LADOTD

IDIQ Contracts for Bridge Preservation Contract Numbers: 4400023921, 4400023922, 4400023923, 4400024185, 4400024186, 4400024187, 4400024188, and 4400024189 May 10, 2022

Gresham Smith





Genuine Ingenuity

10000 Perkins Rowe Suite 280 Baton Rouge, LA 70810

225.757.5849 GreshamSmith.com

May 10, 2022

Mr. Michael A. Gorbaty Consultant Contract Services Administrator Department of Transportation and Development 1201 Capitol Access Road, Room 405-E Baton Rouge, LA 70802

RE: IDIQ Contracts for Bridge Preservation | Contract Numbers 4400023921, 4400023922, 4400023923, 4400024185, 4400024186, 4400024187, 4400024188, and 4400024189

Dear Mr. Gorbaty:

At Gresham Smith, we have been honored to partner with LADOTD and numerous public agencies on a variety of projects. From our Baton Rouge office, and also at the corporate level, we share in the stake that the LADOTD holds in carrying out its responsibilities in the most effective manner possible. Our key local staff all have experience successfully completing road, bridge, complete street, and traffic projects individually for LADOTD and we look forward to the opportunity to partner with LADOTD on this IDIQ Contract for Bridge Preservation.

We have vast experience with similar bridge preservation retainer contracts, currently working under these types of IDIQ contracts for Tennessee, Georgia and Mississippi DOTs. Our overriding goal is to Focus on the Success of Our Client. To make this project a success for LADOTD, we have assembled an extremely strong team that includes Gresham Smith's local staff who have extensive experience and knowledge of the department's policies, processes, and procedures. Our local staff gained this experience and knowledge by working for LADOTD as employees and delivered projects for LADOTD as consultants. Our local team will be supported by key subject matter experts located in regional offices. Gresham Smith staff will be supported by subconsultants including WSP, Burgess and Niple, Bridge Diagnostics Inc., APS, Civil Design and Construction and Meyer Engineering. Our team brings added value over and above your vision for the contract, and offers the DOTD a winning formula based on the following:

Gresham Smith

- Herbert "Bert" Moore II, P.E., PLS, PTOE, Project Executive and Gresham Smith's Louisiana Transportation Leader, is an experienced traffic engineer who has developed many Transportation Management Plans (TMP) and Temporary Traffic Control (TTC) plans for LADOTD. In his 24 years of experience as both as a consultant and as LADOTD's District Traffic Operations Engineer for District 61. As the Project Executive, Bert will ensure the team has the expertise and resources necessary for LADOTD's successful completion of this project on-time and on-budget.
- John Weres, PE, Project Manager, will be responsible for overall project management of this contract. John has over 40 years of experience with a focus on bridge design, preservation, and inspection. John leads our Louisiana bridge practice and will supervise the day-to-day operations for this contract. John has been serving as our Project Manager for the Complex Bridge In-Depth Bridge Inspection Contract, which has included 11 bridge inspections as well as 1 emergency bridge design repair for the Spring Street Bridge in Shreveport.
- Brennon Hughes, P.E., Lead Design Engineer, will lead our road design tasks. Brennon will be responsible for compiling and preparing each of the bridge contract final bid packages. Brennon is a former DOTD engineer who is knowledgeable of the final plan requirements and has led the effort for preparing 12 bid packages in the past 3 years for our LADOTD Retainer Contract for Safe Routes to Schools and Local Road Safety Program.

The Gresham Smith team is eager, enthusiastic and available to start work immediately on this project. We respectfully ask for your consideration and appreciate the opportunity to present this proposal. Please feel free to contact me with any questions at 225.282.2101 or by email at bert.moore@greshamsmith.com or our proposed project manager, John Weres at 225.960.5480 or by email at john.weres@greshamsmith.com.

Sincerely,

hove I

Herbert "Bert" Moore, II, P.E., PLS, PTOE State Transportation Leader - Louisiana

Gresham Smith

DOTD FORM: 24-102 PROPOSAL TO PROVIDE CONSULTANT SERVICES

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

1. Contract title as shown in the advertisement	IDIQ Contracts for Bridge Preservation
2. Contract number(s) as shown in the advertisement	4400023921, 4400023922, 4400023923, 4400024185, 4400024186, 4400024187, 4400024188, and 4400024189
3. State Project Number(s), if shown in the advertisement	N/A
4. Prime consultant name (as registered with the Louisiana Secretary of State where such registration is required by law)	Gresham Smith
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	EF.0003429 DUNS number: 059153676
6. Prime consultant mailing address	10000 Perkins Rowe, Suite 280, Baton Rouge, LA 70810
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	10000 Perkins Rowe, Suite 280, Baton Rouge, LA 70810
8. Name, title, phone number, and email address of prime consultant's contract point of contact	John Weres, P.E. 225.960.5480 / john.weres@greshamsmith.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Herbert "Bert" Moore, II, P.E., PLS, PTOE State Transportation Leader - Louisiana 225.757.5849 / bert.moore@greshamsmith.com

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

12. Past Performance Evaluation Discipline Table:

Past Performance Rating Categories	% of Overall Contract	Gresham Smith (Prime)	WSP (Sub)	Burgess & Niple (Sub)	Bridge Diagnostics, Inc. (Sub)	APS (Sub)	CD&C (Sub)	Matrix (Sub)	Meyer (Sub)
Bridge	80%	74%	12%	10%	4%	0%	0%	0%	0%
Roadway	4%	100%	0%	0%	0%	0%	0%	0%	0%
Other (Bridge Facility Design (Elect, Mech and Arch))	4%	0%	80%	0%	0%	0%	0%	0%	20%
Traffic	4%	100%	0%	0%	0%	0%	0%	0%	0%
Geotech	3%	0%	0%	0%	0%	100%	0%	0%	0%
Survey	3%	0%	0%	0%	0%	0%	100%	0%	0%
Environmental	2%	0%	0%	0%	0%	0%	0%	100%	0%
	Identify the percentage of work for the <u>overall contract</u> to be performed by the prime consultant and each sub-consultant.								
Percent of Contract	100%	67%	13%	8%	3%	3%	3%	2%	1%

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)
Gresham Smith	Principal	1	2
Gresham Smith	Supervisor-Engineer	8	12
Gresham Smith	Supervisor-Other	1	5
Gresham Smith	Engineer	6	14
Gresham Smith	Engineer-Other	1	4
Gresham Smith	Professional	1	3
Gresham Smith	Engineer Intern	6	8
Gresham Smith	Senior Technician	2	3
Gresham Smith	GIS Analyst	0	1
Gresham Smith	CADD-Operator	0	2
Gresham Smith	Clerical	1	1
WSP	Principal	1	25
WSP	Inspector Bridge	10	80
WSP	Engineer	8	32
WSP	Supervisor - Engineering	4	12
WSP	Engineering-Aide	8	32
WSP	CADD Drafter	1	4
WSP	Technician	2	8
Burgess & Niple	Engineer	3	3
Burgess & Niple	Engineer – Other	18	18
Burgess & Niple	Principal	1	2
Burgess & Niple	Engineer Intern	3	4
Burgess & Niple	Inspector – Bridge	3	3
Burgess & Niple	CADD – Operator	1	2
Bridge Diagnostics	Engineer	4	5
Bridge Diagnostics	Driller	8	8
Bridge Diagnostics	Technician	12	12
Bridge Diagnostics	Principal	3	3
Bridge Diagnostics	Supervisor – Engineer	6	6
Bridge Diagnostics	Supervisor – Other	14	14
Bridge Diagnostics	Engineer – Other	4	4

Bridge Diagnostics	Engineer – Intern	7	7
Bridge Diagnostics	Senior Technician	13	13
Bridge Diagnostics	Technician	4	4
Bridge Diagnostics	Computer Analyst	1	1
Bridge Diagnostics	Accountant	2	2
Bridge Diagnostics	Clerical	3	3
Bridge Diagnostics	Professional	6	6
APS	Engineer	5	5
APS	Driller	8	8
APS	Technician	12	12
Civil Design & Construction, Inc.	Surveyor	2	2
Civil Design & Construction, Inc.	Party Chief	2	4
Civil Design & Construction, Inc.	Instrument Man	2	2
Civil Design & Construction, Inc.	Rodman	2	3
Civil Design & Construction, Inc.	CADD Operator	1	1
Civil Design & Construction, Inc.	Senior Technician	3	5
Matrix New World Engineering	Environmental Pro	2	7
Matrix New World Engineering	Biologist/Wetlands	3	5
Meyer Engineers, LTD	Accountant	1	3
Meyer Engineers, LTD	Administrative	1	1
Meyer Engineers, LTD	Clerical	1	3
Meyer Engineers, LTD	Engineer	1	9
Meyer Engineers, LTD	Engineer Intern	0	2
Meyer Engineers, LTD	Inspector	0	4
Meyer Engineers, LTD	Inspector – Certified	2	4
Meyer Engineers, LTD	Inspector – Lead	1	1
Meyer Engineers, LTD	Planner	0	1
Meyer Engineers, LTD	Principal	1	1
Meyer Engineers, LTD	Supervisor – Engineer	1	2
Meyer Engineers, LTD	Architect – Licensed	2	6
Meyer Engineers, LTD	Interior Designer	1	1

14. Organizational Chart:



Meyer Engineers

15. Minimum Personnel Requirements:

MPR (Do not insert wording from ad)	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license / certification required	State of license	License / certification expiration date
1.	Herbert "Bert" Moore, II, P.E., PLS, PTOE	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 31065
			PLS	Louisiana	Exp. 9/30/2023 PLS LA 5043 Exp. 9/30/2023
			PTOE	International	PTOE 2728 Exp. 9/30/2024
2.	Herbert "Bert" Moore, II, P.E., PLS, PTOE	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 31065 Exp. 9/30/2023
			PLS	Louisiana	PLS LA 5043 Exp. 9/30/2023
			PTOE	International	PTOE 2728 Exp. 9/30/2024
3.	John Weres, P.E.	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 36429 Exp. 9/30/2023
	Emery Sayre, P.E.	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 34414 Exp. 9/30/2023
	Tom Tran, P.E.	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 32072 Exp. 3/31/2024
4.	John Weres, P.E.	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 36429 Exp. 9/30/2023
	Emery Sayre, P.E.	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 34414 Exp. 9/30/2023
	Yun Lin, P.E.	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 42444 Exp. 9/30/2022
	Lloyd (Mark) Pearson, P.E.	WSP USA, Inc.	P.E. (Civil)	Louisiana	P.E., LA 39629 Exp. 9/30/2023
5.	Amaka Amalu-Anderson, P.E.	WSP USA, Inc.	P.E. (Mechanical)	Louisiana	P.E., LA 41985 Exp. 3/31/2024
6.	Kevin Walsh, P.E.	WSP USA, Inc.	P.E. (Electrical)	Louisiana	P.E., LA 44049 Exp. 3/31/2024
7.	Trevor Johnson, P.E.	WSP USA Inc.	P.E. (Structural)	Louisiana	P.E., LA 45518 Exp. 9/30/2023

