1 @ 50'; 1 @ 60' near Erath and Maurice, LA.
03/13 – 03/15 (previous employer)	S.P. No. H.010598, Derrick Road Bridge, Iberville Parish, LA (LADOTD) – Project Manager/Engineer of Record – Responsible for all roadway and bridge design including geometrics, bridge TS&L, SOV's, hydraulics, foundation layout, special bridge bents, LRFR, roadway and bridge plan production for the 3-span Off-System bridge replacement project.
03/13 — 03/18 (previous employer)	S.P. No. H.011524, Katie Ln. & Leo Morrow Rd. Bridges, Avoyelles Parish, LA (LADOTD) – Project Manager/Engineer of Record – Responsible for all roadway and bridge design including geometrics, bridge TS&L, SOV's, hydraulics, foundation layout, special bridge bents & spans, LRFR, roadway and bridge plan production for the replacement of two (2) Off-System Bridges near Plaucheville, LA.
09/16 – 08/21 (previous employer)	S.P. No. H.011152, I-12 Widening (US 190 to LA 59), St. Tammany Parish, LA (LADOTD) – Project Manager/Engineer of Record. Responsible for all roadway design including H&V geometrics and drainage, prepared Level 4 TMP and construction phasing plans; Quality Control & bridge design engineer for the widening of Pontchatolawa Creek and Tammany Trace bridges including AASHTO Type III prestressed girders with varying skewed, bobtail spans and LRFR. Performed Construction Support Services. Design completed under an accelerated project schedule.
01/12 – 08/15 (previous employer)	S.P. No. 713-29-0103, Tiger Drive Bridge over Bayou Lafourche, Lafourche Parish, LA (LADOTD) – Staff Engineer. Performed roadway and bridge design including special 23' spans for the three-lane, 210' long Off-System Bridge over Bayou Lafourche, LRFR of special bents and spans, prepared bridge plans and details.
09/18 – 08/21 (previous employer)	S.P. No. H.001344, US 190: LA 437 to US 190 BUS (Ph. 1), St. Tammany Parish (LADOTD) – Quality Control Manager. QC/QA of roadway design elements. Responsible for bridge design report, QC of bridge plan development for a horizontally curved, superelevated, 1400-foot-long bridge over the Bouge Falaya River using LG 36 and LG 54 prestressed concrete girders, 30' rectangular column bents, low water pier foundations.
12/18 – 02/20 (previous employer)	S.P. No. H.013144 Pine Bluff Rd./Drain to Cypress Creek; Tack Allen Rd./Drain to Cypress Creek, Ouachita Parish, LA (LADOTD) – QC Manager. Responsible for topographic surveys, performed oversight and QC reviews of roadway and bridge design including hydraulics, H&V geometry, bridge TS&L, roadway and bridge plan production for the replacement of two (2) Off-System Bridge sites in Ouachita Parish.
02/14 — 12/18 (previous employer)	<b>S.P. No. H.010724, Pecan Island Road Bridge over The Chenal, Point Coupee Parish, LA (LADOTD)</b> – Quality Control Engineer. Responsible for QC reviews of all roadway design and plan preparation, vertical and horizontal geometry, drainage and geometrics, hydraulics design; performed QC reviews of bridge design and bridge plan production for 150' long Off-System Bridge using special detail 25' precast deck and CIP substructure, design of steel pipe piles, anchored steel bulkhead.



# Firm employed by: Crescent Engineering & Mapping, LLC Abbey F. Falcon, PE Years Project Engineer Years

 Years of relevant experience with this
 <1</td>

 employer
 Years of relevant experience with other

 Years of relevant experience with other
 5

 employer(s)
 5

Degree(s) / Years / Specialization Bachelor of Science/2017/Civil Engineering			Bachelor of Science/2017/Civil Engineering				
Active registration number / state / expiration date 46035 / LA / 03/31/2024			46035 / LA / 03/31/2024				
Year registered	ear registered 2021 Discipline P.E./Civil Engineering			P.E./Civil Engineering			
Contract role(s) / brief description of responsibilities			onsibilities	Road & Bridge Project Engineer – Abbey will lead the road & bridge design, perform hydraulics analysis and assist with plan preparation and Inroads modeling.			
Experience dates (mm/yy–mm/yy)	Experie interse	ence and qualif ction", etc. Exp	ications relev perience date	vant to the proposed contract; i.e., "designed drainage", "designed girders", "designed es should cover the time specified in the applicable MPR(s).			
04/20 — 04/22 (previous employer)	roadwa	<b>5.P. No. H.013953, McManus Road Bridge/Cypress Creek, Richland Parish, LA (LADOTD)</b> – Lead/Engineer of Record. Responsible for all roadway and bridge design, bridge hydraulics & scour analysis, developed roadway and bridge H&V alignments, drainage design, prepared bridge TS&L, prepared roadway and bridge plans, design report forms, design criteria for the <b>eight (8) span Off-System bridge replacement.</b>					
04/20 – 05/22 (previous employer)	roadwa bridge 1	S.P. No. H.013955, LA 507, 514, Local: Bayou and Cr BRs, Red River Parish, LA (LADOTD) – Lead/Engineer of Record. Responsible for all roadway and bridge design, bridge hydraulics & scour analysis, SOV's developed roadway and bridge H&V alignments, drainage design, bridge TS&L, curved bridge sites, prepared roadway and bridge plans, design criteria for the replacement of five (5) LADOTD On-System bridges and one (1) Off-System Bridge.					
04/20 — 04/22 (previous employer)	S.P. No. H.013987, LA 521: Bridges Near Dykesville, Claiborne Parish, LA (LADOTD) – Lead/Engineer of Record. Responsible for all roadway and bridge design, bridge hydraulics & scour analysis, developed roadway and bridge H&V alignments, superelevation, drainage, bridge TS&L, prepared roadway and bridge plans, design report & criteria forms for the replacement ofthree (3) LADOTD On-System bridges.						
06/18 – 04/21 (previous employer)	S.P. No. H.013080, McLemore Road/Bee Bayou, Richland Parish, LA (LADOTD) – Project Engineer. Assisted with roadway and bridge design including Inroads modeling, geometrics, bridge TS&L, hydraulics, foundation layout, and bridge plan production for the 6-span Off-System bridge replacement near Rayville, LA.						
07/22-Ongoing		Old Genessee Rd. Bridges/Creeks, Tangipahoa Parish, LA (Tangipahoa Parish) – Lead Engineer – Responsible for roadway and bridge design including TS&L, bridge hydraulics and plan production for the replacement of two (2), 3-span Off-System bridges near Tickfaw, LA					
04/20 — 02/22 (previous employer)	bridge o	lesign, bridge hy	/draulics & sco	abbit Branch, LaSalle Parish, LA (LADOTD) – Lead/Engineer of Record. Responsible for all roadway and our analysis, developed roadway and bridge H&V alignments, drainage design, prepared bridge TS&L, design report forms, design criteria for the 3-span Off-System bridge replacement.			



16. Staff Experien	<u>ce:</u>
05/17 – 08/21 (previous employer)	S.P. No. H.011152, I-12 Widening (US 190 to LA 59), St. Tammany Parish, LA (LADOTD) – Project Engineer. Assisted with all roadway design elements on the 4-mile Interstate widening project including geometrics, Level 4 TMP and drainage. Prepared quantities, Inroads roadway modeling, summary sheets, typical sections, detailing, Sequence of Construction sheets, prepared preliminary and final roadway plans. Accelerated project schedule.
04/18 – 10/21 (previous employer)	S.P. No. H.001344, US 190: LA 437 to US 190 BUS (Ph. 1), St. Tammany Parish (LADOTD) – Project Engineer. Assisted with all roadway design elements on the 1-mile Urban, multi-lane roadway widening project including geometrics and drainage. Prepared quantities, performed Inroads roadway modeling, prepared summary sheets, typical sections, detailing, assisted with the preparation of preliminary and final roadway plans.
03/21 – 07/22 (previous employer)	<b>S.P. No. H.014233, LA 160: Cypress Bayou and Relief Bridges, Bossier Parish, LA (LADOTD)</b> – Lead/Engineer of Record. Responsible for all roadway and bridge design, bridge hydraulics & scour analysis, developed roadway and bridge H&V alignments, drainage design, bridge TS&L, prepared roadway and bridge plans up to 60% Final Plans, design criteria for the replacement of two (2) LADOTD On-System bridges.
05/17 – 08/21 (previous employer)	S.P. No. H.004113, I-12 to Bush: LA 3241 (LA 435 to LA 40/41), St. Tammany Parish, LA (LADOTD) – Project Engineer. Assisted with all roadway design elements on the 5.5 rural, 4-lane corridor project including geometrics and drainage design. Prepared quantities, performed Inroads roadway modeling, prepared summary sheets, typical sections, detailing, Sequence of Construction sheets, prepared preliminary and final roadway plans.
03/21 – 07/22 (previous employer)	<b>S.P. No. H.014217, LA 537: Bridges Near Plain Dealing, Bossier Parish, LA (LADOTD)</b> – Lead/Engineer of Record. Responsible for all roadway and bridge design, bridge hydraulics & scour analysis, developed roadway and bridge H&V alignments, drainage design, bridge TS&L, prepared roadway and bridge plans up to 60% Final Plans, design criteria for the replacement of three (3) LADOTD On-System bridges.
03/21 – 07/22 (previous employer)	S.P. No. H.014231, LA 153: Topy Creek Relief & Drain Bridges, Bienville Parish, LA (LADOTD) – Lead/Engineer of Record. Responsible for all roadway and bridge design, bridge hydraulics & scour, developed roadway and bridge H&V alignments, drainage design, bridge TS&L, prepared roadway and bridge plans up to 60% Prelim Plans for the replacement of four (4) LADOTD On-System bridges.
07/17 – 06/21 (previous employer)	S.P. No. H.013116, LA 20 Widening (LA 307 to S. Vacherie), St. James & Lafourche Parishes (LADOTD) – Project Engineer. Assisted with H&V geometrics, roadway drainage design, roadway and bridge plan production, Inroads modeling, quantity calculations for the 2.7 mile rural safety widening project including split phased bridge construction of the RC slab span bridge over unnamed Bayou.
07/17 – 09/18 (previous employer)	<b>S.P. No. H.011540, Babin Road Bridge/Bayou Narcisse, Ascension Parish, LA (LADOTD)</b> – Engineering Support. Assisted with H&V geometrics, roadway drainage design, roadway and bridge plan production, Inroads modeling, quantity calculations for the <b>3-span Off-System bridge</b> near Gonzales, LA.
12/18 – 07/19 (previous employer)	S.P. No. H.013144 Pine Bluff Rd./Drain to Cypress Creek; Tack Allen Rd./Drain to Cypress Creek, Ouachita Parish, LA (LADOTD) – Engineering Support. Assisted with roadway and bridge design including hydraulics, H&V geometry, assisted in preparation of roadway and bridge plan production for the replacement of two (2) Off-System Bridge sites in Ouachita Parish.
07/17 — 12/18 (previous employer)	S.P. No. H.010724, Pecan Island Road Bridge over The Chenal, Point Coupee Parish, LA (LADOTD) – Engineering Support. Assisted with roadway design and plan preparation, quantity calculations and summary sheets, assisted with bridge plan production and quantities for 150' long Off-System Bridge using special detail 25' precast deck and CIP substructure, steel pipe piles, and anchored steel bulkhead.