8.	Richard Savoie, P.E.	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 20936 Exp. 9/30/2022
	Ronnie Robinson, P.E.	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 24040
	Brennon Hughes, P.E.	Gresham Smith	P.E. (Civil)	Louisiana	P.E., LA 39985 Exp. 3/31/2024
9.	Sergio Aviles, P.E.	APS	P.E. (Civil)	Louisiana	P.É. LA 33571 Exp. 3/31/2024

(Add rows as needed)

16. Staff Experience	e:				
Gresham Smith					
Joh Proje	nn Weres, P.E. ect Manager / Lead B	ridge Engineer		Years of experience with this employer Years of experience with other employer(s)	5 37
Degree(s) / \	Years / Specialization	Bachelor of Science /	1980 / Civil Fr	ngineering University of Pittsburgh	<u> </u>
Active	registration number / state / expiration date	PE.0036429 / LA / Exp	o. 9/30/2023		
	Year registered	2011 (LA) 1985 (PA)	Discipline	P.E./Civil	
Contract role(s) / bri	ef description of respo	onsibilities	Project Man project team	ager / Lead Bridge Engineer. John will manage the overall and lead the coordination of the bridge design teams.	
Experience dates (mm/yy–mm/yy)	Experience and qual "designed intersection	ifications relevant to t on", etc. Experience d	he proposed ates should o	contract; <i>i.e.</i> , "designed drainage", "designed girders cover the time specified in the applicable MPR(s).	",
04/20 – 09/20	LADOTD, Complex Br Shreveport, LA Projection roadway closure. Grest contractor, helical piles coordinator and facilitat strengthen the existing	ridge Inspections, State ect Manager. In April 202 nam Smith was selected were designed to support ted the expedited repairs piers, modifications to de	wide, LA Ta 20, a train dera to perform the rt the new colu to this historic eck overhangs	sk Order 2 - Emergency Bridge Repairs, US 71 in Downto illment damaged Bent 3 of the Spring Street Bridge forcing th bridge repairs to open the bridge. Working with the selected imn foundations and crash wall. John served as the design structure. Rehabilitation options included fiber wrapping to , and new pedestrian friendly railings.	e
06/21 – 08/21	Florida DEP, Florida K Engineer. Florida DEP Bahia-Honda Historic T	Keys Overseas Heritage selected Gresham Smith russ. John led the evalua	Trail Historic to inspect an ation and reco	c Bridge Evaluation, Marathon, FL Lead Structural Design d evaluate two historic bridges, the Seven Mile Bridge and the mmendations on preservation and replacement options.	in e
04/15 – 03/17 With another firm	LADOTD, I-49 Lafayette Connector, Lafayette, LA Deputy Lead Structural Design Engineer. Served as Deputy Lead Structural Design Engineer for the concept design for a 4-mile long elevated structure through an urban area. Structure concepts included post-tensioned concrete U-girders, span-by-span segmental boxes, and steel trapezoidal boxes. John coordinated the efforts of the individual design teams for each structure type and served as the public coordination lead for the structures as part of an overall community involvement plan on developing the proposed structure type for this \$800M project.				
1985 – 1990 With the City	City of Pittsburgh, Bri for the City of Pittsburg and construction managemiscellaneous structure snooper, and coordinate DOT as part of the state	dge Department, Pittsb h, including database ma gement. He was respons es. Bridge inspection duti ing with rigging firms. Ins ewide inspection program	urgh, PA Pr nagement, bri ible for the des es included fre pection report n.	oject Engineer. John managed the structures program dge inspection (NBIS), consultant procurement, design review sign of various retaining walls, pole foundations, and ee climbing of several trusses and arches, operating a bridge s were prepared and reviewed; and coordinated with the state	NS e
06/19 – 03/20	inspections of major riv the LA1 Truss over Atc Lift Bridge over Red Riv truss and Bridge 00913	er crossings. Completed hafalaya River at Simmer ver. Gresham Smith was i0, in Charenton, a steel s	hands-on insp sport, LA8 Seg able to comple swing truss – v	pection of fracture critical elements on several structures inclugmental Bridge over Red River at Boyce and the US165 Verticate the inspection of Bridge 005860, in Jeanerette, a steel switchin the original budget.	iding cal ⁄ing

	TDOT Underwater Pridge Inspection Program TN L and Inspector, John conved as technical load for the underwater
07/10 10/17	increasing of Calculation of the state of Tangana and the state of the
07/13 - 12/17	inspection of 57 structures throughout the state of Tennessee. John oversaw the field inspection and diving services and
	prepared the reports for each structure in accordance with NHI guidelines and requirements.
	Complex Bridge Inspections, Various Locations, MS Team Leader. Prior to joining Gresham Smith, John served as Bridge
09/16 – 03/17	Inspection Team Leader and Deputy PM for the in-depth inspections of the US 84 Dual Bridges over Mississippi River, steel
With another firm	cantilever truss structures in Natchez MS. A second major bridge inspection for MDOT included the I-110 Biloxi Bay Bridge,
	including the bascule movable span. Inspection access included UBI, telescoping manlift and boat mounted manlift.
	LADOTD, Complex Bridge Inspections, Statewide, LA Project Manager. Task Order 3 - Retainer project for various
	movable bridge inspections. Completed hands-on inspection of fracture critical elements on several structures and coordinated
07/00 0 :	the efforts of mechanical and electrical staff and served as EOR for the reports including the Bridge 006210 Vertical Lift Bridge
07/20 – Ongoing	at Loreauville, LA, Bridge 054360 Gross Tete Steel Swing Bridge and Bridge 054472 Indian Village Steel Swing Bridge in
	Iberville Parish. Due to cost savings on the initial 3 bridges in Task Order 2, Gresham Smith was able to complete the inspection
	of Bridge 006306. Bayside Bridge in Jeanerette, a steel swing bridge – within the original budget for the initial three bridges.
	City of Alcoa. TN. Duck Pond Phase 2 Lead Structural Engineer. As part of a Rails to Trails transformation project. John
	led the preservation of 3 older structures, including a 400' long railroad trestle rehabilitated with a wooden timber deck and new
06/20 – 04/22	steel railings as part of the new multi-use trail. Two concrete arches were also rehabilitated to carry the trail over a new local
	roadway.
-	MDOT, MS-178 Benton County Bridges, Benton County, MS Lead Structure Engineer, John served as the Lead Design
<u> </u>	Engineer for the final design of a 2-cell box culvert and two prestressed concrete girder structures in northern Mississippi. These
	water crossings improved the hydraulic conditions at the sites and incorporated low-maintenance details such as jointless
ongoing	bridges
	MDOT, SR 149 Simpson County Bridge Replacements, MS Lead Structure Engineer, Gresham Smith is partnering with
	MDOT for Phase B (Final Design) for the reconstruction of S.R. 149 near D'Lo. Simpson County Mississippi Gresham Smith is
07/18 – Ongoing	designing the two longer structures (Bridge 128.2 and Bridge 128.6). This is the first instance of partial depth deck panels
	utilized for MDOT as a nilot to verify the ease of construction and as an accelerated (ABC) time condition
	Intervention and the second structure related activities including inspection alternatives analysis final
Career	design and construction management and program management. John served as Team Leader on soveral LA DOTD complex
Caleel	bridge inspections prior to joining Gresham Smith, and as Project Manager for underwater bridge inspections for TDOT

*Icon represents key project highlighted in Section 17.

16. Staff Experience	e:				
To Stru	m Tran, P.E. uctures QA/QC			Years of experience with this employer	9
ARB				Years of experience with other employer(s)	22
Degree(s) /	Years / Specialization	Bachelor of Scie University of Ce	ence / 1991 / Civil Ei ntral Florida	ngineering,	
Active	registration number / state / expiration date	PE.0032072 / LA	A / Exp. 3/31/24		
	Year registered	2005 (LA) 1996 (GA)	Discipline	P.E./Civil	
Contract role(s) / brief description of responsibili		onsibilities	Technical Resource structures team and	ce / Structures QAQC. Tom will be a technical resource for t d provide QAQC as a technical reviewer	:he
Experience dates (mm/yy–mm/yy)	Experience and qualif "designed intersectio	fications relevan n", etc. Experier	t to the proposed once dates should c	contract; <i>i.e.</i> , "designed drainage", "designed girders' over the time specified in the applicable MPR(s).	'))
08/20 – Ongoing	GDOT, Statewide Task Manager. Tom served a disciplines, established s workload of team memb	Order Services of sthe single point of schedules, issued ers, and provided	ontract for Bridge of contact with the br assignments based QC of the final bid do	Maintenance Engineering Services, Statewide, GA Projectidge maintenance unit, managed and coordinated the various on qualifications and ocuments.	əct s
10/19 – Ongoing	MDOT, I-55 West Front Gresham is performing F bridge site with poor dra the lead structural desig Old Highway 27 and KC	age Road Bridge Phase A & B Road inage and an emb n engineer for the S railroad. The brid	Preservation (Brid way Drainage analys ankment slide leadin phase "A" preliminar dge is 330 feet long	ge No.16.9C), Madison County, MS Lead Bridge Engine sis and design and bridge repair conceptual and final design g to damage to the end wall at the south end of the bridge. T y design of this fourspan prestressed concrete beam bridge of and 80 feet wide and designed for AASHTO LRFD specificat	er. for a om is over ion.
01/16 – 11/19	GDOT, Bridge Replace Manager. This project co over the North Oconee F served as the Project Ma budget. Tom was respor GDOT and design team.	ment, CR 481/Co onsists of replacing River in Athens-Cla anager. He manag nsible for coordinat . Tom also review	Ilege Station Road g both the eastbound arke County with one ed the various desig ting activities betwee plans to check for co	Over North Oconee River, Athens-Clarke County, GA Produced and westbound existing CR 481/College Station Road bridge new bridge, approximately 263-feet long and 77.5-feet wide n team disciplines to ensure compliance with project schedul on GDOT and the design team and was the sole contact betwo mpleteness and constructability.	r oject jes . Tom le and /een
11/14 – 10/17	MDOT, MS-309 Bridge this project. The design or pipe piles. Span lengt	Replacements, M included replacing hs ranged from 41	larshall County MS full timber structures ' to 140'. Structure a	Lead Bridge Engineer. Tom served as the design engineers with AASHTO beam structures supported by either concrete rrangements varied from 3-span to 6-span structures.	r for ∍ piles
07/15 – 12/18 - Design	GDOT, SR 15/Sandersy Sandersville, GA Eng including a combination over a railroad spur line. bridge length to reduce of foot by 6-foot culvert at S	ville Truck Route ineer of Record. of new alignment a We developed a costs, including mi Sisters Church Cre	GRIP Rural Widenin Gresham Smith deve and existing roadway value engineering de tigation costs. We als eek.	ng and New Bridge Over Railroad Spur Line, eloped preliminary and final plans for a truck bypass project, v widening to create a four-lane section, as well as a new brid sign utilizing a reduced median width and MSE walls to redu so developed the hydraulic analysis and design of a new tripl	lge ce the le 6-

16. Staff Experience Gresham Smith	e:				
Courtney Rome, P.E. Bridge Engineer				Years of experience with this employer	4
				Years of experience with other employer(s)	7
Degree(s) /	Years / Specialization	Bachelor of Scie	nce / 2009 / Civil E	ngineering, Southern University and A&M College	
Active	e registration number / state / expiration date	PE.0043355 / LA	A / Exp. 9/30/23	-	
	Year registered	2019 (LA)	Discipline	P.E./Civil	
Contract role(s) / br	ief description of respo	onsibilities	Bridge Engineer / 0	Courtney will assist with the bridge design and inspections.	
Experience dates (mm/yy–mm/yy)	Experience and qualit "designed intersectio	fications relevant n", etc. Experien	t to the proposed on the total termination of the termination of terminatio of termination of termination of terminati	contract; <i>i.e.</i> , "designed drainage", "designed girders cover the time specified in the applicable MPR(s).	"
05/19 – 04/22	LADOTD, Local Road S for standard plans and d site inspection and ball b	Safety Program - N letails to be incorpo bank testing. Court	West Feliciana Pari prated for the proposiney coordinated RFI	i sh, LA <i>Bridge Engineer.</i> Courtney provided recommendates sed bridge railing replacements. Courtney performed prelimin I and standard drawing modifications.	tions nary
06/19 – 06/20	MDOT, I-55 W Frontage MS <i>Bridge Engineer</i> , abutment. Joint repair de foundation recommenda	Road (Southbou Courtney provided etails were provide itions.	details for the end w data well. Courtney	Soldier Colony Road) Bridge Preservation, Madison Couver vall removal and the proposed new end wall at the bridge provided substructure loads to the geotechnical Engineer for	unty,
02/20 – 08/21	TDOT, Alcoa Greenway structures including, con concrete arch structure of existing concrete arches	y Bridges (City of oversion of an exist on elevated retaining to carry the trail or	Alcoa, TN) Bridge ing steel railroad tree ng walls to carry the ver new roadways.	e Engineer. Courtney served as bridge designer for multiple stle into a multi-use trail structure, construction of a new preceproposed trail over a new roadway, and the rehabilitation of	cast two
C 11/17 – Ongoing	MDOT, SR 178 Benton services for the replacer Beams (FIB) to maximiz services for a one-span	County Bridge Re nent of two water of e span lengths whit (135-foot) and thre	eplacements, MS crossings on parallel ile minimizing structu e-span structure and	Engineer. Gresham Smith is providing final design (Phase B alignment. Both bridges include utilization of prestressed Floure depths. Courtney performed the deck design and beam d d also completed the design of pipe piles for the pier bents.	3) orida I- Jesign
04/20 – 08/20	LADOTD, Task Order 2 derailment that damaged structure and design the support the railroad load	2, US 71 Spring St d the steel bent for emergency repairs is and for the crash	the US 71 Spring Si s. Courtney led the s wall and helical pile	epairs, Shreveport, LA Design Engineer. Following the tra treet Bridge, Gresham Smith was selected to evaluate the substructure design elements including the temporary shoring es.	ain g to
07/18 – Ongoing	MDOT, MS-149 Simpso calculations including Le the bridge plan sheets fo of design and details for	on County Bridges eap Bridge Design f or two structures in MDOT's first use o	s, Simpson County for FIB girders for m cluding all deck, bea of partial depth conc	r, MS <i>Bridge Engineer.</i> Courtney performed final design ultiple span designs for two of the four bridges. Courtney pre ams, and foundations. Courtney led Gresham Smith's develo rete deck panels, to accelerate construction and improve saf	pared pment fety.
Certifications	• NHI 130055 – Bridg	e Inspection Team	Leader and NHI 13	0078 Fracture Critical Insp. Techniques	
(See section 20)	 SPRAT Level 1 Rop 	pe Access Technic	ian.		

16. Staff Experience	:				
En Ser	nery Sayre, P.E.			Years of experience with this employer	3
No. D				Years of experience with other employer(s)	17
Degree(s) /	Years / Specialization	Bachelor of Scie	nce / 2001 / Civil Er	ngineering, University of Mississippi	
Active	registration number / state / expiration date	PE. 0034414 / L	A / Exp. 9/30/2023		
	Year registered	2009 (LA) 2007 (MS)	Discipline	P.E./Civil	
Contract role(s) / br	ief description of respo	onsibilities	Senior Bridge Engi	neer / Emery will assist with the bridge design and load ratin	gs.
Experience dates (mm/yy–mm/yy)	Experience and qualit "designed intersectio	fications relevan n", etc. Experier	t to the proposed on the proposed of the second s	contract; <i>i.e.</i> , "designed drainage", "designed girders over the time specified in the applicable MPR(s).	",
09/18 – 11/18	MDOT, SR 15 over Po contractor, Emery desig the resetting of slab spa span bridge while main	tterchitto Creek gned and detailed ans to correct hor taining traffic thro	Bridge Repairs, Ne temporary shoring izontal alignment of ughout the work.	ewton County, MS <i>Jacking Engineer</i> . On behalf of the and bridge jacking plans to allow for bearing replacement the bridge railing and perform other repairs to the 17-spa	repair s and n slab
06/16 – 11/16	MDOT, US-78/I-22 ove repair contractor, Emer reconstruction of the 3-	e r Tallahatchie R i y designed and d span continuous l	iver Bridge Repairs etailed temporary to box girder bridge.	s, Union County, MS <i>Shoring Engineer</i>. On behalf of t p-down shoring to allow for partial demolition and	he
08/13 – 08/14	MDOT, US 84 WB ove On behalf of the MDOT development of RFQ an constructed in 1940.	r Mississippi Riv Bridge Division, nd RFP documen	ver Pin & Link Repl Emery managed the ts for a \$4 million pi	acements, Adams County, MS Assistant Project Maile preliminary engineering phase including assisting in the n & link replacement project for the cantilevered through t	n ager. russ
04/20 – 08/20	LADOTD, Task Order train derailment that da the structure and desig system, the steel repair	2, US 71 Spring maged the steel to n the emergency rs, and railroad co	Street Emergency bent for the US 71 S repairs. Emery prov ordination.	Repairs, Shreveport, LA Design Engineer. Following pring Street Bridge, Gresham Smith was selected to eval ided constructability reviews for the temporary support br	the uate acing
07/18 – 06/21	MDOT, SR 178 Bentor (Phase B) services for prestressed Florida I-Be During Construction for overhang designs, pile	n County Bridge the replacement of eams (FIB) to main the replacement driving submittals	Replacements, MS of two water crossing ximize span lengths of 2 rural bridges in and shop drawing	5 Bridge Engineer. Gresham Smith provided final designs on parallel alignment. Both bridges include utilization of while minimizing structure depths. Emery provided Servi cluding review of all contractor submittals, including deck s.	n f ces

07/18 – Ongoing	MDOT, SR 149 Simpson County Bridge Replacements, MS <i>Engineer.</i> Gresham Smith is partnered with MDOT for Phase B (Final Design) for the reconstruction of S.R. 149 near D'Lo, Simpson County, Mississippi. Gresham Smith designed the two longer structures (Bridge 128.2 and Bridge 128.6), with partial depth deck panels utilized for MDOT as a pilot to verify the ease of construction and as an accelerated bridge construction (ABC) technique. Emery served as the Engineer-of-Record for the other two hydraulic crossing bridges (Bridge 131.4 and Bridge 131.7) and will manage the services during construction (Phase C) work on this project once it is awarded for construction.
10/19 – Ongoing	MDOT, MS-493 Bridge Replacements, Lauderdale County, MS Design Engineer. Emery is serving as Engineer-of-Record (EOR) for the project and is responsible for the overall structural design and coordination with MDOT and the roadway designer for the final design of two stream crossing bridges in Lauderdale County, MS. The design includes a curved structure alignment and a sharply skewed bridge alignment. Modified FIB concrete beams, similar to DOTD's LG-25 girders, were utilized to minimize the structure depth in order to meet hydraulic requirements. Emery is currently managing the bridge support services during construction (Phase C) work now that the construction contract has been awarded.
06/18 – Ongoing	MDOT, MS-309 Bridge Replacements, Marshall County MS Design Engineer. Emery provided structural consultation services for the construction services phase of five hydraulic crossing bridges in Marshall County, MS. The design included replacing full timber structures with AASHTO beam structures supported by either concrete piles or pipe piles. Span lengths ranged from 41' to 140'. Structure arrangements varied from 3-span to 6-span structures. Work included Services During Construction, scheduled for completion Fall 2021.
03/21 – Ongoing	TDOT, Complex and Standard Bridge Load Ratings, Statewide, TN <i>Project Engineer.</i> Following the successful completion of 2019/2020 Task Orders for load rating of 90 complex structures, TDOT issued a 2021 task order to Gresham Smith for additional bridge load ratings. TO26 Included 21 complex bridges including Reinforced Concrete Hollow (Multi-cell) Box bridges, Reinforced Concrete Hollow (Multi-cell) Box spliced with Prestress-Precast Concrete Box Beam bridges, Rigid Frame (K-Frame) Reinforced Concrete Hollow (Multi-cell) Box spliced with Prestress-Precast Concrete Box Beam bridges, Steel Stringer-Floorbeam-Girder systems, Steel Rigid Frame (K-Frame) Bridges, Steel Curved Bridges with multiple ramp spurs (fingers), Integral bent caps, and 35 standard bridges to be rated using AASHTOWare BrR software in order to complete the load ratings of 56 bridges in 4 months. Emery supported the load rating of more than 13 of these bridges using the AASHTOWare BrR software.
06/19 – Ongoing	 LADOTD, Complex Bridge Inspections, Statewide, LA Bridge Inspector. As an NHI Certified Bridge Inspector and as an NHI certified Team Leader, Emery served as a structural bridge inspector for the recently selected Complex Bridge Inspection Program with LADOTD's Section 21. Emery provided inspection services, including operator for the Under Bridge Inspection vehicle (UBI) and he also performed quality control reviews for the inspection reports. Gresham Smith has completed Task Order #1 in-depth bridge inspections including the following bridges: LA 1 Simmesport Truss over Atchafalaya River. Jackson Street Vertical Lift Bridge over Red River in Alexandria. LA 8 Concrete Segmental Bridge over Red River at Boyce, LA.