Firm employed by: <b>(</b>	Crescent Engineering	& Mapping, Ll	LC					
	es P. Ledet, PE, F. AC		CRESCENT	Years of relevant experience with this employer	<1			
Qu	ality Control Enginee		ENGINEERING & MAPPING LLC	Years of relevant experience with other employer(s)	44			
Degree(s) / Years / S	Specialization		Bachelor of Science/1982/Civil	Engineering				
Active registration r	number / state / exp	iration date	22428 / LA / 03/31/2024					
Year registered	1986	Discipline	P.E./Civil Engineering					
Contract role(s) / br	rief description of res	sponsibilities	Bridge Quality Control Engineer	r – Jimmy will serve as the bridge Quality Control Manager				
Experience dates (mm/yy–mm/yy)	Experience and qua intersection", etc. E	lifications relev xperience date	ant to the proposed contract; s should cover the time specif	i.e., "designed drainage", "designed girders", "designe ied in the applicable MPR(s).	d			
07/22 – Ongoing	<b>E. Lewiston Rd. Bridge over Wilson Branch, Tangipahoa Parish, LA (Tangipahoa Parish)</b> – Quality Control Engineer – Responsible for performing QC reviews of roadway and bridge design, hydraulics analysis and report, roadway and bridge plan reviews for the replacement of a <b>3-span Off-System bridge</b> near Kentwood, LA.							
05/15 — 08/17 (previous employer)	and oversight of road	S.P. No. H.004113, I-12 to Bush: LA 3241 (LA 435 to LA 40/41), St. Tammany Parish, LA (LADOTD) – Senior Supervising Engineer. Supervision and oversight of roadway design including QC of hydraulic analysis, geometrics and supervision of plan production for the new 5.5-mile, four-lane RA-3 roadway from LA 435 to Bush, LA.						
11/10 — 06/14 (previous employer)	S.P. No. 713-29-0103, Tiger Drive Bridge over Bayou Lafourche, Lafourche Parish, LA (LADOTD) – Engineer of Record. Responsible fo topographic surveying, roadway design including approaches, utility relocations, bulkheads and drainage, and bridge design including							
11/13 – 11/18 (previous employer)	<ul> <li>S.P. No. H.010557, Lajaunie Road/Lateral 1 Bridge over Bayou St. Clair, Lafayette Parish, LA (LADOTD) – Senior Professional/QA/QC.</li> <li>Supervision of topographic surveying and engineering design including roadway and bridge design for preliminary plans of the 80' RC Slab and quad-beam, superelevated, curved Off-System bridge structure including roadway upgrades to RL-3 criteria.</li> </ul>							
03/10 – 05/14 (previous employer)	<b>SP 713-04-0002, LA 400 Bridge over Cancienne Canal, Assumption Parish, LA (LADOTD)</b> – Engineer of Record. Responsible for topographic surveying, roadway design including approaches, and bridge design, supervised roadway and bridge plan production including bridge details, roadway details for the <b>7-span off-system bridge</b> replacement.							
10/09 — 11/17 (previous employer)	<ul> <li>Engineer of Record drainage and geometric</li> </ul>	(Ph. I)/Supervisi rics, and oversig	ing Engineer (Ph. II). Responsible	bonne Parish, LA (Terrebonne Parish Consolidated Gove e for topographic surveying, oversight of roadway design i ban bridge design including special/curved spans for 1.6-m es on state routes.	ncluding			



16. Staff Experien	<u>ce:</u>
1997-2011 (previous employer)	<b>S.P. No. 713-55-0100, St. Ann Bridge Replacement, Terrebonne Parish, LA (LADOTD)</b> – Engineer of Record. Responsible for topographic surveying and all roadway design aspects, bridge design and approaches for the <b>Off-System moveable bridge</b> replacement with a single-leaf, bascule span bridge.
02/05 – 05/08 (previous employer)	S.P. No. 246-01-0054, Route LA 57: Grand Caillou Road, Terrebonne Parish, LA (LADOTD) – Engineer of Record. Responsible for all roadway design aspects including and subsurface drainage design; construction support and topographic survey for two-mile long UA-2, five-lane widening project.
11/99 – 01/01 (previous employer)	S.P. No. 742-07-0019, Bayou Gardens Blvd. Widening: LA 659 to Alma St., Terrebonne Parish, LA (LADOTD) – Engineer of Record/Project Manager. Responsible for topographic surveying, roadway design including geometrics and intersection improvements and subsurface drainage design for the one-mile UA-2 widening project.
1994 – 1997 (previous employer)	S.P. No. 413-01-0011, Hollywood Rd./LA 311 Intersection Improvements/Bridge Replacement, Terrebonne Parish, LA (LADOTD) – Engineer of Record/Project Manager. Responsible for design of roadway, hydraulics, utility relocations, drainage improvements, bulkheads and bridge design services for intersection improvement and Off-System bridge replacement project.
1993 – 1997 (previous employer)	S.P. No. 065-91-0011; S.P. 855-04-0052; S.P. 855-08-00340, Howard Avenue Bridge and Approaches, Terrebonne Parish, LA (LADOTD) – Engineer of Record. Responsible for roadway design including subsurface drainage, geometrics, and bridge design of Off-System steel lift span bridge replacement (using towers from Pinhook Rd. bridge) for preliminary and final plans.
1985 – 1991 (previous employer)	S.P. No. 700-26-100, Off-System Bridge Replacement Program, Lafourche Parish, LA (LADOTD) – Engineer of Record/ Project Manager. Responsible for engineering design services for the replacement of four (4) Off-System bridges and associated roadway approaches: S.P. 713-46-98, Parish Road 16 (Choctaw Road) over St. James Canal; S.P. 713-53-93, Parish Road 18 (60 Arpent Road) over Bayou Boudreaux; S.P. 713-53-94, Parish Road 11 (Lepine Rd. #1) over unnamed canal; and S.P. 713-53-92 Parish Road 579 (Hamilton Road) over 40 Arpent Canal.
1994 – 1995 (previous employer)	S.P. No. 742-05-0042, Combon Bridge and Approaches, Terrebonne Parish, LA (LADOTD) – Project Manager. Responsible for EIS document and design supervision of the Off-System 100 Ft. vertical lift span across Grand Caillou including roadway approaches and shop drawing reviews during construction.
1984 — 1986 (previous employer)	S.P. No. 855-14-08 & 65-90-23, LA 3087: Bridge over Bayou Terrebonne at East Street, Terrebonne Parish, LA (LADOTD) – Project Manager. Responsible for the roadway and bridge design services to retrofit the existing Prospect Street bridge to be relocated to construct a vertical lift bridge at East Street, and associated intersection improvements at LA 24 and LA 659.



# <u>16. Staff Experience:</u>

Firm employed by:	Cresc	ent Engineering 8	Mapping, Ll	.C				
Mat	tthew	/ Ledet, PLS			Years of relevant experience with this employer	1		
		Vanager	E	ENGINEERING & MAPPING LLC	Years of relevant experience with other employer(s)	16		
Degree(s) / Years / Specialization         Bachelor of Science/2008/Manuf           Bachelor of Science/2010/Geom         Bachelor of Science/2010/Geom					ufacturing Engineering Technology matics			
Active registration	numb	oer / state / expira	ation date	5104 / LA / 09/30/2022				
Year registered		2013	Discipline	PLS/Surveying				
Contract role(s) / brief description of responsibilities       Lead Surveyor/Surveyor of Record – Matt will lead the survey effort and serve as the Surveyor         Record. His 17 years' of experience meets       MPR # 4.						eyor of		
Experience dates (mm/yy–mm/yy)	Expe inte	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).						
05/20 – 12/21 (previous employer)	Contract 44-17598 – Rural Bridge Replacement Initiative Phase I (47 bridge structures), Districts 04, 05, 08, 58 (LADOTD) – Lead Surveyor/ Surveyor of Record. Led survey effort including GPS control establishment, topographic surveys, data processing, deliverable preparation, property surveys and Right of Way Mapping for the replacement of 47 bridge structures in northern Louisiana containing nine (9) Off- System Bridges.							
08/15 – 08/18 (previous employer)	for t drair	<b>S.P. No. H.011540, Babin Road Bridge/Bayou Narcisse, Ascension Parish, LA (LADOTD)</b> – Lead Surveyor/Surveyor of Record. Responsible for topographic surveys, crew coordination, oversight of data processing, LiDAR processing for surface generation and use in existing drainage maps, deliverable preparation, title take off, property surveys, prepared base, and final right of way maps for the Off-System Bridge replacement project.						
11/13 – 05/14 (previous employer) (previous employer) S.P. No. H.010557, Lajaunie Road/Lateral 1 Bridge over Bayou St. Clair, Lafayette Parish, LA (LADOTD) – Lead Surveyor/Surveyor of Record. Responsible for topographic surveys, crew coordination, oversight of data processing, LiDAR processing, existing drainage maps deliverable preparation, title take off, property surveys, prepared base, and final right of way maps for the Off-System Bridge replacement project.						ge maps,		
03/22 – 07/22	Reco exist	Tangipahoa Parish Off-System Bridge Replacement (4 Sites), Tangipahoa Parish (Tangipahoa Parish Government) – Lead/Surveyor or Record. Responsible for topographic surveys, crew coordination, data processing, LiDAR processing for surface generation and use in existing drainage maps for the replacement of four (4) Off-System Bridge replacements with RC Slab Span sites throughout Tangipahoa Parish.						
04/14 – 12/18 (previous employer)	data wide	processing and over	ersight of field and property	crew coordination for the topo	Tammany Parish, LA (LADOTD) – Surveyor of Record. Lec graphic surveys of 5.5 miles of virgin, wooded terrain wit I right of way maps including 101 parcels for the 5.5-mile, f	h a 300'		



16. Staff Experien	<u>ce:</u>
07/21 – 12/21 (previous employer)	<b>Contract 44-19336 – Rural Bridge Replacement Initiative Phase II (40 bridge structures), Districts 04 &amp; 05, (LADOTD)</b> – Lead Surveyor/ Surveyor of Record. Led survey effort including GPS control establishment, topographic surveys, data processing, deliverable preparation for the <b>replacement of 40 bridge structures in northern Louisiana.</b>
04/16 – 08/21 (previous employer)	S.P. No. H.013116, LA 20 Widening (LA 307 to S. Vacherie), St. James & Lafourche Parishes (LADOTD) – Surveyor of Record, Lead Surveyor. Led topographic survey effort for the 2.7 mile rural safety widening project including control establishment, topographic surveys, and property surveys. Performed field reconnaissance, prepared survey field crew packs, processed data and prepared deliverables. Prepared base and Final Right of Way Maps including 9 parcels.
03/10 – 10/10 (previous employer)	S.P. No. 713-04-0002, LA 400 Bridge over Cancienne Canal, Assumption Parish, LA (LADOTD) – Survey Support. Performed field topographic surveys, processed data and prepared topographic survey deliverables on field roll for the eight (8) span Off-System Bridge replacement project in Thibodaux, LA.
06/18 – 10/18 (previous employer)	<b>S.P. No. H.013080, McLemore Road/Bee Bayou, Richland Parish, LA (LADOTD)</b> – Lead Surveyor/Surveyor of Record. Responsible for topographic surveys, crew coordination, oversight of data processing, deliverable preparation for the <b>6-span Off-System bridge replacement</b> near Rayville, LA.
04/13 — 08/13 (previous employer)	S.P. No. H.010559, Bayou Mercier Road/Berard Canal Bayou, St. Martin Parish, LA (LADOTD) – Lead Surveyor/Surveyor of Record. Responsible for topographic surveys, crew coordination, oversight of data processing, deliverable preparation for the 200' long, 5-span Quad Beam Off-System bridge replacement project near Catahoula, LA.
06/15 – 08/15 (previous employer)	S.P. No. H.011806, Gracie Lane Bridge, Iberville Parish, LA (LADOTD) – Lead Surveyor/Surveyor of Record. Responsible for topographic surveys, crew coordination, oversight of data processing, topographic survey deliverable preparation for the 7-span Off-System bridge replacement project near Bayou Sorrel, LA.
02/18 — 12/18 (previous employer)	<b>ENG-17-013, LA 3127 Extension (LA 70 to LA 1), Ascension Parish, LA (Ascension Parish Government)</b> – Lead Project Surveyor. Responsible for topographic surveys, crew coordination, oversight of data processing, deliverable preparation, title take off, title research reports, property surveys, prepared base right of way maps including 12 parcels for the 6.8-mile roadway extension project including several Off and On-System Bridges.
02/11 – 01/13 (previous employer)	S.P. No. 713-29-0103, Tiger Drive Bridge over Bayou Lafourche, Lafourche Parish, LA (LADOTD) – Survey Support. Performed field topographic and property surveys, prepared topographic survey deliverables, prepared base, and final right of way maps for the urban, 3-lane Off-System Bridge replacement project in Thibodaux, LA.
09/04 – 06/07 (previous employer)	<b>S.P. No. 742-55-0102, Country Drive Widening, Terrebonne Parish, LA (LADOTD)</b> – Survey Support. Assisted with calculating 107 parcels on base and final right-of-way maps; performing topographic survey; boundary survey for 2.7 miles roadway widening project.
04/05 – 03/07 (previous employer)	S.P. No. 246-01-0054, Route LA 57: Grand Caillou Road, Terrebonne Parish, LA (LADOTD) – Survey Support. Assisted with calculating 35 parcels on base and final right-of-way maps, performed topographic survey; boundary survey for two-mile, four-lane UA-2 roadway widening project.



### Firm employed by: Crescent Engineering & Mapping, LLC



Kelly G. Jones Sr. Technician



Years of relevant experience with this<br/>employer<1</th>Years of relevant experience with other<br/>employer(s)3

Degree(s) / Years /	Specialization		Bachelor of Arts/2012/Mathematics & English				
Active registration	number / state / e	xpiration date	N/A				
Year registered	N/A	Discipline	N/A				
Contract role(s) / brief description of responsibilities			Sr. Technician – Survey & Engineering. Kelly will assist with the preparation of topographic surveys, roadway and bridge plans, detailing.				
Experience dates (mm/yy–mm/yy)	Experience and q intersection", etc	ualifications rele . Experience dat	vant to the proposed contract; i.e., "designed drainage", "designed girders", "designed es should cover the time specified in the applicable MPR(s).				
02/19 — 04/20 (previous employer)	of roadway and bri	dge plans, tempor	<b>S 190 to LA 59), St. Tammany Parish, LA (LADOTD)</b> – Project Technician. Assisted with the preparation ary erosion control plans, summary of estimated quantities, quantity summary sheets, bridge quantity on, title sheet and typical sections and details. Design completed under an accelerated project schedule.				
03/22 – Ongoing	Performed survey preparation includ	data processing, ing Inroads alignn ns, typical sectior	e Replacement (4 Sites), Tangipahoa Parish (Tangipahoa Parish Government) – Project Technician, post-processing and topo survey deliverable preparation, assisting with roadway and bridge plan nents, Plan/Profile sheets, Temporary Bench Marks, Erosion control plans, quantity summary sheets, s and drainage maps for the replacement of four (4) Off-System Bridge replacements with RC Slab arish.				
11/19 — 09/20 (previous employer)	of roadway plans i	ncluding utility re	<b>US 190 BUS (Ph. 1), St. Tammany Parish (LADOTD)</b> – Project Technician. Assisted with the preparation ocation plans, detail sheets, summary of estimated quantities, quantity summary sheets, calculating inced plan checks of roadway plans vs. bridge plans, assisted with preparing cost estimates.				
01/22 — 03/22 (previous employer)	of roadway and br	<b>S.P. No. H.014238, LA 818: Barnet Springs &amp; Creek Bridges, Lincoln Parish (LADOTD)</b> – Project Technician. Assisted with the preparation of roadway and bridge plans including typical sections, plan/profiles, detail sheets, summary of estimated quantities, title sheet for the replacement of two (2) on-system bridges in Lincoln Parish.					
12/21 — 03/22 (previous employer)	of roadway plans in	ncluding typical se	nch & Indian Creek BRs, Webster Parish (LADOTD) – Project Technician. Assisted with the preparation ections, plan/profiles, detail sheets, summary of estimated quantities, title sheet for the replacement ments in Webster Parish.				



#### Firm employed by: Crescent Engineering & Mapping, LLC Years of relevant experience with this <1 employer Dakotah "Kody" Holley Years of relevant experience with other 3 Survey Technician employer(s) Degree(s) / Years / Specialization High School Diploma/2017 Active registration number / state / expiration date N/A Year registered N/A Discipline N/A Contract role(s) / brief description of responsibilities Survey Field Technician – Mr. Holly will serve as a field survey technician for topographic surveys. **Experience dates** 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). (mm/yy-mm/yy)Almonaster Bridge Rehabilitation and Approaches, Orleans Parish, LA (Port of New Orleans) – Survey Technician. Performed field 05/19 - 01/21topographic and boundary surveys as well as assist with 3D laser scanning of the existing single-leaf bascule bridge, railroad and roadway (previous employer) approaches using LADOTD procedures for the rehabilitation and reconstruction of the bridge approaches. S.P. No. H.001399, Happy Jack – N. Port Sulphur, Plaquemines Parish, LA (LADOTD) – Survey Technician. Performed field topographic route 10/20 - 03/21surveys of the existing roadway sections including control and full .DTM survey using LADOTD procedures for the widening to 4 lanes. (previous employer) Lapalco Bridge @ Harvey Canal, Jefferson Parish, LA (Jefferson Parish Government) – Survey Technician. Performed field topographic 11/20 - 03/21route surveys of the existing roadway sections and bridge including full .DTM survey and hydrographic survey using LADOTD procedures. (previous employer) 22-01, Roadway Rehabilitation Program, St. James Parish, LA (St. James Parish Government) – Survey Technician. Performed field topographic route surveys, control establishment, patch surveys and full .DTM topographic surveys of the existing roadways Parish-wide 06/22 - Ongoingusing LADOTD procedures for the reconstruction and rehabilitation project. 09/21 - 02/22Lapalco Blvd. Phase II, Jefferson Parish, LA (Jefferson Parish Government) – Survey Technician. Performed field topographic route surveys of the existing roadway sections including full .DTM survey, patching locations, utilities and drainage using LADOTD procedures. (previous employer) LA 3127 Widening (LA 20 to LA 3213), St. James Parish, LA (St. James Parish Government) – Party Chief/Survey Technician. Performed 07/22 - OngoingGPS static control establishment, digital levels, field topographic surveys of the existing roadway with a 350' wide full .DTM survey using LADOTD codes and procedures for the 2.5 mile widening to 4 lanes. 22-084, Rousseau Rd. Bridge/Tchefuncte River, St. Tammany Parish, LA (St. Tammany Parish Government) – Party Chief/Survey Technician. 07/22 – Ongoing Performed site reconnaissance, prepared field packs, field topographic survey including GPS control establishment and full .DTM topographic

surveys (200' x 2200' .DTM) of the existing roadway, bridge and channel for the 6-span Off-System Bridge replacement near Covington, LA.



## Firm employed by: Crescent Engineering & Mapping, LLC



Will Cupit Survey Technician



Years of relevant experience with this employer Years of relevant experience with other employer(s) 1

1.5

Degree(s) / Years /	Specialization		High School Diploma/2019			
Active registration	number / state / expira	ation date	N/A			
Year registered	N/A	Discipline	N/A			
Contract role(s) / bi	ief description of resp	onsibilities	Survey Field Technician – Mr. Cupit will serve as a field survey technician for topographic surveys			
Experience dates (mm/yy–mm/yy)	Experience and qualif intersection", etc. Exp	ications relevations relevations relevations relevations and the second se	ant to the proposed contract; i.e., "designed drainage", "designed girders", "designed s should cover the time specified in the applicable MPR(s).			
03/22 – 07/22		nent, ran digita	ranch, Tangipahoa Parish, LA (Tangipahoa Parish Government) – Survey Technician. Performed GF I levels and performed field topographic surveys of the existing bridge, channel, and roadway for th ct near Kentwood, LA.			
03/22 – 05/22	<b>Easley Rd. Bridge over Sweetwater Creek, Tangipahoa Parish, LA (Tangipahoa Parish Government)</b> – Survey Technician. Performed GPS static control establishment, ran digital levels and performed field topographic surveys of the existing bridge, channel, and roadway for the <b>Off-System Bridge replacement</b> project near Loranger, LA.					
04/22 – 06/22		nent, ran digita	<b>#1, Tangipahoa Parish, LA (Tangipahoa Parish Government)</b> – Survey Technician. Performed GF I levels and performed field topographic surveys of the existing bridge, channel, and roadway for the ct near Tickfaw, LA.			
07/22 – Ongoing	• •	digital levels, fi	<b>b), St. James Parish, LA (St. James Parish Government)</b> – Survey Technician. Performed GPS stat ield topographic surveys of the existing roadway with a 350' wide full .DTM survey using LADOT widening to 4 lanes.			
09/21 - 02/22	• •	• •	ments, Vacherie, LA (St. James Parish Government) – Survey Technician. Performed GPS contr urveys of over 2 miles of existing roadway, drainage structures, utilities.			
04/22 – 06/22		nent, ran digita	<b>#2, Tangipahoa Parish, LA (Tangipahoa Parish Government)</b> – Survey Technician. Performed GF I levels and performed field topographic surveys of the existing bridge, channel, and roadway for the ct near Tickfaw, LA.			
07/22 – Ongoing	site reconnaissance, pre	epared field pa	<b>cte River, St. Tammany Parish, LA (St. Tammany Parish Government)</b> – Survey Technician. Performe cks, field topographic survey including GPS control establishment and full .DTM topographic surver dway, bridge and channel for the <b>6-span Off-System Bridge replacement</b> near Covington, LA.			



	ELOS Environmental, I	LC				
Brian Fortson	FLOO			Years of relevant experience with this employer	7	
Senior Ecologist				Years of relevant experience with other employer(s)	30	
Degree(s) / Years / Specialization			Juris Doctorate / 2006 / Civil Cu BS / 1995 / Wetland Ecology	im Laude		
Active registration	number / state / expir	ation date	N/A			
Year registered	N/A	Discipline	N/A			
Contract role(s) / brief description of responsibilities			Brian will serve as the Senior Ecagency coordination. Brian me	cologist, providing his expertise for environmental permit ets <b>MPR #5.</b>	s and	
Experience dates (mm/yy–mm/yy)			ant to the proposed contract; s should cover the time specif	i.e., "designed drainage", "designed girders", "design ied in the applicable MPR(s).	ed	
him to navigate the p endangered species s 01/15 – 01/16	SURVEYS. STATE PROJECT NO. ST in field investigations t	<b>2-445-1(002), U</b> o support wetl	S 51 BUSINESS (LA 22 TO I-12) (L and delineations and findings re	nental scientists at ELOS on plant identification and threa <b>ADOTD, N-Y ASSOCIATES)</b> – Mr. Fortson supervised and paragenetic ports, biological surveys, and threatened and endangenetic es. consultation with landowners, and outreach to public	rticipate ed specie	
	<ul> <li>reports. He also provided coordination among natural resource agencies, consultation with landowners, and outreach to public groups.</li> <li>S.P. H.972275, LAND USE AND TRANSPORTATION STUDY HARRISON AVE EXT (LADOTD, PROFESSIONAL ENGINEERING CONSULTANTS CORP.) – Senior Environmental Scientist. Assisted in the preparation of a DOTD Stage 0 Environmental Checklist for the extension of Harrison Avenue in Abita Springs from LA 59 to LA 36, a distance of 1.7 miles. Desktop and field data were collected to identify relevant resources in the project area. He assisted in the identification of land use, wetlands, community facilities, recreational assets, historic and the project area.</li> </ul>					
08/17 - 07/18	Harrison Avenue in Ab	nmental Scient ta Springs from t area. He assist	tist. Assisted in the preparation LA 59 to LA 36, a distance of 1. ted in the identification of land u	<b>AVE EXT (LADOTD, PROFESSIONAL ENGINEERING CON</b> of a DOTD Stage 0 Environmental Checklist for the ex 7 miles. Desktop and field data were collected to identif	SULTANT ension o y relevar	
08/17 – 07/18 09/17 – 02/21	Harrison Avenue in Ab resources in the project cultural sites, and haza S.P. H.008915.2, LA 32 Environmental Scientist for three alternative a	nmental Scient ta Springs from t area. He assist rdous waste site <b>34 EXTENSION</b> Responsible fo lignments being	tist. Assisted in the preparation I LA 59 to LA 36, a distance of 1. ted in the identification of land u es. I <b>TO HAMMOND AIRPORT ENV</b> or the supervision of fieldwork, v g studied for the extension of F	<b>AVE EXT (LADOTD, PROFESSIONAL ENGINEERING CON</b> of a DOTD Stage 0 Environmental Checklist for the ex 7 miles. Desktop and field data were collected to identif	SULTANT ension o y relevar storic an ) – Senic pplicatio	



Firm employed by:	ELOS Environmental, I	.LC					
Cory Ricks	FLOO			Years of relevant experience with this employer	6		
Project Manager/ Environmental Scie	ntist			Years of relevant experience with other employer(s)	2		
Degree(s) / Years /	Specialization		BS / 2015 / Biology	1			
Active registration	number / state / expir	ation date	R-I-99273-17-01464				
Year registered	2017	Discipline	proActive Safety Services Renov	vator Initial			
Contract role(s) / b	rief description of res	oonsibilities	Cory will serve as the Project Manager, providing his expertise for wetland delineations and jurisdictional determinations, as well as managing the collection of field data and the development of reports. Cory meets <b>MPR #5.</b>				
Experience dates (mm/yy–mm/yy)	Experience and quali intersection", etc. Ex	fications relev perience date	ant to the proposed contract; s should cover the time specif	i.e., "designed drainage", "designed girders", "des ied in the applicable MPR(s).	igned		
resources for a variet	cy of projects. He currentebris monitoring projects	tly manages a t 5.	team of environmental scientists	ation, permitting, wetland delineations, GIS mapping, s, field biologists, and data processors who all assist or	n a variety c		
09-20 – In Progress	wetland delineation for Findings Report, Phase and endangered specie	r all three rou 1 Environment es known in the lineation, sectio	tes and provided a report of th tal Assessment Survey, and the E e project area. Lead efforts on p	ADOTD, N-Y ASSOCIATES) – Environmental Scientist. Per e findings. Provided assistance for GIS mapping of t Biological Assessment Survey. Provided a report of the providing stream and waterbody data for each report. ons, cultural resources site visit and report, and a thr	he Wetland e threatene . This projec		
08/20 – 7/21			<b>FIVE - JESSE B ROAD OVER BAYC</b> ded a wetland delineation and pe	<b>DU MALLET (LADOTD, BURK-KLEINPETER, INC.)</b> – Projermit applications.	ect Manage		
08/20 – 7/21			TIVE – SANDY CREEK BRIDGE ( and delineation and permit application	LADOTD, BURK-KLEINPETER, INC.) – Project Manager ations.	r. This bridg		
8/20 – In Progress	-		ATIVE– BEAMOW RD. OVER BA	YOU MARINGOUIN (LADOTD, BURK-KLEINPETER, IN	C  – Project		
	S.D. U. 012057 DUDAL			ion and permit applications.	<b>c.</b> <i>j</i> – Projec		
8/20 – 7/21			wetland delineation and permit	CREEK (LADOTD, BURK-KLEINPETER, INC.) – Project N			