16. Staff Experienc	e:				
Gresham Smith					
Yu Brid	I n Lin, Ph.D., P.B dge Engineer	Ξ.		Years of experience with this employer	4
				Years of experience with other employer(s)	7
Degree(s) /	Years / Specialization	Bachelor of Scient Master of Scient Doctor of Philos	ence / 2008 / Civil El ce / 2010 / Civil Eng ophy (Ph.D.) / 2015	ngineering, West Virginia University, ineering, Penn State University / Structures, West Virginia University	
Active	e registration number / state / expiration date	PE. 0042444 / L	A / Exp. 9/30/2022		
	Year registered	2018	Discipline	P.E./Civil	
Contract role(s) / br	rief description of respo	onsibilities	Bridge Engineer / [Dr. Lin will assist the team with bridge load ratings.	
Experience dates (mm/yy–mm/yy)	Experience and qualit "designed intersectio	fications relevan n", etc. Experier	t to the proposed once dates should c	contract; <i>i.e.</i> , "designed drainage", "designed girders" over the time specified in the applicable MPR(s).	,
Career	Dr. Lin relocated to Lou 2017. Dr. Lin's experien adapting their finite ele	uisiana in 2015 an nce includes bridg ment analysis sof	d worked with John ge inspection and ra tware for complex b	Weres with a different firm, prior to joining Gresham Smith ting, and bridge design. Dr. Lin is a trusted advisor to Mida ridge geometry.	n in as for
01/16 – 07/17	MDOT, Mississippi Br bridges in Mississippi. Spreadsheet (LFR) for trucks by MDOT, as we	idge Load Ratin To include the spe three bascule brid ell as, permit truck	gs, Statewide, MS ecial truck load for N dges in Mississippi. s with customized a	Designer. Dr. Lin performed load rating calculations for t Aississippi, he created a stand-alone bridge load rating The program included all load rating vehicles, all required axle loads.	hree
03/21 – Ongoing	TDOT, Complex Bridg finite element methods arches with steel cable girder-floor beam-string prestressed girders for Dr. Lin led the modeling appropriate.	Je Load Ratings, and CSi Bridge s s supporting steel ger system bridges center span bridg g and analysis of o	Statewide, TN <i>Pr</i> oftware. The structu I floor beam – string s, steel rigid K-fram jes. The standard st complex structures	roject Engineer. Complex structures were analyzed utilizir ures load rated consisted of curved steel tub girders, steel er systems, deck trusses, bascule arched steel truss, stee e bridges, and reinforced concrete rigid k-frames with splic tructures were analyzed using the AASHTOWare BrR soft utilizing both CSiBridge and Midas programs where	וק ו ced ware.
01/20 – 05/20	LADOTD, Complex But Lin provided bridge ins Simmesport, LA.	ridge Inspections pection services f	s, District 08 Bridg or the Concrete Sec	es <i>Bridge Inspector.</i> As an NHI Certified Team Leader, gmental Bridge in Boyce LA and also for the LA 1 truss brid	Dr. Jge in
05/18 – 08/18	LADOTD, Complex Bu prepared the inspection fracture critical truss ele	ridge Inspections In report for the GN ements utilizing bi	s, GNO Bridge No. NO Bridge No. 1 in N ridge access equipn	1 <i>Bridge Inspector.</i> Dr. Lin served as on-site inspector a New Orleans. Duties included the hands-on inspection of the nent.	and he

16. Staff Experience	:				
Gresham Smith Ser	lam Davidson, P nior Bridge Engineer	P.E.		Years of experience with this emplo	oyer 4
				Years of experience with other employe	•r(s) 18
Degree(s) /	Years / Specialization	Master of Science	ce / 2004 / Civil Eng	eering, University of Tennessee	
Active	e registration number / state / expiration date	PE. 110436 / TN (Application prod	V / Exp. 1/31/2024 cessing for LA PE lic	ensure)	
	Year registered	2008 (TN)	Discipline	P.E./Civil	
Contract role(s) / br	rief description of respo	onsibilities	Senior Bridge Eng	leer / Adam assist the team with bridge load rating	3.
Experience dates (mm/yy–mm/yy)	Experience and qualif "designed intersectio	fications relevan n", etc. Experier	t to the proposed once dates should c	ontract; <i>i.e.</i> , "designed drainage", "designed gin ver the time specified in the applicable MPR(s).	ders",
07/19 – 04/20	TDOT, Complex Bridg curved steel tub girders a floor beam-stringer de second work order, WC a 2-3-month time frame and load ratings for a m	Je Load Ratings, s and two steel are eck support syste 011-System Bridg to help the State majority of these b	Statewide, TN Pr ch bridges with the r m for WO#5. Based es and WO12-Off S meet a critical FHV ridges.	<i>ject Manager.</i> Gresham Smith load rated 23 contin adway suspended from the arches by steel cables on our performance on WO #5, we were entrusted stem Bridges, to load rate a total of 41 complex brid A Deadline. Emery performed Quality Control on th	iuous and supporting with a dges within e models
07/19 – 04/20	TDOT, Bridge Mainter manager for the comple concrete structure. Unit over the railroad without thereby accelerated the foundations and substru	nance and Repai eted bridge replac quely modified 36 it the need to rais e project schedule ucture units and i	r Contract, Region cement project. The i-inch deep bulb-tee e the existing grade e. Additionally, the lo mproved the hydrau	1, 2 & 3, TN <i>Project Manager</i> . Adam served as a placement structure is a 685-foot, eight continuous with composite deck were used to achieve required This eliminated the need to purchase Right-Of-Way ger spans compared to the original structure elimin c opening.	the project s spans, d clearance / and lated costly
04/18 – 06/20	Tennessee Valley Aut for providing bridge eng included a study, analy expansion joint closure	thority - Chickam gineering services sis, load rating, re due to foundation	hauga Dam Bridge, s in association with epairs, and construc n movements from A	Chattanooga, TN <i>Project Manager.</i> Adam was rene existing SR 153 bridge over the lock and dam. The existing associated with a pier displacement SR concrete.	esponsible asks and
10/15 – 06/17	Heavy Haul Load Rati bridge load ratings on 2 vehicle weight of appro northern Virginia. Struc arch culvert, three core	ng (Northern Vir 20 structures for th ximately 1.7 millio tures were analyz d slabs, four pres	rginia) Senior Bric he passage of sever on pounds for the de zed using AASHTOV tressed.	e Engineer. Prior to joining Gresham Smith, Adam I superload hauler configurations with a maximum very of components to the Panda Stonewall Energy are BrR software and included eight concrete culve) provided gross γ Center in erts, one

16. Staff Experienc	e:				
Tir Ser	n Dow, P.E. nior Bridge Engineer			Years of experience with this employer	8
E.				Years of experience with other employer(s)	0
Degree(s) /	Years / Specialization	Bachelor of Scie	ence / 2015 / Civil Er	igineering, Southern Polytechnic State University	
Active	e registration number / state / expiration date	P.E. 43940 12/3	1/2022		
	Year registered	2018 (GA)	Discipline	P.E. / Civil	
Contract role(s) / br	ief description of respo	onsibilities	Senior Bridge Eng tasks.	neer / Tim will support the bridge inspection and bridge rep	pair
Experience dates (mm/yy–mm/yy)	Experience and qualit "designed intersectio	ications relevan n", etc. Experien	t to the proposed once dates should c	ontract; <i>i.e.</i> , "designed drainage", "designed girders", over the time specified in the applicable MPR(s).	;
11/14 – 09/21	MDOT, SR 309 Byhali and bearing pad desigr developed the bridge p	a Creek Bridge R ns. The deck used lans in accordanc	Replacement, Mars I a link system to eli e with MDOT proce	h all County, MS <i>Design Engineer.</i> Tim provided the dec minate the deck joints at the simplespan beam joints. Tim a dures for this multi-span bridge.	:k also
07/15 – 12/18	GDOT, SR 15/Sanders Sandersville, GA Bri Smith developed prelim existing roadway widen roundabout, bicycle acc using a reduced media assisted with the hydra	Sville Truck Rout dge Engineer. Ti ninary and final pla ing to create a for commodations, ar n width and MSE ulic analysis and o	e GRIP Rural Wide m provided prelimin ans for a TIA truck b ur-lane section, as w nd 3.3 miles of side walls to reduce the design of a new trip	ning and New Bridge Over Railroad Spur Line, ary layout, final bridge design and plan preparation. Gresha ypass project, including a combination of new alignment ar vell as a new bridge over a railroad spur line, a multilane road realignments. Tim developed a value engineering des bridge length to reduce costs, including mitigation costs. He e 6-foot by 6-foot culvert at Sisters Church Creek.	am ∩d ₀ign e
08/16 – Ongoing	Newton County Public bridge inspections and for seven bridges in Ne Specifications should h We used the 2014 Brid specifications. This incl repair item.	c Works, LMIG B creating bridge re wton County in ac ave sufficient deta ge Assessment re udes a list of repa	ridge Maintenance epair plans for the pr ccordance with the 2 ail to be used in the eport, as well as, se air items for each bri	, Covington, GA Bridge Engineer. Tim was responsible ojects. Gresham Smith prepared the plans and specificatio 2014 Bridge Assessment previously completed for the cour selection of a contractor and for the performance of the wo ven site visits as a basis for producing the repair plans and dge and cost estimate for each recommended maintenance	÷ for ons nty. ork. e or
02/08 – 02/10	GDOT, SR 3/US 19 Ov the bridge inspection of prepared rehabilitation spall repairs, expansion	er Ochlocknee F f the twin 23 span plans, special pro n joint replacemen	River Bridge Rehat structures to provid ovisions and a project at and epoxy overpa	ilitation, Thomas County, GA Engineer of Record. Time a comprehensive rehabilitation design. Gresham Smithet cost estimate. Proposed repairs included pile encasemer yment of the deck.	n led nts,

16. Staff Experience	e:				
Gresnam Smith Brice	aden Wells, El lge Engineer Intern			Years of experience with this employer	4
AN				Years of experience with other employer(s)	0
Degree(s) /	Years / Specialization	Bachelor of Scie	nce / 2018 / Civil Ei	ngineering, University of Tennessee	
Active	e registration number / state / expiration date	EI. 33695 / N/A			
	Year registered	N/A	Discipline	E.I. / Civil	
Contract role(s) / br	ief description of respo	onsibilities	Bridge Engineer Ir repair tasks.	ntern / Braden will support the bridge inspection and bridg	е
Experience dates (mm/yy–mm/yy)	Experience and qualit "designed intersectio	fications relevan n", etc. Experier	t to the proposed on the proposed of the second s	contract; <i>i.e.</i> , "designed drainage", "designed girders" over the time specified in the applicable MPR(s).	",
07/19 – 04/20	TDOT, Bridge Maintena underwater bridge inspe and Accelerated Bridge Williamson Road bridge preparing and organizing	ance and Repair (ctions, routine stru Construction proje repair projects. Br g plan sheets and o	Contract, Regions 1 Ictural repairs, super cts. It more specifica aden's responsibilitie detail sheets.	I, 2 & 3, TN <i>Engineer Intern.</i> This contract has included structure replacements and widening, full structure replacem ally includes I-65 over SR 76 and I-65 over Cartwright Circle a es include preliminary layouts, bridge inspections, quantities,	ents and and
05/17 – 09/19	TDOT, Rehabilitation of SR 16 over Kelly Creek, Rutherford County, TN Engineer Intern. Gresham Smith is partnered with TDOT to rehabilitate the bridge carrying State Route 16 over Kelly Creek near Eagleville in Rutherford County, Tennessee. The scope of services for the rehabilitation included utilizing Accelerated Bridge Construction techniques to convert the existing bridge to a single span structure by removing the center pier, replacing the entire superstructure with new precast, prestressed concrete 21"x36" box beams with a composite CIP bridge comprised of full depth precast deck panels and closure pours, precast concrete end wall components, precast approach slab components, and modifying the existing abutments to accommodate the new superstructure. 90% of this work will be done during a single weekend closure, thus limiting traffic disruptions to 56 hours.				
07/17 – 08/19	TDOT, Rehabilitation o Smith partnered with TD County, Tennessee. The single span structure by 21"x36" box beams with end wall components, pr superstructure. Ninety p	of SR 49 over Mille OT to rehabilitate e scope included u removing the cent a composite CIP to recast approach sta ercent this work wi	er Creek and Caleb the bridges carrying tilizing Accelerated E er pier, replacing the pridge comprised of f ab components, and Il be done during a s	Creek Robertson County, TN Engineer Intern. Greshar State Route 49 over Miller Creek and Caleb Creek in Robert Bridge Construction techniques to convert the existing bridge e entire superstructure with new precast, prestressed concret full depth precast deck panels and closure pours, precast con modifying the existing abutments to accommodate the new single weekend closure, thus limiting traffic disruptions to 56 I	n son s to a œ ncrete hours.
07/17 – 10/18	TDOT, Rehabilitation o Smith for the rehabilitation 21"x36" box beams with accommodate the new s State Route 230 below t	f I-40 Bridges over on which included a composite CIP to superstructure, rep he bridge by 2.5-fe	er SR 230 Project, H replacing the entire so pridge deck made co air concrete deteriora eet to achieve the rec	Hickman County, TN Engineer Intern. TDOT selected Greesuperstructure in phases with new precast, prestressed concurtinuous for live load, modify the existing abutment and bent ations on the existing bents and abutments, and lower existing quired minimum vertical clearance.	sham rete s to าg

16. Staff Experience: **Gresham Smith Ruth Steele, El** Years of experience with this employer 5 Bridge Load Rating Years of experience with other employer(s) 0 Degree(s) / Years / Specialization Bachelor of Science / 2018 / Civil Engineering, Lipscomb University Active registration number EI. 33680 / N/A state / expiration date E.I. / Civil Year registered EI (2018) Discipline Contract role(s) / brief description of responsibilities Bridge Load Rating / Ruth will support the load rating and bridge design. Experience and gualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", Experience dates "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s). (mm/yy–mm/yy) Ruth is a talented engineer intern within our structures group. She has been an integral member of the team, gaining experience through our TDOT Structural Division on-call contracts. She will take the skills she has learned through that Career program and apply it to your project. TDOT. SR 1 over Trace Creek Superstructure Replacement, Humphreys County, TN | Engineer Intern. Gresham Smith was tasked with designing the superstructure replacement of SR 1 over Trace Creek. Gresham Smith performed the structural analysis and design of the replacement, provided contract plans, and prepared quantity and cost estimates. 03/19 - 10/20Design included the slab, prestressed box beams, abutments, and bent caps. Ruth's responsibilities include preparing the preliminary layout, phased construction sequence, assisting in the box-beam design, and detailing the superstructure, box beam, bent cap, and abutment details. TDOT, I-65 over SR 76 Bridge Repair, Robertson County, TN | Engineer Intern. Gresham Smith was tasked with the repair of collision damage on I-65 in Robertson County, Tennessee, including providing the structural analysis, design, 07/18 - 06/19 contract plans, and quantity and cost estimates. The repairs for the hollow box beams were designed and new inspection hatches were designed to be placed into each cell and diaphragms of the concrete hollow box. Ruth was tasked with drawing the layout of the curved bridges and detailing the inspection hatches to be placed. TDOT, Complex and Standard Bridge Load Ratings, Statewide, TN | Engineer Intern. Complex structures were analyzed utilizing finite element methods and CSi Bridge software. The structures load rated consisted of curved steel tub girders, steel arches with steel cables supporting steel floor beam - stringer systems, deck trusses, bascule arched steel 03/21 - 10/21truss, steel girder-floor beam-stringer system bridges, steel rigid K-frame bridges, and reinforced concrete rigid k-frames with spliced prestressed girders for center span bridges. The standard structures were analyzed using the AASHTOWare BrR software. TDOT, Underwater Bridge Inspection Program, TN | Engineer Intern. Ruth served as support for the underwater 07/13 - 12/17 inspection of 57 structures throughout the state of Tennessee. She also supported the field inspection and diving services and prepared the reports for each structure in accordance with NHI guidelines and requirements.

16. Staff Experience: Gresham Smith					
Brer Lead	nnon Hughes, Roadway Design E	P.E. Ingineer		Years of experience with this firm/employer	5
				Years of experience with other firm(s)/employer(s)	6
Degree(s) / Years	s / Specialization	Bachelor of Sci	ence / 2011 / Civil E	Engineering, Louisiana State University	
Active regis	tration number / / expiration date	P.E.0039985 /	LA / 3/31/24		
	Year registered	2015	Discipline	P.E./Civil	
Contract role(s) / brie	f description of res	ponsibilities	Lead Roadway/ D plans and develop	esign Engineer / Brennon will lead the development of the re oment of bid packages.	pair
Experience dates (mm/yy–mm/yy)	Experience and "designed inters	qualifications rele ection", etc. Expe	evant to the propose erience dates shoul	ed contract; <i>i.e.</i> , "designed drainage", "designed girders", d cover the time specified in the applicable MPR(s).	
08/17 – 12/20	LADOTD, SRTS/I Roadway Design This project involv sidewalks, truck is	LRSP Task Order <i>Engineer.</i> Brenner yed safety and open slands and turnouts	6 and 21: Endom B on led the design and rations improvement s.	Fridge Preliminary and Final Design, West Monroe, LA Lead If the preparation of preliminary and final plans and cost estimate Is for the intersection realignment, curb and gutter drainage desi	d es. ign,
09/11 – 07/17	LADOTD Roadwa Roadway Group a and intersection ir	LADOTD Roadway Group. <i>Project Engineer.</i> Prior to joining Gresham Smith, Brennon served with the LADOTD Roadway Group as a designer and squad leader on various roadway projects including a new roundabout, overlay projects, and intersection improvements.			cts,
09/17 – 06/19	LADOTD, SRTS/I Monroe, LA Lea LA. Brennon's role included the desig	LRSP Task Order ad Roadway Designer was to lead the d gn and installation of	7: McMillan Street a gn Engineer. This wa esign and the prepar of an ADA ramp and	at Blanchard Street Intersection Improvements Design, West as a striping and intersection improvement project in West Monr ration of preliminary and final plans and cost estimates. The sco a new crosswalk.	st oe, pe
04/20 – Ongoing	City of Central (L Roadway/Round accordance with L accommodate bot preliminary and fir	A), Hooper Road about Design Eng ADOTD's Roadwa h pedestrians and hal plans and cost o	(LA 408) at Sullivar gineer. Gresham Sm ay Design Manual ge bicycles through this estimates.	n Road (LA 3034) Roundabout Design <i>Lead</i> with is tasked with the full roundabout design which will be in ometric requirements and LADOTD's Complete Streets Policy to intersection. Brennon is leading the design and the preparation	ว า of
9 07/18 – 02/21	LADOTD, SRTS/ Roadway Design project. He also le in-hand meeting v development. This	LRSP Task Orders . Brennon was res ed the design and the vith local officials for s project is currentl	s #17 and #22: Wes ponsible for planning he preparation of pre or the preliminary des y under construction	t Feliciana Signing & Striping, West Feliciana Parish, LA <i>L</i> g and coordinating staffing, scheduling, and budgeting for this eliminary and final plans and cost estimates. Brennon led the pla sign review and served as engineer-of-record for the design	ead
Certifications (See section 20)	American Traf	fic Safety Services	Association – Traffic	Control Supervisor, LA State Specific	

16. Staff Experience:						
Rice Roa	chard Savoie, I Idway Design Engine	P.E. eer		Years of experience with this firm/employer Years of experience with other firm(s)/employer(s)	3.5 40	
Degree(s) / Ye	ars / Specialization	Bachelor c	of Science / 1978 / Civil Fi	ngineering McNeese State University		
Active re	egistration number / ate / expiration date	P.E.00209	36 / LA / 9/30/22			
	Year registered	1983 (LA)	Discipline	P.E./Civil		
Contract role(s) / bri responsibilities	ief description of	()	Roadway Design Engine to verify DOTD requirem	eer. Richard will support the roadway portion of repair plans	and	
09/18 – 12/20	LADOTD, SRTS/LRSP Task Order 6 and 21: Endom Bridge Preliminary and Final Design, West Monroe, LA Senior Engineer. The project consisted of roadway realignment at the bridge approach to improve roadway geometry and safety. Right-of-way is being acquired at one quadrant of the intersection and Richard is assisting with the coordination between the right-of-way plans and the roadway requirements. Richard performed Quality Control reviews on the final preliminary design submission and was responsible for Quality Control on the final design process.					
09/18 – 12/19	LADOTD, SRTS/LR Richard provided qu review was to ensur included installation utility relocation avoit	LADOTD, SRTS/LRSP Task Order 14: Farmerville Design, Union Parish, Farmerville, LA Senior Engineer. Richard provided quality control review for the Final Plan submission for this Safe Routes to Public Places Project. The review was to ensure that the plans were developed in accordance with standard LADOTD policy and procedure. Plans included installation of sidewalks along various local roadways, driveway adjustments to ensure ADA compliance and utility relocation avoidance.				
04/20 – Ongoing	City of Central (LA), Hooper Road (LA 408) at Sullivan Road (LA 3034) Roundabout Design Senior Engineer. Gresham Smith is tasked with the full roundabout design which will be in accordance with LADOTD's Roadway Design Manual geometric requirements and LADOTD's Complete Streets Policy to accommodate both pedestrians and bicycles through this intersection. Richard is responsible for overall Quality Control on the project. He is mentoring the engineering staff on the field evaluation requirements, reviewing all potential improvements, and will perform QC reviews on the proliminary and final design plan submissions.					
02/90 – 03/14	Image: preliminary and final design plan submissions. LADOTD, Project and Program Delivery Project Manager. Richard was the Project Manager for the I-49 North project in Caddo Parish, from I-220 to the Arkansas State Line. The project started with the Corridor Selection Study and progressed to the Environmental Impact Study. Once the alignment was selected plan development began and thence project delivery for this \$670 million project. As the Deputy Chief and Chief Engineer, he met with program managers in the Engineering Division and approved and recommended changes to their budget partitions and project schedules.					
Career	Richard's 40+-year of Engineer. As Chief E budgets, expenditure preservation of all tra	career incluc Engineer, Ri es, program ansportatior	des 34 years with LADOT ichard was responsible fo is and procedures that gu n-related projects and sys	D in increasing roles culminating as the LADOTD Chief r establishing engineering directives and standards, policies, ided project and program delivery, construction, and tems.	3	