16. Staff Experier	
8/20 – 3/22	S.P. H.013959, RURAL BRIDGE INITIATIVE – REEDS BRIDGE ROAD OVER CALCASIEU RIVER RELIEF (LADOTD, BURK-KLEINPETER, INC.) – Project Manager. This bridge replacement project included a wetland delineation, permit applications, and a threatened and endangered species survey.
8/20 – 1/22	<b>S.P. H.013963, RURAL BRIDGE INITIATIVE – UNNAMED WATERWAY ROUTE (LADOTD, BURK-KLEINPETER, INC.)</b> – Project Manager. This bridge replacement project included a wetland delineation, permit applications, and a threatened and endangered species survey.
8/20 - 9/21	<b>S.P. H.013966, RURAL BRIDGE INITIATIVE – LA 321: CREEK BRIDGES (LADOTD, BURK-KLEINPETER, INC.)</b> – Project Manager. This bridge replacement project included a wetland delineation, permit applications, and a threatened and endangered species survey.
8/20 - 9/21	S.P. H.013968, RURAL BRIDGE INITIATIVE – LA 404: BAYOU AND CANAL BRIDGES (LADOTD, BURK-KLEINPETER, INC.) – Project Manager. This bridge replacement project included a wetland delineation and permit applications.
8/20 – 2/22	S.P. H.013970, RURAL BRIDGE INITIATIVE – LA 717: KLONDIKE CANAL AND BAYOU BRIDGES (LADOTD, BURK-KLEINPETER, INC.) – Project Manager. This bridge replacement project included a wetland delineation, permit applications, and a threatened and endangered species survey.
8/20 – In Progress	S.P. H.013976, RURAL BRIDGE INITIATIVE – LA 376: BAYOU BRIDGES (LADOTD, BURK-KLEINPETER, INC.) – Project Manager. This bridge replacement project included a wetland delineation, permit applications, and a threatened and endangered species survey.
8/20 – 1/22	S.P. H.013982, RURAL BRIDGE INITIATIVE – LA 10 SPUR, LA 1042: BRIDGES NEAR GREENSBURG (LADOTD, BURK-KLEINPETER, INC.) – Project Manager. This bridge replacement project included a wetland delineation and permit applications.
8/20 – In Progress	S.P. H.013984, RURAL BRIDGE INITIATIVE – LA-0016/WRIGHT'S CREEK, HOLDEN'S CREEK, UNNAMED DRAIN, TALLEY'S CREEK, BERRY'S CREEK (LADOTD, BURK-KLEINPETER, INC.) – Project Manager. This bridge replacement project included a wetland delineation, permit applications, and a threatened and endangered species survey.
8/20 – 1/22	S.P. H.013996, RURAL BRIDGE INITIATIVE – LA 1074, LA 1075: BRIDGES NEAR RIO (LADOTD, BURK-KLEINPETER, INC.) – Project Manager. This bridge replacement project included a wetland delineation, permit applications, and a threatened and endangered species survey.
8/20 - 9/21	S.P. H.013989, RURAL BRIDGE INITIATIVE – GRAYBOW ROAD/PALMETTO CREEK (LADOTD, BURK-KLEINPETER, INC.) – Project Manager. This bridge replacement project included a wetland delineation, permit applications, and a threatened and endangered species survey.



Firm employed by:	ELOS Environmental,	LLC					
Hunter Perrilloux				Years of relevant experience with this employer	3		
Environmental Scie				Years of relevant experience with other employer(s)	1		
Degree(s) / Years /	Specialization		BS / 2018 / Biology				
Active registration	number / state / expi	iration date	N/A				
Year registered	N/A	Discipline	N/A				
Contract role(s) / b	rief description of res	sponsibilities	Hunter will serve as the Field Biologist, providing his expertise for collecting and analyzing data for wetland delineations and jurisdictional determinations. Hunter meets <b>MPR #5.</b>				
Experience dates (mm/yy–mm/yy)	Experience and qual intersection", etc. Ex	lifications relev xperience date	ant to the proposed contract s should cover the time speci	; i.e., "designed drainage", "designed girders", "de fied in the applicable MPR(s).	signed		
	performed several field			nitoring, endangered species monitoring, and perfor Perrilloux has also assisted with mitigation bank mor			
8/20 – 7/21			IVE, JESSE B ROAD OVER BAYO wetland delineation and permi	U MALLET (LADOTD, BURK-KLEINPETER, INC.) – Field t applications.	Biologist. Thi		
8/20 – 7/21			ATIVE, SANDY CREEK BRIDGE and delineation and permit applic	(LADOTD, BURK-KLEINPETER, INC.) – Field Biologis cations.	t. This bridg		
8/20 – 7/21			TIVE, SLIGO ROAD OVER WALT wetland delineation and permi	ER CREEK (LADOTD, BURK-KLEINPETER, INC.) – Field t applications.	Biologist. Thi		
8/20 - 9/21				ADOTD, BURK-KLEINPETER, INC.) – Conducted fieldwo ons, and a threatened and endangered species survey.			
8/20 - 9/21			VE, LA 404: BAYOU AND CANAL ded a wetland delineation and p	BRIDGES (LADOTD, BURK-KLEINPETER, INC.) – Conduc ermit applications.	cted fieldwork		
8/20 – 1/22				NEAR RIO (LADOTD, BURK-KLEINPETER, INC.) – Conduc nit applications, and a threatened and endangered spe			
8/20 – 1/22				UTE (LADOTD, BURK-KLEINPETER, INC.) – Field Biolog ons, and a threatened and endangered species survey.			
8/20 – 1/22				RIDGES NEAR GREENSBURG (LADOTD, BURK-KLEINF land delineation and permit applications.	PETER, INC.)		
9/20 – In Progress		ded a wetland	delineation, section 404 and 40	NVIRONMENTAL ASSESSMENT (LADOTD, N-Y ASSOC 1 permit applications, cultural resources site visit and			



Firm employed by:	ELOS Environmental, L	LC				
<b>Stephanie Perrault</b> Archaeologist/	FINC			Years of relevant experience with this employer	1	
Principal Investigato	r <b>ELUS</b>			Years of relevant experience with other employer(s)	25	
Degree(s) / Years / Specialization			MA, Anthropology			
Active registration	number / state / expira	ation date	33714583			
Year registered	N/A	Discipline	Professional Archaeologist			
Contract role(s) / brief description of responsibilities			Ms. Perrault will serve as a investigations, agency coordinations	n Archaeologist, providing her expertise for cultural ation, and tribal coordination.	resource	
Experience dates (mm/yy–mm/yy)	Experience and qualif intersection", etc. Exp	ications relev perience date	ant to the proposed contract; s should cover the time specif	i.e., "designed drainage", "designed girders", "design ied in the applicable MPR(s).	ed	
investigations and his	toric structure surveys the e eligibility for listing in the LAFITTE LEVEES SECTION low and high probability	at comply with ne National Rep <b>N 106 REVIEW</b> / areas for pote	n all state and federal standards. gister of Historic Places (NRHP) a , JEFFERSON PARISH, LA – Ms. Pe ential cultural resource findings.	nce to the environmental scientists at ELOS on cultural Ms. Perrault is an expert in artifact analyses, site mapping and state registry of historic properties. errault was responsible for the Section 106 Review to dete She performed 2 digs so far and based on her findings, Ma robability areas within the Area of Potential Impact.	g, and the rmine the	
8/20 – 9/21	S.P. H.013976, RURAL BI and responsible for the	<b>RIDGE INITIATI</b> Cultural Resou	VE – LA 376 BAYOU BRIDGES (LAI rce Phase I Survey for the two-br	DOTD, BURK-KLEINPETER, INC.) – Ms. Perrault was the Arch ridge replacement project totaling in 3.1 areas. The projec	t included	
6/21 – 9/21	a wetland delineation, permit applications, cultural resource phase one survey, and a threatened and endangered species survey. PHASE I CULTURAL RESOURCES ASSESSMENT SURVEY, LACOMBE TRACE TRAILS AND NATURE PARK, ST. TAMMANY, LA – The entire 25.527 acre project area was situated between Bayou Lacombe and the St. Tammany Trace. Ms. Perrault provided guidance through the National Environmental Policy Act (NEPA) permitting process, assisted with an Environmental Assessment of the site, conducted a Phase I Cultural Resources Investigation, provided recommendations to St. Tammany Parish Planners based on the findings of the Cultural Resources investigation, provided consultation services and communication support between St. Tammany Parish, the Lead Federal Agency Agency Reviewers (i.e. SHPO and THPOS), and other stakeholders, and ensured compliance with the NEPA and Section 106 of the National Historic Preservation Act (NHPA).					
6/21 – Present	fulfill the requirements	of Section 106	5 of the NHPA. 1) Background re	ANA PARISH, LA – Ms. Perrault provided services for threesearch; 2) Terrestrial Phase I Cultural Resource Survey; 3 ducted a pedestrian survey, 63 shovel testing, and auguri	) Cultura	



# SECTION 17

SP No. H.011788 Oak Street Bridge over Poydras Bayou Erwinville, LA Engineer of Record: Dennis Hymel, Jr., PE

Firm name	me Crescent Engineering & Mapping, LLC						Past Performance Evaluation Discipline(s)*			Survey, Bridge, Road
E. Lewiston Rd. Bridge over Wilson Branch								Firm responsibility (prime or sub?) Prime		
Project number	mber N/A Owner's name Tangipahoa Parish G						Governmen	t		
Project location	า	Kentwood, LA	A			Owner's Pro	ject Manage	er	Misty Evans, P.E.	
Owner's addres	ss, pl	none, email	206 E. Mu	berry St.,	, Ami	te, LA 70422	985-244-688	30 m	evans@tangipahoa.org	
Services comm	Services commenced by this firm (mm/yy) 03/22				1	Total consultant contract cost (\$1,000's)			\$1,000's)	\$190
Services completed by this firm (mm/yy) Ongoing					C	Cost of consultant services provided by this firm (\$1,000's)			\$131	

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

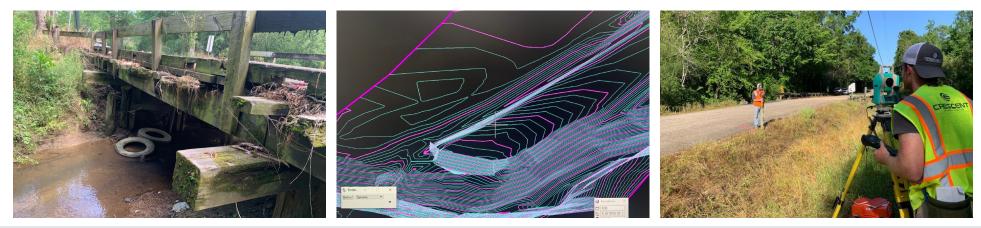
\* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

The E. Lewiston Rd./Wilson Branch Bridge Replacement project involves the replacement of 4-span structurally deficient timber trestle bridge in Tangipahoa Parish near Kentwood, LA. The project includes topographic surveys, property surveys, bridge design, roadway design, geotechnical, environmental and contract management. Project scoping and design is per LADOTD requirements including plan production.

Crescent Engineering & Mapping, LLC is the prime consultant for the project and is responsible for the topographic surveys, hydraulic analyses and modeling, roadway design, bridge design, utility surveys and roadway/bridge plan production. The project's topographic survey (140' x 1500' DTM) was conducted to LADOTD standards and processed in Bentley Microstation/Inroads. Hydraulic analysis was performed using GEO HEC-RAS and HYDR1130 as well as LADOTD HYDRWIN programs for roadside drainage. LADOTD design criteria are being followed and design drawings are also being developed as traditional LADOTD plans using Bentley Microstation/Inroads due to anticipated federal funding.

Crescent has completed the topographic surveys and hydraulics report. Preliminary plans are currently underway along with environmental and geotechnical services.

Team Members Highlighted in this Proposal: Dennis M. Hymel Jr., PE, Matthew J. Ledet, PLS, James Ledet, PE, F. ACEC, Kelly Jones, Will Cupit





#### 17. Firm Experience: Firm name **Crescent Engineering & Mapping, LLC** Past Performance Evaluation Discipline(s)\* Survey, Bridge, Road Prime Firm responsibility (prime or sub?) Old Genessee Rd. Bridge over Creek #1 **Project number** N/A **Owner's name** Tangipahoa Parish Government Tickfaw, LA **Project location Owner's Project Manager** Misty Evans, P.E. **Owner's address, phone, email** 206 E. Mulberry St., Amite, LA 70422 985-244-6880 mevans@tangipahoa.org Services commenced by this firm (mm/yy) \$149 03/22 Total consultant contract cost (\$1,000's) Services completed by this firm (mm/yy) Cost of consultant services provided by this firm (\$1,000's) \$105 Ongoing

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

\* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

The Old Genessee Rd./Creek #1 Bridge Replacement project involves the replacement of a structurally deficient, 2-span timber trestle bridge in Tangipahoa Parish near Tickfaw, LA. The project includes topographic surveys, property surveys, bridge design, roadway design, geotechnical, environmental and contract management. Project scoping and design is per LADOTD requirements including plan production.

Crescent Engineering & Mapping, LLC is the prime consultant for the project and is responsible for the topographic surveys, hydraulic analyses and modeling, roadway design, bridge design, utility surveys and roadway/bridge plan production. The project's topographic survey (140' x 2200' DTM) was conducted to LADOTD standards and processed in Bentley Microstation/Inroads. Hydraulic analysis was performed using GEO HEC-RAS and HYDR1130 as well as LADOTD HYDRWIN programs for roadside drainage. LADOTD design criteria are being followed and design drawings are also being developed as traditional LADOTD plans using Bentley Microstation/Inroads due to anticipated federal funding.

Crescent has completed the topographic surveys. Preliminary plans are currently underway along with environmental and geotechnical services.