16. Staff Experience:					
Gresham Smith Ronr Senior	Transportation Er	, P.E. ngineer		Years of experience with this firm/employer Years of experience with other firm(s)/employer(s)	6 33
Degree(s) / Years	/ Specialization	Bachelor of Scie	ence / 1982 / Civil Ei	ngineering, Louisiana State University	
Active regist state /	ration number / expiration date	P.E.0024040 / L	A / 3/31/24		
	Year registered	1988	Discipline	P.E./Civil	
Contract role(s) / brief	description of res	ponsibilities	Senior Transportati any permitting issue	on Engineer / Ronnie will assist with repair plan development a es.	ind
Experience dates (mm/yy–mm/yy)	Experience and "designed inters	qualifications rele ection", etc. Expe	vant to the propose prience dates shoul	ed contract; <i>i.e.</i> , "designed drainage", "designed girders", d cover the time specified in the applicable MPR(s).	
02/17 – 12/20	LADOTD, SRTS/LRSP Task Order 6 and 21: Endom Bridge Preliminary and Final Design, West Monroe, LA Senior Transportation Engineer. Ronnie's responsibilities included developing preliminary and final plans and construction cost estimates. His efforts included coordination of the contaminated waste investigation, drainage layout and quality control for the preliminary design.				∣ γout
03/16 – 10/17	LADOTD, Farmerville State and Local Road Traffic Study, Farmerville, LA Senior Engineer. Gresham Smith was selected to perform a formal traffic study of all the intersections (57) within and around the City of Farmerville on both state and local routes. The project included data collection, safety/crash review, developing alternatives, analysis of existing and proposed conditions and benefit/cost analysis. Ronnie assisted with the development of alternatives and was responsible for developing construction cost estimates for various alternatives				า on ysis s
07/17 – 06/19	LADOTD, SRTS LA Senior Eng for the study port and final plans a	/LRSP Task Orde ineer. Ronnie's re ion. For the design nd construction co	er 7: McMillan at Bl sponsibilities includ n portion, his respor st estimates.	anchard Intersection Improvements Design, West Monro ed conducting field traffic observations and collecting field da nsibilities included developing conceptual designs, preliminal	be, ata ry
04/20 – Ongoing	City of Central (LA), Hooper Road (LA 408) at Sullivan Road (LA 3034) Roundabout Design Senior Transportation Engineer. Gresham Smith is tasked with the full roundabout design which will be in accordance with LADOTD's Roadway Design Manual geometric requirements and LADOTD's Complete Streets Policy to accommodate both pedestrians and bicycles through this intersection. Ronnie will provide quality control for the preliminary design phase, participate in the plan-in-hand meeting, and provide design assistance for the development of the final design plans.				
Career	Ronnie has 33 ye of his 16 years in nine years as ad	ears of experience construction as a ministrator for the	with the Louisiana project engineer, e design, water resou	Department of Transportation and Development. He worked ight years as manager of the design and permit sections and premit and materials testing sections.	11

16. Staff Experience: Gresham Smith



Herbert "Bert" Moore, II, P.E., PLS, PTOE

Project Executive

Years of experience with this firm/employer 7

Years of experience with other firm(s)/employer(s) 16

Degree(s) / Years / Specialization	Bachelor of Science / 1999 / Civil Engineering, Louisiana State University

state / expiration date		P.E.0031065 / LA / Exp. 9/30/22 PTOE 2728 / Exp. 9/30/24 PLS 5043 / LA / Exp. 9/30/22				
	Year registered	2004(PE); 2009(PTOE); 2010(PLS)	Discipline	P.E./Civil, PLS, PTOE		
Contract role(s) / brid	ef description of res	ponsibilities	Project Executive traffic related tasks	Bert will lead the development of traffic control plans and other		
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relev tion", etc. Exper	ant to the propose ience dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders", I cover the time specified in the applicable MPR(s).		
Career	Through his consulting career and while at LADOTD, Bert led a number of Stage 0 studies and Road Safety Assessments. While the District Traffic Operations Engineer of District 61, Bert completed these tasks initiated by request from internally, the public or an elected official. Some of these Stage 0 studies include LA 75 Roundabouts in Plaquemine, LA, Access Management Improvements at LA 42 at US 61, Improvements to LA 427 (Acadian), and TSM Turn Lane Installation on LA 30 at LA 74. RSA that were performed included Stringer Bridge Road, LA 431 at Valentine Road, LA 427 (Acadian) From I-10 to I A 73 (Government) and I-210 at LA 1138 (Nelson Road)					
6/19 – Ongoing	LADOTD, Complex Bridge Inspections, Task Orders 1, 3, and 4, Statewide LA <i>Project Executive</i> . Bert serves as the Project Executive responsible for ensuring that all aspects of the work are performed in accordance with contract requirements. Bert also serves as the lead Traffic Engineer responsible for development of the traffic control plans and coordination with DOTD District Traffic Engineers.					
10/17 – 04/18	LADOTD, US 90 Bridge Maintenance over I-10 Ramps, Transportation Management Plan (TMP), Lake Charles, LA <i> Project Executive.</i> Gresham Smith was selected to develop a TMP for the replacement of the bridge deck of the US 90 overpass over I-10 in Lake Charles, LA. The project included working with the design engineers to determine the required lane closures for the construction, data collection and queue and safety analyses. Bert was responsible for the overall study including overseeing the data collection review, conducting the queue and safety analysis, implementing the proper traffic control plans and development of the TMP report.					
04/18 – 05/19	LADOTD, I-10 TMP Smith developed a Charles, LA. This pr replacing all of the c 10, traffic was move temporary traffic sig queue and safety ar	West of LA 108 TMP for the Rubbe oject included the oncrete panels or d to a C/D road w nals were designen alyses and traffic	to I-210 Interchange elization and Overla mill and overlay of I I-10 through the La within the interchange ed to facilitate traffic signal design. Bert	Perform Project Executive. Gresham y on I-10 between I-210 and the LA 108 Interchange in Lake I-10, widening two flat deck bridges on I-10 to add a lane, and A 108 interchange. In order to replace the concrete panels on I- e and cloverleaf ramps were closed during construction. Two at this interchange. This project included data collection and was responsible for the overall study including overseeing the		

	data collection review, conducting the queue and safety analysis, implementing the proper traffic control plans, development of the TMP report, the design of two temporary traffic signals and QA/QC.
05/17 – 03/19	LADOTD, I-210 at LA 1138-2 (Nelson Road) Interchange Modification Re-Evaluation Study, Lake Charles, LA <i>Project Executive.</i> Gresham Smith was selected to develop a calibrated VISSIM model to model existing conditions and the future proposed diverging diamond interchange at I-210 at Nelson Road in order to evaluate the proposed interchange design. The project included data collection, development of growth rates, lead the Road Safety Assessment, developing and calibrating an existing VISSIM model and evaluation of the proposed alternative. Bert was responsible for the overall study, overseeing data collection, conducting safety analysis, development of VISSIM models, development of alternatives and the report.
11/08 – 11/14	LADOTD , Baton Rouge , LA <i>District Traffic Operations Engineer</i> . While at LADOTD Bert and his staff developed many projects to improve the safety and reduce conflict points on the highway system. Some of these projects were initiated by request from internally, the public or an elected official, as result of an RSA, or from the review of crashes or the abnormal crash list by Bert and his staff. These projects were implemented with a number of different funding sources such as Access Management, TSM, and funds from the safety section. Bert and his staff were responsible for writing the stage zero forms to implement these projects. Some of these stage zeros include LA 75 Roundabouts in Plaquemine, LA, Access Management Improvements at LA 42 at US 61, RSA improvements to LA 427 (Acadian), and TSM Turn Lane Installation on LA 30 at LA 74.
04/20 – 09/20	LADOTD, Complex Bridge Inspections, Statewide, LA Task Order 2 - Emergency Bridge Repairs, US 71 in Downtown Shreveport, LA <i>Project Executive</i> . In April 2020, a train derailment damaged Bent 3 of the Spring Street Bridge forcing the roadway closure. Gresham Smith was selected to perform the bridge repairs to open the bridge. Working with the selected contractor, helical piles were designed to support the new column foundations and crash wall. Bert served as Project Executive (Principal) and assisted with DOTD coordination.
11/08 – 11/14	LADOTD, Baton Rouge, LA <i>District Traffic Operations Engineer.</i> While at LADOTD, Bert was responsible for reviewing, approving and developing temporary traffic control plans for all construction and maintenance work on the state highway system, which included the yearly inspections of all the on system bridges each year by district forces and consultants. These bridges included all of the I-10 bridges through the Baton Rouge region and over the Mississippi River. Bert was also responsible for Transportation Management Plans (TMPs) required for construction projects on these bridges.
Certifications (See section 20)	 DOTD Traffic Engineering Analysis Process & Report – Modules 1, 2 and 3 U.S. Department of Transportation Federal Highway Administration – DPFA Certification LADOTD – Highway Safety Manual Workshop NCHRP 17-38 Louisiana Local Technical Assistance Program – Regional Crash Data Workshop American Traffic Safety Services Association –Traffic Control Supervisor, LA State Specific