Team Members Highlighted in this Proposal: Dennis M. Hymel Jr., PE, Abbey Falcon, PE, Matthew J. Ledet, PLS, Kelly Jones, Will Cupit





Firm name	Crescent Engineering & Mapping, LLC						Past Performance Evaluation Discipline(s)*			Survey, Bridge, Road
Easley Rd. Bridge over Sweetwater Creek								Firm responsibility (prime or sub?) Prime		
Project numbe	r l	N/A	Owner's	name	Tang	ipahoa Parish	Governmen	t		
Project locatio	n	Loranger, LA				Owner's Pro	ject Manag	er	Misty Evans, P.E.	
Owner's addre	ss, pl	hone, email	206 E. Mu	lberry St.	., Am	ite, LA 70422	985-244-68	80 m	evans@tangipahoa.org	
Services comm	Services commenced by this firm (mm/yy) 03/22					Total consultant contract cost (\$1,000's)			\$1,000's)	\$187
Services completed by this firm (mm/yy) Ongoing Cost of cons					Cost of consult	tant service	s pro	vided by this firm (\$1,000's)	\$129	

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

\* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

The Easley Road over Sweetwater Creek Bridge Replacement project involves the replacement of a 3-span structurally deficient timber trestle bridge in Tangipahoa Parish near Loranger, LA. The project includes topographic surveys, property surveys, bridge design, roadway design, geotechnical, environmental and contract management. Project scoping and design is per LADOTD requirements including plan production.

Crescent Engineering & Mapping, LLC is the prime consultant for the project and is responsible for the topographic surveys, hydraulic analyses and modeling, roadway design, bridge design, utility surveys and roadway/bridge plan production. The project's topographic survey (140' x 1600' DTM) was conducted to LADOTD standards and processed in Bentley Microstation/Inroads. Hydraulic analysis was performed using GEOHEC-RAS and HYDR1130 as well as LADOTD HYDRWIN programs for roadside drainage. LADOTD design criteria are being followed and design drawings are also being developed as traditional LADOTD plans using Bentley Microstation/Inroads due to anticipated federal funding.

Crescent has completed the topographic surveys and hydraulics report. Preliminary plans are currently underway along with environmental and geotechnical services.

Team Members Highlighted in this Proposal: Dennis M. Hymel Jr., PE, Matthew J. Ledet, PLS, James Ledet, PE, F. ACEC, Kelly Jones, Will Cupit





Firm name C	Crescent Engineering & Mapping, LLC Pa						Past Perfor	man	Survey, Bridge, Road	
Rousseau Rd. Bridge over Tchefuncte River								Firm	responsibility (prime or sub?)	Prime
Project number	umber 22-084 Owner's name St. Tammany Parish Government									
<b>Project location</b>	(	Covington, LA				Owner's Pro	bject Manager Daniel Hill, P.E.			
Owner's address	s, pho	one, email	21454 Koo	p Drive,	Build	ing B, Mandev	ille, LA 7047	1, 98	35-898-2552, dphill@stpgov.org	
Services comme	Services commenced by this firm (mm/yy) 07/22				Total consultant contract cost (\$1,000's)			\$1,000's)	\$220	
Services completed by this firm (mm/yy) Ongoing C				Cost of consultant services provided by this firm (\$1,000's)			\$134			

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

\* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

The Rousseau Road Bridge over Tchefuncte River project involves the replacement of a structurally deficient, 5-span pre-cast concrete bridge founded on timber piles in St. Tammany Parish near Covington, LA. The project includes topographic surveys, property surveys, bridge design, roadway design, geotechnical, environmental and contract management. Project scoping and design is per LADOTD requirements including plan production. Rousseau Rd. services the only access to a residential/commercial area and a detour bridge is necessary across the scenic river system of the Tchefuncte.

Crescent Engineering & Mapping, LLC is the prime consultant for the project and is responsible for the topographic surveys, hydraulic & scour analyses, hydraulics and HEC-RAS modeling, roadway design, bridge design, utility surveys and roadway/bridge plan production. The project's topographic survey is enlarged (200' x 2200' DTM) due to the detour bridge and is being conducted to LADOTD standards and processed in Bentley Microstation/Inroads. Hydraulic analysis will be performed using GEOHEC-RAS and HYDR1130 as well as LADOTD HYDRWIN programs for roadside drainage. LADOTD design criteria are being followed and design drawings are also being developed as traditional LADOTD plans using Bentley Microstation/Inroads due to anticipated federal funding.

Crescent is currently performing the topographic surveys and will soon begin the preliminary plans.

Team Members Highlighted in this Proposal: Dennis M. Hymel Jr., PE, Abbey Falcon, P.E., Matthew J. Ledet, PLS, Dakotah Holley, Will Cupit





17. Firm Experience:										
Firm name	Crescent Engineering & Mapping, LLC						Past Performance Evaluation Discipline(s)*			Survey, Bridge, Road
Old Genessee Rd. Bridge over Creek #2 Firm responsibility (prime or sub?)								Prime		
Project numbe	er	N/A	Owner's	name	Tang	gipahoa Parish	Governmen	t		
Project locatio	on	Tickfaw, LA				Owner's Pro	ject Manag	er	Misty Evans, P.E.	
Owner's addre	ess, p	hone, email	206 E. Mu	lberry St.	, Am	ite, LA 70422	985-244-688	30 m	evans@tangipahoa.org	
Services comm	Services commenced by this firm (mm/yy) 03/22					Total consultant contract cost (\$1,000's)			\$148	
Services comp	Services completed by this firm (mm/yy) Ongoing Cost of consultant services provided by this firm (\$1,000's) \$2						\$104			

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

\* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

The Old Genessee Rd./Creek #2 Bridge Replacement project involves the replacement of a 2-span structurally deficient timber trestle bridge in Tangipahoa Parish near Tickfaw, LA. The project includes topographic surveys, property surveys, bridge design, roadway design, geotechnical, environmental and contract management. Project scoping and design is per LADOTD requirements including plan production.

Crescent Engineering & Mapping, LLC is the prime consultant for the project and is responsible for the topographic surveys, hydraulic analyses and modeling, roadway design, bridge design, utility surveys and roadway/bridge plan production. The project's topographic survey (140' x 1600' DTM) was conducted to LADOTD standards and processed in Bentley Microstation/Inroads. Hydraulic analysis was performed using GEOHEC-RAS and HYDR1130 as well as LADOTD HYDRWIN programs for roadside drainage. LADOTD design criteria are being followed and design drawings are also being developed as traditional LADOTD plans using Bentley Microstation/Inroads due to anticipated federal funding.

Crescent has completed the topographic surveys. Preliminary plans are currently underway along with environmental and geotechnical services.

Team Members Highlighted in this Proposal: Dennis M. Hymel Jr., PE, Abbey Falcon, PE, Matthew J. Ledet, PLS, Kelly Jones, Will Cupit





Firm name	LOS	S Environmenta	al, LLC				Past Performance Evaluation Discipline(s)*			Environmental
LA 10 SPUR, LA 1042 Bridges Near Greensburg Rural Bridge Initiative Firm responsibility (prime or sub?) Sub										Sub
Project number	I	H.013982	Owner's	name	name LADOTD					
<b>Project location</b>	Project locationSt. Helena Parish, LAOwner					Owner's Pro	ject Manager	Andrew Ranck, P.E.		
<b>Owner's addres</b>	Owner's address, phone, email 1201 Capitol Access Road, Baton Rouge, LA, (225) 379-1232, dotdcs@la.gov									
Services commenced by this firm (mm/yy) 0				08/20	<b>Total consultant contract cost (</b>			<b>\$1,000's)</b> \$16		
Services completed by this firm (mm/yy)				01/22		Cost of consultant services provided by this firm (\$1,00			\$16	

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

\* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

Services Provided: wetland delineations, preliminary jurisdictional determination, United State Army Corps of Engineers (USACE) nationwide permit applications, threatened and endangered species research, Categorical Exclusions checklist (CE), and solicitation of views (SOV).

ELOS was contracted by Burke-Kleinpeter to provide environmental services for H.013982. The Louisiana Department of Transportation and Development (LADOTD) proposed the replacement of four existing bridges including one site at LA 1042 over Choctaw Creek, one site at LA 1042 over an unnamed creek, one site at LA 10 Spur over Raby Branch, and one site at LA 10 Spur over St. Joseph Branch in St. Helena Parish. **This project is one of many bridges part of the DOTD Rural Bridges Phase I projects, for which ELOS was the environmental consultant conducting the environmental reviews and documentation.** This project primarily involved wetland delineations and a wetlands finding report. Evidence observed and documented indicates that approximately 0.22 acre of the site location meets the established criteria to be considered "Section 404 wetlands." In addition, approximately 2.19 acre of this site meet the established criteria to be considered "Section 404 wetlands impacted by construction activities for this project by minimizing impacts as listed in the Louisiana Standard Specifications for Roads and Bridges, 2016 edition, and mitigate for lost wetland habitats by reseeding with appropriate plants and seedlings. No threatened and endangered species surveys were required for this project.

Site 1. LA 1042/ Choctaw Creek: Recall No. 058492) Site 2. LA 1042/ unnamed creek: Recall No. 058494 Site 3. LA 10 Spur/ Raby Branch: Recall No. 620045 Site 4. LA 10 Spur/ St. Joseph Branch: Recall No. 620046

Team Members Highlighted in this Proposal: Cory Ricks, Hunter Perrilloux, Mike Hill, and Basile Dardar





Firm name EL	DS Environmental, LLC Pa					Past Performance Evaluation Discipline(s)*			Environmental	
LA-4 Rural Brid	ge Initiative		Firm responsibility (prime or	sub?)	Sub					
Project number	H.014268	Owner's	name	ame LADOTD						
Project location	ion Jackson and Caldwell Parish Owner's Project Mar					ect Manager	Andrew Ranck, P.E.			
Owner's address, phone, email 1201 Capitol Access Road, Baton Rouge, LA, (225) 379-1232, dotdcs@la.gov										
Services commenced by this firm (mm/yy)				09/21 Total consultant co			\$1,000's)	\$16		
Services complete	N/A	(	Cost of consult	ant services pro	vided by this firm (\$1,000's)	\$16				

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

\* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

Services Provided: wetland delineations, preliminary jurisdictional determination, United State Army Corps of Engineers (USACE) nationwide and Department of Natural Resources CUP/Consistency Determination permit applications, threatened and endangered species research, Categorical Exclusion checklist (CE) and solicitation of views (SOV).

ELOS was contracted by Burke-Kleinpeter to provide environmental services for H.014268. The Louisiana Department of Transportation and Development (LADOTD) proposed the replacement of 8 separate bridges located on LA-4 in Jackson and Caldwell Parishes. **This project is one of many bridges part of the DOTD Rural Bridges Phase II projects, for which ELOS was the environmental consultant conducting the environmental reviews and documentation.** This project involved surveys for threatened and endangered species, including investigations for the Northern Long-eared Bat, Louisiana Pine Snake, and the Red Cockheaded Woodpecker. Evidence observed and documented indicates that approximately 17.40 acres of these sites meet the established criteria to be considered "wetlands" and approximately 6.05-acres of these sites meet the established criteria to be considered "other waters of the U.S.".

Site 1. Unnamed Creek: Recall No. 021100 Site 2. Unnamed Creek: Recall No. 021120 Site 3. Bear Creek: Recall No. 021130 Site 4. Squirrel Creek: Recall No. 046750 Site 5. Sugar Creek: Recall No. 046760 Site 6. Bill's Creek: Recall No. 046782 Site 7. Lost Creek Relief: Recall No. 046786

Team Members Highlighted in this Proposal: Cory Ricks, Hunter Perrilloux, Mike Hill, and Basile Dardar





Firm name EL	LOS Environmental, LLC				Past Performance Evaluation Discipline(s)*				Environmental
Savanne Road	Bridge Over Ha	inson Ca	nal				Firm responsibility (prime or s	sub?)	Sub
Project number	H.014267	Owner's	name	ame LADOTD					
Project location	oject location Terrebonne Parish, LA					ect Manager	Andrew Ranck, P.E.		
Owner's address, phone, email 1201 Capitol Access Road, Baton Rouge, LA, (225) 379-1232, dotdcs@la.gov									
Services commenced by this firm (mm/yy) 08				Total consultant contract cost (\$			<b>\$1,000's)</b> \$16		
Services completed by this firm (mm/yy)				(	Cost of consultant services provided by this firm (\$1,000's)			\$16	

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

\* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

Services Provided: Scenic Rivers and Streams Permits, USACE Permits, Wetland Delineation and Jurisdictional Determination, Threatened and Endangered Species, Solicitation of Views, and Categorical Exclusion Checklist.

ELOS was contracted by Infinity to provide environmental services for the improvement of DOTD Bridge Replacement projects. LADOTD proposed the replacement of the existing Savanne Road Bridge over Hanson Canal **(Recall No. 020165)** with a new concrete reinforced bridge at approximately 90° 48' 56.088" West and 29° 35' 37.308" North.

The existing bridge, located approximately 0.82 miles north of LA 182 in Terrebonne Parish, was recommended for replacement by the Louisiana Department of Transportation and Development (LA DOTD). The existing structure was a 4-span, 57-foot-long, and 24-foot-wide concrete bridge. The proposed action was to replace the existing bridge with three 20-foot spans, totaling 60 feet, with 3:1 riprap abutments and a proposed finished grade at branch crossing at 5.51 in accordance with current LADOTD and AASHTO guidelines.