16. Staff Experience	e:				
Gresham Smith	ebecca Murray, I ad Traffic Engineer	P.E., PTOE,	RSP1	Years of experience with this employer	6
				Years of experience with other employer(s)	0
Degree(s)	/ Years / Specialization	Bachelor of Scie	nce / 2015 / Civil Er	ngineering, Louisiana State University	
Activ	e registration number / state / expiration date	P.E.0043788 / L	A / Exp. 3/31/22 P	TOE 4861 / Exp. 3/26/23 RSP1 611 / Exp. 4/5/24	
	Year registered	2019 (LA) 2020 (PTOE) 2021 (RSP1)	Discipline	P.E./Civil; PTOE; RSP1	
Contract role(s) / b	rief description of respo	onsibilities	Traffic Engineer / R other traffic related	ebecca will support the development of traffic control plans ar tasks.	nd
Experience dates (mm/yy–mm/yy)	Experience and qualifi "designed intersection	cations relevant n", etc. Experienc	to the proposed co ce dates should co	ontract; <i>i.e.</i> , "designed drainage", "designed girders", over the time specified in the applicable MPR(s).	
6/19 – Ongoing	LADOTD, Complex Bridge Inspections, Task Orders 1, 3, and 4, Statewide LA Engineer. Rebecca serves as the engineer assisting with the development of traffic control plans for bridge inspection in accordance with the LADOTD TTC plans. Rebecca also assists with the coordination with DOTD District Traffic Operations Engineers.				
04/18 — 04/19	LADOTD, I-10 Transportation Management Plan (TMP) West of 108 to I-210 Interchange, H.009620.5, Calcasieu Parish, LA <i>Pre-Professional.</i> LADOTD developed design plans for the Rubblization and Overlay of I-10 from just west of the LA 108 interchange to the I-210 interchange. This project includes a full closure on I-10 diverting traffic to the ramps. This diversion required 2 cloverleaf ramps to be closed and temporary traffic signals to be installed at the ramps. Rebecca assisted with the traffic and crash analysis, and the development of the TMP documentation for this project and revision of the TMP that was performed the I-210 redecking project as well as traffic signal design plans for the traffic signals				
10/17 – 04/18	LADOTD, I-10 at US 90 Lockmoor Bridge Transportation Management Plan (TMP), H.013076.5-1, Lake Charles, LA <i>Pre-</i> <i>Professional.</i> LADOTD oversaw the design of planned bridge maintenance of the US 90 bridge that operates as an on ramp to I- 10 Eastbound. This bridge crosses over mainline I-10 for both the Eastbound and Westbound directions as well as the Westbound Off Ramp and Eastbound On Ramp to/from PPG drive. We were selected to develop the TMP to identify the challenges and strategies to address these challenges in order to minimize the traffic delays associated with the lane closures, demand volumes and incidents within the construction limits. Referce assisted with the traffic and crash analysis and the TMP documentation				
07/18 – Ongoing	LADOTD, LA 37: Sullivan Road to Liberty Road Stage 0 Feasibility Study, Baton Rouge, LA <i>Engineer.</i> Collected and reviewed over 580 crash reports over a span of three years from the state highway crash database and collected ADT data on 21 segments of LA 37 and intersecting streets, peak hour turning movement counts at 12 significant intersections and 15-minute counts along 38 driveways and insignificant side streets. The reports were reviewed and evaluated using the safety triage safety tool box. Traffic analysis will be performed using HCS and Synchro and other software tools as needed. We reviewed historic traffic volume counts and TransCAD models and performed count analyses to develop regional growth rates for the study area. Rebecca assisted with review of the count data, development of growth rates, crash data analysis and traffic analysis.				
Certifications (See section 20)	 Traffic Engineering Ar American Traffic Safe Supervisor, LA State 	nalysis Process & F ty Services Associ Specific	Report – Modules 1, ation – Traffic Contro	2 and 3 I Technician, LA State Specific; Certified Flagger; Traffic Con	ıtrol

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	-	3
17	3/	5
	1	

Trevor Johnson, P.E. Structural Engineer Lead		Years of experience with this firm/employer Years of experience with other firm(s)/employer(s)	18		
Degree(s) / Ye	ars / Specialization	BS / 2002 / Struc	ctural Engineering		1
Active re sta	gistration number / ate / expiration date	PE LA (0045518	s) - 9/30/2023; FL (6	5624) - 2/28/2023	
	Year registered	2021; 2020	Discipline	Structural Engineering	
Contract role(s) / brid	ef description of res	ponsibilities	Moveable Bridge I	nspection and Design Lead	
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relev tion", etc. Exper	ant to the propose ience dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	," ,
6/16 - 5/21	FDOT, District Wide Bridge Engineering Design/CEI Support Services, District One, FL: <i>Project Manager and</i> <i>Engineer of Record</i> responsible for this task work order based contract for various repairs, inspections, and rehabilitation projects including multiple movable bridge repairs and mechanical/electrical upgrades, post tension bridge repairs, conventional bridge repairs, emergency response, engineering assessments, painting, fender repairs, pile jackets, cathodic protection system repairs, ABC bridge span replacement, joint repairs, concrete and steel repairs, load ratings, and temporary traffic control. Responsibilities also included determining appropriate scope of work, implemented innovative cost saving approaches, coordinated with owners, stakeholders, and project team, and lead work to high				
6/12 - 12/18	 FDOT, District Wide Movable and Complex Bridge Repairs, District Two, FL: Project Manager and Engineer of Record responsible for this task work order based contract for various repairs, inspections, and rehabilitation projects including movable bridge repairs, approach span repairs, inspections, and mechanical/electrical upgrades, multiple truss bridge repairs, segmental post tension soft grout investigations and impregnation repairs, painting, joint repairs, concrete spall and crack repairs, load ratings, and temporary traffic control. Responsibilities also included determining appropriate scope of work, cost effective complex steel repairs, minimized impacts on the public, coordinated with owners, stakeholders, and project team, and lead work to high guality standards, constructability, and accurate cost estimates. 				
11/16 - 3/21	FDOT, Wilson Pigott Draw Bascule Bridge & LaBelle Draw Bascule Bridge over the Caloosahatchee Channel, Le County, FL : <i>Project Manager and Engineer of Record</i> responsible for these double-leaf Hopkins trunnion bascule bridges. Work included strengthening to bring the structure up to current HL-93 FL120 load rating. Strengthening include innovative solutions of adding post tensioning bars to the floor beams, post installed shear connectors to the cross beams, and carbon fiber wraps to the pre-stressed approach span beams. Rehabilitation included spall repairs, structura steel repairs, coating spot paint, span balancing, span lock repairs, live load shoe adjustments, temporary traffic control, and Wilson Pigott Draw included replacement of the program logic control system (PLC). Also responsible for coordinating with owners, stakeholders, community outreach, and project team, and lead work to high quality standards expertmetability, and ecourted patients.			Lee Jded tural rol, ds	

10/19 - 4/20	LADOTD, Port of New Orleans, Almonaster Rail Bascule Bridge, New Orleans, LA : <i>Technical Advisor</i> for the single leaf Strauss truss bascule bridge rehabilitation recommendations and analysis for the repair of deteriorated components of the Almonaster Bridge. Trevor's duties include advising and review of the on-site inspection, quality control review reports of findings & technical memorandums, and load rating calculations.
3/19 – Present	LADOTD, Seabrook Rail Bascule Bridge, New Orleans, LA : <i>Technical Advisor</i> for the single leaf Strauss truss bascule bridge and approach span rehabilitation. Trevor's duties included advising and quality control review of the analysis, design, contract plans and specifications of the full superstructure and bearings replacement for each approach spans along with post design services.
4/16 – 11/19	FDOT, Bridge of Lions Bascule over Matanzas River IWW, St. Augustine, FL : <i>Project Manager and Structural Engineer</i> responsible for the double rolling bascule bridge rehabilitation, spot painting and overcoating of existing metalizing, correcting barrier railing conflicts, partial replacement of the sidewalk slip resistant plates, and repairing all the pedestrian railing and coordinating the electrical rehabilitation and limit switch improvements.
7/09 – 7/16 & 10/17 – 9/18	FDOT, Main Street Lift Bridge Structural Enhancements, Jacksonville, FL : <i>Project Manager and Engineer of Record</i> responsible for structural enhancement to this landmark 365-foot span drive vertical lift truss bridge including sidewalk replacement, addition of barriers for truss protection, structural repairs of the trusses, towers, floor beams, stringers, rocker nest bearing repairs, approach span repairs, and spot painting. lead inspections, determine appropriate scope of work, establish structural repair methods. Work also included electrical rehabilitation and droop cable replacement. Engineering studies include Main Sheave Trunnion and Wire Rope Replacement, Fit for Service analysis (remaining life) of trunnion cracks, cost estimate, construction time estimates and Traffic Resistance Barrier Replacement for making improvements to the existing and replacement options.

Aru Struc	n Saha, P.E. ctural Lead			Years of experience with this firm/employer	3
				Years of experience with other firm(s)/employer(s)	26
Degree(s) / Ye	ars / Specialization	MS / Civil Engine	eering / 1995 / Unive	ersity of Florida	
209.00(0) / 10		BE / Civil Engine	ering / 1989 / Unive	ersity of Florida	
Active re	gistration number /	PE LA (38334) -	² E LA (38334) - 03/31/2024; GA (25132) - 12/31/2022; SC (25295) - 06/30/2022; NC (32280) -		
sta	te / expiration date	12/31/2022; KY	<u>2/31/2022; KY (29778) - 06/30/2022; NV (23915) - 06/30/2022</u>		
	Voor registered	2013; 1999;	Dissipling	Structural Engineering	
	rear registered	2000, 2000, 2000, 2013	Discipline		
Contro et vele(e) / hvi		2013, 2013			
Contract role(s) / brid	et description of res	ponsibilities	Structural Lead		
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relev tion", etc. Exper	ant to the propose ience dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	",
2/13 – 8/15	LADOTD, US 90 over LA 318 Design-Build, St. Mary Parish, LA: <i>Bridge task manager</i> whose responsibilities included attendance at all design-related meetings (internal team and DOTD), resolution of design issues, coordination of project team, QA/QC design calculations and plans, and management of schedule and budget for the bridge task. The US 90 over LA 318 bridges were constructed as twin bridges for east and westbound traffic. Each structure was 1887 feet long with seventeen 111-foot spans, with LaDOTD precast, prestressed concrete "LG-54" girders. The superstructure consists of a simple span over LA 318, flanked by four two-span continuous units on the east and west sides. Stantec was the prime design consultant and collaborated with the Gilchrist Construction design-build team				
2/13 – 8/15 LADOTD, LA 511: Jimmie Davis Bridge Rehabilitation, Bossier Parish, LA: Overall project manager whose responsibilities included maintaining schedule and budget; quality management; coordination with project team, sub- consultants, and client; design, plan productions, and deliverables. This project is in Bossier Parish and crosses the Red River. The existing bridge is a 16-span structure, totaling approximately 2,823 feet in length. The bridge is on State Route LA 511 and is composed of three main steel truss simple spans: 354 feet, 402.5 feet, and 354 feet long respectively. The truss spans are flanked on both ends by three-span continuous steel deck girders, totaling 610 feet each and spanning the batture at each end. Simple steel girder spans of 70 feet each complete the structure, with five spans at the west end and two spans at the east end of the bridge. Stantec Consulting researched previous repair and inspection documents along with performing in-depth condition verification inspection using rope access method. Based on the findings of the research and site visit, Stantec generated repair strategies and presented the scope of services to LADOTD. Structural rehabilitation included full deck replacement, structural repair of truss members at 200 locations, design of paint containment system, replacement of nested rocker bearing, design and detailing of jacking scheme of truss spans, pin and hanger replacement.			ted oute The g end s ie al		

2/13 – 8/15	LADOTD, Retainer Contract for Bridge Preservation, Statewide, LA : <i>Project manager</i> for this \$6 million on-call contract, which includes a full array of services, such as bridge design, rehabilitation, bridge hydraulics, roadway design, geotechnical investigation, and surveying. LaDOTD selected Stantec Consulting Ltd. to provide bridge task order services throughout the state. To date, the focus of the contract has been to provide design and construction documents for the new widening and rehabilitation of bridges throughout the various districts in Louisiana.
2/13 – 8/15	LADOTD, Retainer Contract for Bridge Load Rating, Statewide, LA : <i>Project manager</i> for this \$3-million contract. LADOTD selected Stantec Consulting Ltd. to provide bridge load rating services throughout the state. Work began in 2014 and was completed in two years. This contract included load rating of more than 600 bridges. Bridge types included concrete, prestressed concrete, steel, and truss bridges, with lengths ranging from 100 feet to 29,000 feet.
2/13 – 8/15	LADOTD, Bridge Scour Project, Statewide, LA : <i>Project manager</i> of this approximate \$1-million contract. The project involves analysis of scour critical bridges throughout the state, including finite element analysis using data gathered from field inspection and providing recommendation reports.
2/13 – 8/15	LADOTD, US 90 over LA 318 Design-Build, St. Mary Parish, LA: <i>Bridge task manager</i> whose responsibilities included attendance at all design-related meetings (internal team and DOTD), resolution of design issues, coordination of project team, QA/QC design calculations and plans, and management of schedule and budget for the bridge task. The US 90 over LA 318 bridges were constructed as twin bridges for east and westbound traffic. Each structure was 1887 feet long with seventeen 111-foot spans, with LaDOTD precast, prestressed concrete "LG-54" girders. The superstructure consists of a simple span over LA 318, flanked by four two-span continuous units on the east and west sides. Stantec was the prime design consultant and collaborated with the Gilchrist Construction design-build team.