This project included a wetland delineation and jurisdictional determination from the USACE, a Section 404 permit from the USACE, a scenic rivers and streams permit from the LDWF, and a threatened and endangered species survey for West Indian Manatees (Trichechus manatus). ELOS was also tasked with preparing and mailing the solicitation of views letters to the relevant agencies and responding to comments. This project qualified for a categorical exclusion (CATEX), meaning a detailed environmental analysis was not required. ELOS prepared and submitted the CATEX documentation.

Team Members Highlighted in this Proposal: Cory Ricks, Hunter Perrilloux, Mike Hill, and Claire LaBarbera





# section 18

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W. and

S.P. No. H.010559 Bayou Mercier Rd. over Berard Canal Catahoula, LA Engineer of Record: Dennis Hymel, Jr., PE

### 18. Approach and Methodology:

#### **INTRODUCTION**

The staff provided by the Crescent Engineering & Mapping (Crescent) team offer a combined over **80 years' of LADOTD Off-System Bridge Replacement** (OSBR) experience with a proven record of project delivery for the OSBR program. Our staff has surveyed and prepared plans for OSBR projects involving both standard plan and non-standard structures in accordance with all LADOTD procedures and manuals including roadway and bridge design, BDEM, BDTM's, environmental and OSBR guidelines.

Crescent's team is led by **Dennis Hymel, Jr., PE** who has served in various roles on over **100 LADOTD bridge replacements,** including both On and Off-System bridges. Crescent's survey manager, **Matthew J. Ledet, PLS** has led the survey effort on over **80 LADOTD bridge replacements** and our QC Manager, **James "Jimmy" Ledet, PE** has been involved in the OSBR program **since 1986.** Crescent's team includes **ELOS Environmental** who has a long history of performing environmental services for LADOTD.



#### **PROJECT UNDERSTANDING & SITE VISIT**

Crescent visited the McHugh Road Bridge site on 6/17/2022 to assess the project conditions and identify potential design challenges. A **pedestrian bridge exists immediately adjacent** to the structure and multiple utilities are either **near or attached to the structure**. If the pedestrian bridge will be replaced as well, it can be integrated into the replacement structure with a 54" separation barrier and a special deck design. If not being replaced, multiple utilities will need to be relocated to the other side of the structure including a medium size water main which is attached to the structure. Additionally, a **large transformer bank and overhead 3-phase power** are located on the other side of the bridge.



McHugh Road bridge looking South showing pedestrian bridge and utilities Site Visit (6/17/2022

#### LADOTD & PARISH KICKOFF MEETING

Following the NTP, Crescent will meet with the OSBR Program Manager and staff to discuss the project, review the schedule, receive LADOTD field books, review any program guideline changes, invoice requirements, and establish communication protocols. Our project schedule will be based on critical path items with concurrent items being utilized to **expedite project delivery**.

Crescent will also meet with **East Baton Rouge Parish** representatives prior to the start of topographic surveys as required by the OSBR Guidelines. Additional items such as planned corridor improvements, hydraulics, structure preferences and corridor users will be discussed. Previous 5-years crash history will also be requested at this meeting. Meeting minutes for both meetings will be provided within 3 days of the meeting for review.



# 18. Approach and Methodology:

#### **TOPOGRAPHIC SURVEY**

Crescent will perform the topographic survey for the project. Providing the **topographic surveys in-house** offers a distinct advantage for scheduling and delivery of these services. Crescent's engineering staff works closely with survey staff during this phase to ensure that all required data is collected. Surveys will be completed in accordance with LADOTD Off-System Bridge Guidelines and LADOTD Location & Survey requirements. GPS control will be established using at minimum four (4) control points set in concrete with digital levels run between these points.

#### **Crescent Engineering & Mapping ADVANTAGE**

Crescent owns the latest in Trimble® Survey equipment, operated by our in-house survey crews for roadway and bridge projects. Providing surveys in-house allows for seamless coordination and communication of survey needs directly from our engineering staff to the field. Additionally, in-house survey services allow for immediate deployment of survey crews and near instantaneous data review, eliminating missing data and ensuring the most expedient project delivery. Lastly, should additional data be required during design, these services can be immediately performed, eliminating costly delays caused by subconsultant coordination.



Once control is established and sketches complete, the topographic surveys will continue for the existing roadway, bridge, and channel/river. Surveys will be extended beyond traditional limits to incorporate any curves or additional geometric changes needed for design. Additional data points needed to show .DTM break lines and surface anomalies will be collected, and any upstream structures in the channel/river will be surveyed.

Bridge sketches will be provided and the channel/river traverses shown on the field roll. Survey data will be processed in Inroads daily and reviewed by the project's engineering staff for completeness prior to preparation of survey deliverables and field rolls. The survey submittal will include all items required by the LADOTD OSBR Guidelines including photographs, point listing and plotted cross sections. Surveys will undergo extensive QC/QA by both the survey and engineering teams prior to submittal to LADOTD.

#### **50% PRELIMINARY PLANS & HYDRAULICS ANALYSIS**

After surveys are reviewed and approved by LADOTD, Crescent will begin the hydraulics analysis and preparation of 50% Preliminary Plans.

## <u>Design Criteria</u>

Crescent will review the 5-year crash history and traffic data in order to establish preliminary design criteria. The existing roadway is a 2-lane, curb and gutter section with subsurface drainage, a posted speed limit of 35 MPH, an apparent ADT of approximately 400 vpd, and no major geometric elements appear to need improvement. If the adjacent pedestrian bridge is to be replaced, the **pedestrian path can be integrated into the superstructure** design, separated by a barrier. Crescent will also alert the Parish to the presence of **multiple utilities** on site early in the design to begin relocation plans including water, sewer, gas, telephone and overhead power.



Photo showing typical roadway looking South from McHugh Rd. bridge (6/17/22)

Upon review of supplied data, bridge design criteria and LADOTD Design Report Forms will be submitted for review and approval, guiding the remainder of plan development.

## Hydraulics & Scour Analysis

Crescent will begin the hydraulics and scour analysis by reviewing additional data including topographic maps, FEMA Firm maps, USGS Quadrangle maps and LiDAR to delineate the site's drainage basin. Peak discharges and water surface elevations will be developed using a suite of software including LADOTD's HYDR1130 and GeoCivil's GeoHECRAS. Hydraulic design will be conducted in accordance with the LADOTD Hydraulics Manual and the results prepared in report format along with the Hydraulic Data table.



# 18. Approach and Methodology:

#### Bridge TS&L

The bridge Type, Size and Location (TS&L), which will determine the appropriate bridge length, revetment slopes and hydraulic opening will be developed at the start of the hydraulics analysis. If needed, Crescent's staff has the experience and design tools to perform the design of a non-standard bridge structure inhouse per LRFD methodology.

## 50% Preliminary Plans

Once hydraulics is completed, the remainder of the 50% PP will be developed including the roadway horizontal and vertical geometry, guardrail and embankment widening, roadside drainage, cross-sectional geometrics and transitions. The roadway will be modeled in Bentley Inroads to determine the limits of construction at this early stage. Plans will be developed in accordance with LADOTD plan preparation and OSBR Guidelines. If Design Exceptions or Waivers are needed, Draft forms will be completed upon structure approval and submitted for review by DOTD and/or the Parish.

## 75% PRELIMINARY PLANS (PRE-PIH) & SOLICITATION OF VIEWS (SOV'S)

After review of the 50% Preliminary Plans, Crescent will address all comments, and if necessary, will prepare the Pre-PIH plans. Crescent's staff have historically been allowed to proceed to Plan in Hand without the submittal of Pre-PIH plans, aiding in project delivery. Upon approval of the replacement structure, Crescent and ELOS Environmental will prepare the Solicitation of Views (SOVs), receive DOTD approval thereof and mail these to the recipient list provided by LADOTD Environmental Section. Responses will be logged and loops closed to all SOV responses.

#### **Crescent Engineering & Mapping ADVANTAGE**

- $\checkmark$  Extreme familiarity with OSBR Program  $\checkmark$  In-house survey resources
- ✓ Extensive staff history with LADOTD
- Extensive ATSSA & NHI Training
- ✓ Commitment to LADOTD Processes
- ✓ Project Specific QC/QA Manager

## 95% PRELIMINARY PLANS (PLAN IN HAND)

Comments from the 50% PP or. 75% PP (if necessary) will be addressed in the Plan in Hand submittal. The roadway model, typical sections, plan & profiles, general notes, bridge GPE, summary of estimated quantities, and construction signing will continue to be developed from the previous plan submittal(s). If superelevation is required, the superelevation diagrams will be further developed and completed by the end of preliminary plans along with the foundation layouts. Standard Plan lists, cost estimate and the Constructability & Biddability Review form will be provided. Crescent will attend the Plan in Hand meeting onsite with LADOTD and Parish representatives. Meeting notes will be provided within three (3) days.

## **100% PRELIMINARY PLANS (POST PLAN IN HAND PRINTS)**

Plan development will continue to progress as comments are addressed and major design elements are completed. Items discussed at the PIH meeting will be addressed and added to the plans per the PIH Meeting Memorandum.

## Environmental

The wetland delineation will be conducted onsite and a wetland findings report prepared in accordance with US Army Corps of Engineers (USACE) guidelines. A Preliminary Jurisdictional Determination (PJD) will be requested from the USACE upon report completion. Permit sketches sized 8.5"x11" will be prepared to accompany the wetlands report, SOV packet, and Environmental Determination Checklist.

## **R/W Sketches & Other Documents**

Crescent will prepare the Right of Way Sketch per OSBR guidelines showing the required taking lines and anticipated parcels affected along with a draft of the R/W agreements. A draft utility conflict matrix will be provided to the Parish to aide in their responsibility to relocate utilities.

In addition to the 100% Preliminary Plans, environmental package and R/W sketches, the Design Report forms will be finalized and sealed by Crescent's Engineer of Record. The Level 1 or Level 2 TMP checklists will also be prepared and submitted. Pile length requests with all supporting documentation will be submitted at this stage for use by the geotechnical engineer.



# 18. Approach and Methodology:

#### 60% FINAL PLANS (PRE-ADVANCED CHECK PRINTS)

Following the environmental approval and receipt of the Notice to Proceed for Final Plans, Crescent will immediately begin the development of additional plan sheets required including embankment widening details, geometric layout (if necessary), erosion control plans, quantity summary sheets, Pile Data & Elevation, and concrete surface finish. All bridge structure and pile elevations will be finalized. Any special design superstructure or substructure bridge elements or special approach slabs will be fully detailed and placed on bridge sheets. Bridge railing, joint and bearing details will also be completed. If a nonstandard structure is chosen for the site, a draft of the bridge calculations and Load Resistance and Factor Rating (LRFR) will be prepared at this stage to ensure adequacy of reviews.

#### 95% & 98% FINAL PLANS (ADVANCED CHECK PRINTS)

Comments from the 60% Final Plans (Pre-ACP) will be reviewed with LADOTD and addressed. Additional details, notes or changes will be added to the plans and quantities will be completed. The ACP Plans will be provided to the Plan Quality Unit (PQU) if necessary. Crescent's staff have received few comments from PQU on previous OSBR projects. An ACP review meeting will be held to ensure all comments are addressed. Upon resolution, a 98% Final Plan set will be prepared for review by the Chief Engineer and use by General Files to prepare the proposal. Crescent will work with LADOTD staff to input pay items and quantities into AASHTOWARE and generate final cost estimates.

Crescent uses all **LADOTD** approved software including: *Microstation/ Inroads, Open Roads Designer, ProjectWise, Interplot Organizer, CADConform, BlueBeam Revu.* 

#### **100% FINAL PLANS (TRACINGS)**

Crescent will provide the 100% Final Plans (Tracings) as per OSBR Guidelines with the Title Sheet on Mylar for Chief Engineer signature. This submittal will be prepared once all comments are addressed from task managers, PQU and/ or the Chief Engineer. Parish granted Design Exceptions will be noted on the Title Sheet. A bound calculations book will be prepared and submitted with the original field books and an electronic copy of the Hydraulics Report.

## QUALITY CONTROL AND QUALITY ASSURANCE (QC/QA)

A project specific QC/QA plan has been included Section 21. Proper QC/ QA is a critical component of any successful bridge project and Crescent has designated a QC/QA manager for the project, **James "Jimmy" Ledet**, **PE**, with **45 years of experience** involving LADOTD projects and specifically Off-System Bridges. Each submittal will be accompanied by LADOTD QC/QA certification forms. Design and plan comments, along with their resolutions will be documented in Crescent's Design Comment Review forms.

## LETTING

Crescent will respond to Falcon questions and assist LADOTD during letting. Upon receiving the bid results and tabulations, Crescent will provide additional information to LADOTD as needed regarding contract award, etc.

#### **STAGE 5: CONSTRUCTION**

Crescent's staff will be available to provide LADOTD with Construction Support (if necessary) by assisting with RFI's, reviewing shop drawings, evaluating contractor submittals, attending meetings, and providing design review assistance in the event of bridge component changes during construction such as bent modifications due to pile misalignment.

#### **PROPOSED PROJECT SCHEDULE**





# section **19–23**

S.P. No. H.006147 Tiger Drive Bridge over Bayou Lafourche Thibodaux, LA Engineer of Record: James P. Ledet, PE, F. ACEC

# 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**
Crescent Engineering & Mapping, LLC	Road	N/A	No current projects	\$0
Crescent Engineering & Mapping, LLC	Survey	N/A	No current projects	\$0
Crescent Engineering & Mapping, LLC	Bridge	N/A	No current projects	\$0
ELOS Environmental, LLC	Environmental	H.013958	Carpenters Br Rd over Whiskey Chitto	\$842
ELOS Environmental, LLC	Environmental	H.013970	LA 717 Klondike Canal & Bayou Bridges	\$279
ELOS Environmental, LLC	Environmental	H.013976	LA 376: Bayou Bridges	\$4,681
ELOS Environmental, LLC	Environmental	H.013984	LA 16 Bridges (Isabel to Sun)	\$241
ELOS Environmental, LLC	Environmental	H.014242	LA 124: Big Branch, Sandy, Godfrey, Beech Creeks	\$3,685
ELOS Environmental, LLC	Environmental	H.014243	LA 472: Indian Creek and Big Bear Creek	\$30
ELOS Environmental, LLC	Environmental	H.014245	LA 119: Creeks & Bayou Pierre	\$30
ELOS Environmental, LLC	Environmental	H.014246	LA 1199: Creeks & Spring Creek	\$30
ELOS Environmental, LLC	Environmental	H.014247	LA 399: Creeks, Little 6 Mile, Relief & Flat Branch	\$164
ELOS Environmental, LLC	Environmental	H.014248	LA 124: Creeks, Broke Leg Bayou, Boggy Bayou	\$30
ELOS Environmental, LLC	Environmental	H.014249	LA 126: Creek	\$221
ELOS Environmental, LLC	Environmental	H.014250	LA 577: Creek & Bull Bayou	\$298
ELOS Environmental, LLC	Environmental	H.014268	LA 4: Creeks, Bear, Sugar	\$1,342
ELOS Environmental, LLC	Environmental	H.014267	Savanne Road over Hanson Canal	\$5,668
ELOS Environmental, LLC	Environmental	H.014265	N. River Road Bridge	\$5,943













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NHÌ



August 1s-2nd, 2017

Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 12 <u>Michael 5. Pichura, P.E.</u> Michael 5. Pichura, P.E.

Michael S. Pichura, P.E. Michael Baker International

LA DOTD/LTRC

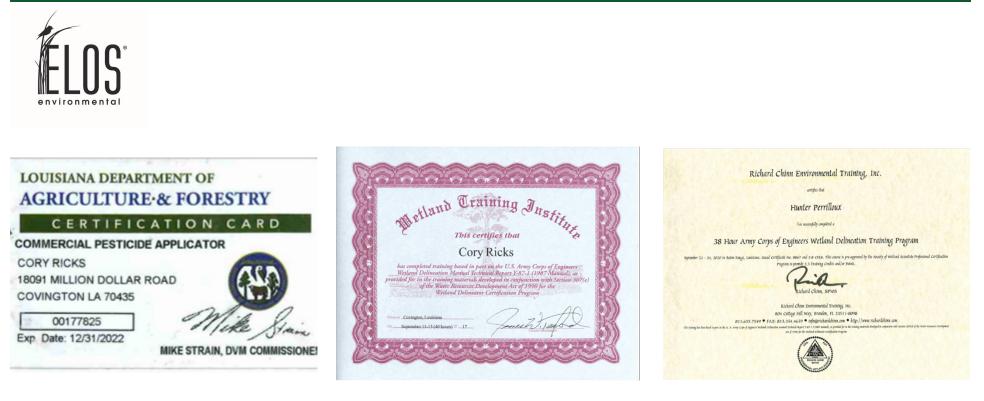
Firm Name: CRESCENT ENGINEERING & MAPPING, LLC

2















LADOTD CONTRACT No. 4400024591

S.P. No. H.014992.5

F.A.P. No. H014992

MCHUGH ROAD OVER BRUSHY BAYOU

BRIDGE DESIGN QC/QA PLAN

"Committed to Excellence, Focused on Delivery"

August 2022



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

# **Table of Contents**

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Appendix A	LADOTD Checklists & Worksheets
Appendix B	Crescent Design Comment Review Forms
Appendix C	LADOTD QC/QA Submittal Certifications



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

## Introduction

Crescent Engineering & Mapping, LLC (Crescent) understands that proper QC/QA is vital to the success of any bridge project. When a clearly outlined, known and repeatable process is followed by a team of bridge designers and technicians, design errors are eliminated, and plan accuracy is greatly enhanced. These QA/QC procedures and guidelines have been developed to ensure that bridge design team develops and accurately confirms that the project's design and resulting drawings meet LADOTD and AASHTO criteria and are in accordance with the requirements of the Contract. LADOTD's Bridge Design and Evaluation Manual requires that the Department's Policy for Quality Control and Quality Assurance is followed for all LADOTD projects. This QC/QA plan establishes the basis for Crescent to continue to be Committed to Excellence and Focused on Delivery.

This QC/QA plan has been developed consistent with LADOTD and Crescent policies specially for:

# Contract No. 4400024591 S.P. No. H.014992.5 McHugh Road Over Brushy Bayou

Crescent will manager design and design quality control/quality assurance program throughout the development of bridge design and production of bridge plans and specifications for this project. Our designated QC/QA manager for this project will be responsible for overseeing the overall quality program, performing independent Quality Assurance reviews as well as the preparation and implementation of the QC/QA plan. Crescent fully understands that it is the LADOTD's expectation that it's consulting engineers take full responsibility for their design and bridge plan submittals throughout the design process. We further understand that review and comments by LADOTD does not relieve Crescent of this responsibility.

This QA/QC plan has been prepared in accordance with the requirements set forth in "Guidance on QC/QA in Bridge Design in Response to NTSB Recommendation (H-08-17)," FHWA, AASHTO, August 2011. Additionally, requirements of BDTM.37 and "Policy on Quality Control and Quality Assurance," Louisiana Department of Transportation and Development, Bridge Design Section, October 2012, as amended and the requirements of the LADOTD's Bridge Design and Evaluation Manual will be followed throughout the project.

Crescent has committed to this process and has dedicated resources to deliver bridge design projects for LADOTD. We strive for continuous improvement to our processes to the benefit of our team members, the clients we serve and the public as a whole. We are committed to partnering with our clients by properly planning our work efforts to achieve a repeatable, consistent and a seamless delivery of our bridge projects. Crescent is committed to continuing education, offering our employees ample opportunities to remain on the leading edge of technology, bridge modeling and design methodology improvements, changes and innovation.

## **Definitions**

Quality Control (QC): This process involves the procedures of checking the accuracy of the calculations and consistency of the drawings, detecting and correction design omission and errors before the design plans are finalized, and verifying that bridge components are adequately designed for the requirements of the AASHTO LRFD Bridge Design Specifications, LADOTD Bridge Design and Evaluation Manual and other technical memoranda.

Quality Assurance (QA): This process involves the procedures of reviewing the work to ensure the quality control procedures and processes are in place and effective in preventing mistakes, and consistency in the development of bridge design plans.

Designer: An individual directly responsible for the development of design calculations, drawings, specifications, and contract documents and, potentially, in the review of shop drawings related to a specific bridge design with a level of technical skills and experience commensurate with the complexity of the subject structure or structures being designed. A designer shall be either a Professional Engineer licensed in the State of Louisiana or certified as an Engineer Intern under the direct supervision of a licensed Professional Engineer. The designer's experience should be commensurate with the complexity of the structure being designed.



Design Checker: An individual responsible for performing full technical review of the structural calculations, drawings, specifications and contract documents. A Design Checker shall be a Professional Engineer licensed in the State of Louisiana or certified as an Engineer Intern under the direct supervision of a licensed Professional Engineer. If the Designer is an Engineer Intern, the Design Checker should be a Professional Engineer. The checker's experience should be commensurate with the complexity of the structure being designed/checked.

Detailer: An individual responsible for the necessary Microstation/CAD duties of producing bridge design plans which reflect the designer's intentions and calculations. The Detailer shall be competent in operating Microstation/CAD software, able to read design sketches and drawings and shall communicate with the designer throughout the development of bridge design plans.

Reviewer: An individual responsible for performing QA procedures for assuring that QA/QC procedures have been performed.

Engineer of Record: A Licensed Professional Engineer responsible for all bridge structural aspects of the design of the structure including the design of all the bridge's systems and components. This individual is responsible for sealing and signing the final project plans.

## **QC/QA Roles and Responsibilities**

The following tables outline the team members who have been selected to perform the individual QC/QA assignments for this project's bridge elements. These assignments are subject to change with comparable personnel depending upon contract execution and timeline.

Bridge Structural Design*			Construction Support & Shop Drawings		
	Designer:	Dennis M. Hymel, Jr., P.E.	Drawing Review:	Dennis M. Hymel, PE.	
	Design Checker:	Abbey F. Falcon, P.E.	Review Checker:	Abbey F. Falcon, P.E.	
	Detailer:	Kelly G. Jones	QA Review:	James P. Ledet, P.E.	
	Detail Checker:	Abbey F. Falcon, P.E.			
	QA Review:	James P. Ledet, P.E.			
Hydraulics Design & Scour Analysis					
ſ	Hydraulics [	Design & Scour Analysis	Bridg	ge Geometric Design	
	Hydraulics I Designer:	Design & Scour Analysis Abbey F. Falcon, P.E.	Bridg Designer:	ge Geometric Design Dennis M. Hymel, PE.	
		<u> </u>			
	Designer:	Abbey F. Falcon, P.E.	Designer:	Dennis M. Hymel, PE.	
	Designer: Design Checker:	Abbey F. Falcon, P.E. Dennis M. Hymel, Jr., P.E.	Designer: Design Checker:	Dennis M. Hymel, PE. Abbey F. Falcon, P.E.	

\*For Non-Standard Structure Elements

Bridge Engineer of Record: Dennis M. Hymel, Jr., P.E.

<u>QC/QA Manager:</u> James P. Ledet, P.E.



## QC/QA Procedures

## 1. CALCULATIONS

## INTRODUCTION

Calculations are to be done on calculation tablet sheets for each design organization. Calculation tablets shall bear the name and address of the firm preparing the design. Calculations shall include sketches which are legible to detailers which may augment or clarify the calculations, list all assumptions, references, units, and conclusions. The calculations shall reference the specific component for which they apply and shall cite specific AASHTO codes being used for specific calculations being made.

## RESPONSIBILITIES

Engineer of Record – Ensures that staff assigned to the project are capable of performing the analysis and calculations and that their experience is commensurate with the complexity of the structure or component being tasked. Responsible for direct oversight and supervision of the design of the bridge components and structure. Assembles or assigns personnel to assemble and maintain original calculations and calculation checks for the project.

Designers – Prepare all calculations in a neat and logical manner which is conducive to checking. Provide the calculations to the Checker in a timely fashion with time to properly and adequately check calculations prior to detailing.

Checkers – Thoroughly check the design calculations starting with assumptions, mandated parameters, references, given values and formulas, AASHTO codes, omissions, and correctness of arithmetic. The Checker is responsible for asking questions of the Designer in areas that are not clear or seeking technical advice if warranted for a particular element of the calculation.

QC/QA Manager – Performs independent review of the checked calculations and random audits to ensure that QC procedures are being followed for checking of calculations.

## PROCEDURES

- 1. Identify each sheet of calculations with designer's initials, date, project name, and sheet number. Indicate portion of project being designed in the upper right corner of each sheet below the title block. For example: Bent 5 Design, Intermediate Bent Design, Span 3 Design, etc. A component of a project shall be checked promptly upon completion of calculations. Normally, design and quantity calculations are not combined.
- 2. The Designer shall make a copy (checking copy) of the calculation set and give to the checker. The originals shall then be placed in a designated binder or folder, in a convenient location, which can be accessed by the entire design team.
- 3. The checker shall fill in the checking copy headings with initials and date in red. All errors and disagreements shall be marked in red. Yellow shall be used to indicate information that has been checked is correct.
- 4. The checker shall promptly return the checking copy to the Designer for review. If the Designer agrees with the checker's markup then the Designer shall put a green check on red marks. When the Designer and Checker disagree, then the Engineer of Record shall resolve the dispute.
- 5. The Designer shall change the originals and return the originals and the checking copy to the checker for the checker's initials and date to be placed on the original.
- 6. The originals shall immediately be placed back into the calculation folder or binder. The checking copy shall be kept as required.



## 2. DRAWINGS

## **INTRODUCTION**

Timely checking of drawings is important for efficient performance of plan producing and to minimize errors and prevent compounded error. A drawing used as a base file by several disciplines (road, bridge, hydraulics) should be checked and corrected before further additions are made; this will eliminate the need to check and correct the same items on subsequent drawings.

## **RESPONSIBILITIES**

The Engineer of Record, with the help of the QC/QA Manager, will ensure that this procedure is implemented on all project drawings and that the check prints are assembled and available for audit for each submittal milestone during project delivery.

The Designer of the structure or the bridge element on the drawing has the primary responsibility for accuracy and adequacy. It is not intended that the Designer rely upon the checking system to complete the drawing.

The Designer of each drawing or set of drawings is responsible for making the Check Print, stamping and dating it, following that Check Print through the process, and obtaining the required sign-offs.

Checkers are responsible for checking the drawings, independent of the Designer, for accuracy and adequacy of all the information shown, including geometrics, reinforcing and quantities.

QA/QC Manager performs particular QA reviews and audits to ensure that procedures are being followed in regard to the checking of drawings.

## **PROCEDURES**

- 1. As each drawing individually is completed and deemed ready for checking, the Designer signs or initials the title block of drawings, makes a Check Print copy, and affixes, numbers, and dates the Check Print stamp on the print of each drawing. This is to be done on each drawing print separately, not on the set of prints as a whole, even if the same information is put on the check print stamp.
- 2. The Checker checks the Check Print of the drawing for technical adequacy and conformance to any applicable standards and format, and performs specific accuracy checks required for that type of drawing. Checking activity is recorded directly on the Check Print. The Checker is responsible for ascertaining that the drawing is consistent with the corresponding calculations, and signing off that those calculations have been properly checked. In order to document the check-ing process, the Checker highlights in yellow on the Check Print each part checked that is found to be correct and marks in red on the Check Print corrections, additions, or deletions.



Use of Colors

Instrument	Use For	User
Yellow Highlight	Checker confirmation	Checker
Red Pen	Correction to be made	Checker
Blue Pen	Discussion Item, Design Issue	Checker
Green Pen	Concur or Alternate Resolution	Designer
Orange Highlight	Confirmation of Correction	Detailer
Pink Highlight	Verification of Corrections Made	Designer/EOR

The Checker signs and dates the Check Print stamp upon completion of the checking. The Checker completes the Design Review Form concurrently with the checking of the Check Prints in order to augment suggested corrections, provide additional information or suggestions.

In the case where no corrections, additions or deletions are found, there is no need for backchecking or further signatures on the Check Print stamp. The Check Print and original drawing, signed in the appropriate checked block, should be returned to the Designer for placement in the projects file.

3. The Designer (or designee, as Backchecker) reviews the Checker's marks on the Check Print as well as the Design Review Form with the Checker to ensure that comments are conveyed accurately and to discuss suggestions or other issues. The Designer then personally makes or supervises the update of the Drawing Original.

To document the backchecking process, the Designer:

- Check-marks in green each of the Checker's red-marked changes if in agreement that the Original should be changed and adds in green, with the concurrence of the Checker, any additional changes not picked up by the Checker.
- Crosses out in green each of the Checker's red-marked changes that both the Designer and the Checker agree should not be changed. The Backchecker should not obliterate the Checker's marks.

NOTE: The Backchecker and Checker should resolve differences encountered during the checking process so they are not repeated. If resolution cannot be achieved by the two individuals, the appropriate Design Unit Engineer or Design Manager should be requested to resolve the differences.

• Signs and dates the Check Print stamp.



4. Correction of the Drawing Original should be supervised by (or drafted by) either the Designer or Checker, since both are familiar with the changes to be made.

When making the Check Print corrections to the Drawing Original, the engineer, draftsperson, or CADD operator highlights in orange each correction as incorporated. The person correcting the drawing signs and dates the Check Prints stamp upon completion of the corrections.

5. When corrections are made by a third party (not the Designer or checker), the Check Print should be verified by the Checker or Designer to assure that the agreed-to corrections have been incorporated without error. If the corrections are not made or are erroneous, the Check Print with penciled instructions is returned to the corrector. The Verifier puts a pink check mark next to or pink highlight over the item after reviewing its incorporation on the Original Drawing.

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

After the corrections have been verified the Checker initials the "checked by" block on the title block of the Drawing Original.

6. The completed original (or CADD file) is put under the control of the Engineer of Record or a designee in order to prevent further changes in the drawing that could invalidate the checking which has been done. The Engineer of Record or a designee releases the checked drawing to other disciplines to use as a baseline for their input, or to the client.

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

7. If changes mandated by the client at the final review are simple in nature, the Engineer of Record or a designee may abbreviate the checking process by noting the changes in red on a new Check Print (which should be sequentially numbered) and signing the Check Print as the Backchecker, indicating that the changes do not materially affect the design. Then the normal correcting and verifying processes should be utilized.

Exceptions to the procedural documentation of the Check Prints can be given only by the QC/QA Manager based upon the size, character and complexity of the project.



## **Description of Appendices:**

The following review forms, checklists and certifications within the Appendices will be used during the project's QC/QA process as required by LADOTD's Bridge Design Section BDTM.37. The checklists and certification forms are included in the Appendices for reference.

## Appendix A

- LADOTD Design Criteria Worksheet
- LADOTD Project Activity Log Sheet
- LADOTD Consultant Project Bridge Design Kick-Off Meeting Agenda Checklist
- LADOTD Consultant Submittal Review Checklist
- Final Calculation Book Index Checklist

## Appendix B

Crescent Design Comment Review Forms

## Appendix C

- LADOTD QA Information Package Checklist
- LADOTD QC/QA Certification
- LADOTD Consultant Submittal QC/QA Certification

The Consultant Submittal QC-QA Certification will accompany all submittals as required by the Bridge Design Section QC-QA Policy. Additional checklist(s) may be added by the QC/QA Manager based upon the scope, character and complexity of the project, should this change throughout the course of design.



## **Design Criteria Checklist**

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

\_\_\_ Cover Sheet

The following information must be included on the cover sheet:

- LADOTD project number
- Project name
- Revision date
- The Supervisor or Team Leader's signature and date
- \_\_\_\_ Governing Design and Construction Specifications and Other References

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

\_\_\_\_ Design Assumptions and Design Exceptions

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

- \_\_\_\_\_ General Information
  - The general information as listed below should be included in this section:
    - Bridge information (no. of bridges, bridge clear width, length, no. of lanes, lane width, shoulder width, etc.)
    - Road information (roadway classifications, design speed, traffic data, etc.)
    - Vertical datum
    - Vertical and horizontal clearances
    - Other relevant information
- \_\_\_\_ Hydraulic Design Criteria

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

\_\_\_\_ Design Factors

The ductility factor ηD, redundancy factor ηR, and operational importance factor ηI shall be listed in this section.

\_\_\_\_ Design Loads

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

\_\_\_\_ Limit States

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



Bridge Barrier Railing The design criteria, types, and test levels for bridge barrier railing shall be listed in this section. Standard plans should be listed if they are utilized. Guardrail The design criteria, types, and test levels for guardrails shall be listed in this section. Standard plans should be listed if they are utilized. Approach Slab Design criteria for approach slab shall be included in this section. Standard plans should be listed if they are utilized. Deck and Deck Drainage All design criteria for deck and deck drainage design shall be included in this section. Standard plans should be listed if they are utilized. Bearing All bearing types and design criteria for each bearing type shall be included in this section. Standard plans should be listed if they are utilized. Joint All joint types and design criteria for each type shall be included in this section. Standard plans should be listed if they are utilized. Superstructure All superstructure types and design criteria for each type shall be included in this section. Standard plans should be listed if they are utilized. Substructure All substructure types and design criteria for each type shall be included in this section. Standard plans should be listed if they are utilized. **Piles and Drilled Shafts** All pile types, sizes, and structural design criteria shall be included in this section. Standard plans should be listed if they are utilized. Geotechnical Design All geotechnical design criteria shall be included in this section and the information shall be provided by the Geotechnical Engineer. Standard plans should be listed if they are utilized. Mechanical Design All mechanical design criteria shall be included in this section if applicable. Standard plans should be listed if they are utilized. Electrical/Lighting Design All electrical design criteria shall be included in this section if applicable. Standard plans should be listed if they are utilized. As-Designed Bridge Rating Criteria All as-designed bridge rating criteria shall be included in this section. Software All software used for design and check shall be included in this section.



#### APPENDIX J-PROJECT ACTIVITY LOG SHEET

Project No .:

Project Name:

Bridge Task Manager:

Date	Project Activity	Comments

11/17/2014



# APPENDIX H—CONSULTANT PROJECT BRIDGE DESIGN KICK-OFF MEETING AGENDA CHECKLIST

A kick-off meeting with the Consultant's bridge design team shall be initiated by the LADOTD Bridge Design Task Manager once the project is awarded. The meeting agenda shall include, but not be limited to, the following items:

- \_\_\_\_ Introduce LADOTD Bridge Task Manager and the Consultant's Key Team Members (The Supervisor or Team Leader and Key Designers/Design Checkers/Reviewers)
- Discuss Consultant's Staffing Plan and Implementation of QC/QA Plan Document (The staffing plan should include names and responsibilities of the designers, detailers, checkers, reviewers, and the EOR.)
- Determine Schedules for Project Submittals
   (Design Criteria, TS & L, 30%, 60%, 90%, 100% of Preliminary Plans and Final Plans, Final Calculations, etc.)
- Share Expectations and Consultant Rating Criteria (Consultant rating will be performed for all project submittals shown on the project submittal schedule.)
- Discuss Design Criteria
- Discuss Budget, Supplemental Requests, Invoices, and Importance of Avoiding Claims (Staff shown on invoices will be reviewed in accordance with the staffing plan.)

11/17/2014



LADOTD BRIDER DENON AND BY ALL'ATON MANUAL PART I - POLETES AND PROCEDURES

Beess         Decign Criteria         TSAL         JPP         GPP         PP         PP<	Final Calculation Book R	Plan Revisions R	Change Orders R
Submital QCQA Certification     R	R	R	R
Design Criteria         C			
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General Notes     Image: constraint of the sector of the sec			
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Bridge Desinage Details D C S			
Detour Bridge Details D C S			
Revenment Details D C S			
Signing Lighting Details D C S			
Year Plate D C S			
Rebar Support D C S			
Misc. Details D C S			
Project Specific D C S			
Electrical Lighting Details D C S			
Mechanical Details D C S			
As-Buit Plans D C C			
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Cost Estimate D D D D C C			
Final Calculations	s		
Revised Plans Calculations		s	s

8.8.2019

Legends: "R" = The item is required and shall be included in the submittal. "C" = The item shall be complete and shall be included in the submittal. "D" = The item shall be in development and shall be included in the submittal. "S" = The item is stamped by the EOR and shall be included in the submittal.



100-24

CRAPTER J POLICY FOR QC/QA

## **Final Calculation Book Checklist**

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

\_\_\_ Cover Sheet

The following information must be included on the cover sheet:

- LADOTD project number
- Project name
- The title of "Final Calculation Book"
- The EOR's seal with signature and date
- \_\_\_\_ Final Calculation Book Check List
- \_\_\_\_\_ QC/QA Certifications
- \_\_\_\_ Peer Review Resolution Agreement (if peer review is performed)
- \_\_\_\_ Design Criteria
- \_\_\_\_ Final Hydraulic Analysis Report from Hydraulic Engineer
- \_\_\_\_ Final Geotechnical Analysis Report from Geotechnical Engineer
- \_\_\_\_ Superstructure Design Calculations
- \_\_\_\_ Substructure Design Calculations
- \_\_\_\_ Quantity Calculations
- \_\_\_\_ Special Provisions/NS-Items
- \_\_\_ Construction Cost Estimate
- \_\_\_\_ As-Designed Rating Report
- \_\_\_\_ List of All Final Electronic Design Files and File Locations (ProjectWise directory name)

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

- \_\_\_\_ A PDF File of the Calculation Book
- \_\_\_\_ All Electronic Design Files
- \_\_\_\_ A PDF File of the As-Designed Rating Report Only



QC/QA REVIEW COMMENT SUM	MARY AND RESOLUTION SHEE	ET	PERPONSE CODE
Project Name: XXX		Date: XXXXX	RESPONSE CODE 1. Concur / Accept comment 2. Non-Concur / Disagree with comment
Project Number: H.0XXXX	Engineer: Dennis Hymel, Jr., P.E.		<ol> <li>Conflicts with previous directive</li> <li>For Information Only</li> <li>Clarify or discussion required</li> <li>Delete comment</li> </ol>
Submittal: 60% Preliminary	Reviewer: XXX	Page: 1 of 1	<ol> <li>Resolution of comment in next phase</li> <li>See additional comment</li> </ol>

•	GENER	AL USE (THIS	SECTION)					
Item No.	Date	(1)Source	Reviewer Comments	(2)Code	(2)Date	<sup>(3)</sup> Responses		Final olution Date
							Code	
1	8/31	2a	Revise typical section to include X.	1	9/10	Will Incorporate.	1	9/15

If no comment, write "NO COMMENT"	Signature of Reviewer	Agency/Company Sign-off
<ul> <li>(1) Indicates the document / model, or use "G" for General Comment</li> <li>(2) Design Firm/Agency response code &amp; date to reviewer comment</li> </ul>		<ul> <li>(3) Design Firm/Agency response to reviewer comment</li> <li>(4) To be filled out during back check / subsequent meeting/discussion</li> </ul>



# QA Information Package Checklist

Project No.:

Project Description:

 Calculation Book
 Plans
 Special Provisions
 Cost Estimate
 Other Documents



# QC/QA Certification

Project No.:

Project Name:

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

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



# **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



# 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.

Address	Point of Contact and email address	Phone Number
607 W. Morris Avenue Hammond, LA 70403	Drake Arnone President	985-662-5501
	Business Development	
	607 W. Morris Avenue	Addressaddress607 W. Morris AvenueDrake ArnoneHammond, LA 70403President

# 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.





"Committed to Excellence, Focused on Delivery"

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