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Lloyd (Mark) Pearson, P.E.

Bridge Inspection Preservation Lead

Years of experience with other firm(s)/employer(s) 42

Years of experience with this firm/employer

Degree(s) / Years / Specialization		BSCE / 1977 / Civil Engineering MCE / 1979 / Structural Engineering		
		MCE / 1979 / Structural Engineering		
Active registration number / state / expiration date		PE LA (39629) – 9/30/2023, NC (10656) – 12/31/2022, MS (13215) – 12/31/2022		
	Year registered	2015, 1982, 1997	Discipline	Structural/Civil Engineering
Contract role(s) / bri	ef description of res	ponsibilities Bridge Load Rating, Preservation and Structural QA/QC		g, Preservation and Structural QA/QC
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relev tion", etc. Exper	ant to the propose ience dates should	d contract; <i>i.e.</i> , "designed drainage", "designed girders", I cover the time specified in the applicable MPR(s).
11/19 – on going	SCDOT Districts 2 and 7 Load Rating Services for 2,604 structures in SC (2018-Ongoing). As <i>Bridge Inspection</i> and <i>Preservation Manager</i> , Mark performed QC reviews for bridge load ratings in Districts 2 and 7 in South Carolina. He provided QC reviews of modifications to bridge load ratings based on NDT and load test results for selected bridges in all seven districts. Role included detailed engineering reviews of rating documents.			
05/17 – 03/19	City of Oxford, Alabama, Leon Smith Parkway Bridge Widenings over Choccolocco Creek, in Calhoun County . <i>Engineer-of-Record</i> for widening design of a four @ 100-foot span bridge and a five @ 100-foot span bridge utilizing prestressed concrete bulb-tees as sub to the prime design firm, GMC, Inc. Work included checking designs and plans sheets and directly supervising the design. Project was reviewed by ALDOT on behalf of the Town of Oxford and partly state funded. (Construction 2021)			
05/16 – 07/18	City of Raleigh, NC, B-5556 Replacement of Bridge No. 490 on Lake Dam Road (SR 1427), City of Raleigh Public Works, NC. <i>Project Manager</i> for bridge replacement project with Categorical Exclusion (CE), surveys, hydraulic (FEMA) modeling, utility design/coordination and permitting. Engineer-of Record for design of the 100 foot, two-span precast cored slab bridge replacement. Work included checking the plans and calculations, supervising the design and providing engineering support services. (Construction 2018)			
04/16 – 08/16	CFX (FDOT) Ramp G Bridge in SR 417 Boggy Creek Interchange, Load Rating (Bridge 750804), Central Florida Expressway, Orlando, FL. <i>Engineer-of-Record</i> for structural load rating of four–span, curved, twin steel box girders spanning 201.75ft-246.92ft-201.75ft-246.92ft.			
02/09 – 7/14	Florida DOT - District 4, I-595 Express Lanes (Design-Build) between I-75 and I-95, Broward County, FL <i>Bridge Design Task Leader and Engineer of Record</i> . Mark was responsible for the final structure designs for 20 bridges in the design–build phase of a P3 toll project. Designs included 15 highway bridges and five bicycle and pedestrian bridges. Roles included preparing preliminary designs, directly supervising, and checking final plans and calculations, writing special provisions, preparing estimates and providing bridge ratings and construction phase engineering support services. Bridges included curved girders with integral caps.			

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	NCDOT Rail Division, Project P-5201, Morrisville Parkway underpass of Norfolk Southern, Structure Design,
02/13 – 12/13	Morrisville, Wake County, NC. Structures task manager and engineer-of-record for a new four-span, curved, ballast
	deck railroad bridge over Morrisville Parkway. Structure featured drilled shaft piers, steel pile abutment foundations,
	temporary tie-back soldier pile shoring wall and steel plate girders and rolled beams. Roles included preliminary design,
	checking final calculations and plans, directly supervising the design, writing special provisions, and preparing estimates.
	(Design 2013; Construction 2016).

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Thomas Harris, P.E. Senior Supervising Structural Engineer			Years of experience with this firm/employer	4	
				Years of experience with other firm(s)/employer(s)	33
Degree(s) / Ye	ars / Specialization	MS / 1993 / Civil En BS / 2002 / Civil En	gineering (Wate gineering	r Resources)	
Active re sta	gistration number / ite / expiration date	LA (42081) - 03/31/ 12/31/2022; FL (473	2022; NC (1929 335) - 02/28/202	9) - 12/31/2021; SC (20305) - 06/30/2022; GA (41057) - 3; AL (23025) - 12/31/2021; TN (124719) - 02/28/2023	
	Year registered	2017; 1993; 2000; 2016; 1993; 1999; 2021	Discipline	Structural/Civil Engineering	
Contract role(s) / brid	ef description of res	ponsibilities	Bridge Design	and Load Rating	
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant tion", etc. Experien	to the propose ce dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	, <i>"</i> ,
09/17 – 07/21	NCDOT, Division 14 Group 3, Cherokee, Clay, Haywood, Macon and Swain County, NC: project manager and lead structural engineer responsible for bridge design for a total of 10 low impact bridge replacements in the above counties. Structures include prestressed concrete cored slab and box beam bridges and aluminum box culverts. Each site varies from new locations to bridge replacements utilizing both staged construction and off-site detours to accommodate construction				
1/19 – 07/21	NCDOT, Division 13, McDowell, Rutherford and Madison Counties, NC: Tom is the <i>lead structural engineer</i> responsible for the design of four bridge replacements in the above counties. Designs include prestressed concrete cored slabs and prestressed concrete box beams single and multi-span configuration, one and two bar metal rail barriers as well as vertical barrier rail, steel pile, drilled pier and spread footing foundations. All sites utilize staged construction for the proposed structure.				
01/03 - 12/05	¹⁰⁵ LADOTD, LA-1 Road and Bridge Improvements, Leeville to Port Fourchon, LA: Senior engineer for the design of substructure and superstructure for a 72-foot, simple span with reinforced concrete deck and clear roadway varying in width from 40 feet to 86 feet. The deck and girders were designed at the widened end to cantilever over the cap to allow the deck to abut the edge of the main line structure. The reinforced concrete deck with splayed AASHTO type III concrete girders is supported on reinforced concrete caps and 24-inch pre-stressed concrete piles. The span is designed as part of an elevated interchange facilitating access from existing at grade roadway.				
09/17– 07/21	NCDOT, Division 14 Group 3, Cherokee, Clay, Haywood, Macon and Swain County, NC : <i>project manager</i> and <i>lead structural engineer</i> responsible for bridge design for a total of 10 low impact bridge replacements in the above counties. Structures include prestressed concrete cored slab and box beam bridges and aluminum box culverts. Each site varies from new locations to bridge replacements utilizing both staged construction and off-site detours to accommodate construction.			ad es. es	

1/19 – 07/21	NCDOT, Division 13, McDowell, Rutherford and Madison Counties, NC : Tom is the <i>lead structural engineer</i> responsible for the design of four bridge replacements in the above counties. Designs include prestressed concrete cored slabs and prestressed concrete box beams single and multi-span configuration, one and two bar metal rail barriers as well as vertical barrier rail, steel pile, drilled pier and spread footing foundations. All sites utilize staged construction for the proposed structure.
01/03 - 12/05	LADOTD, LA-1 Road and Bridge Improvements, Leeville to Port Fourchon, LA: Senior engineer for the design of substructure and superstructure for a 72-foot, simple span with reinforced concrete deck and clear roadway varying in width from 40 feet to 86 feet. The deck and girders were designed at the widened end to cantilever over the cap to allow the deck to abut the edge of the main line structure. The reinforced concrete deck with splayed AASHTO type III concrete girders is supported on reinforced concrete caps and 24-inch pre-stressed concrete piles. The span is designed as part of an elevated interchange facilitating access from existing at grade roadway.
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Chr Supe	ristopher Ray, ervising Structural E	P.E. ngineer		Years of experience with this firm/employer	20
Degree(s) / Ye	ars / Specialization	MS / 1997 / Civil En BS / 1995 / Civil En	gineering gineering	rears of experience with other firm(s)/employer(s)	_ 27
Active re sta	gistration number / ate / expiration date	PE FL (56105) - 2/2	8/2023		
	Year registered	2000	Discipline	Structural Engineering	
Contract role(s) / bri	ef description of res	ponsibilities	Bridge Design	and Historic Bridge Preservation	
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant tion", etc. Experien	to the propose ce dates shoul	ed contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	," " ,
1/10 - 9/13	District-wide Comp Office, FL: Project I included repairs to replatforms were added determine the existin involved the design system is a hybrid u hydraulic cylinders p coordinated among gates and provides	blex and Movable Br Manager and Engines einforce the existing j ed to replace the existing and capacity which inc and integration of a p sing a programmable powered from a hydra structural and mecha better gate access for	ridges Engineer er on Record for joint, while minin ting platforms. A luded the curren partial replaceme logic controller fulic power unit-r nical disciplines r maintenance.	Fing Services, FDOT District Two Structures Maintenanc the Sisters Creek Bascule Bridge rehabilitation project. Deta nizing impacts to the structure and traveling public. Steel structural analysis was performed on the approach piers to t level of deterioration on the existing structure. The project ent of the electrical and control system. The replacement con (PLC) and hardwired relays. The span drives are existing notor/pump/valves (HPU). Electrical and controls design is . The design includes the replacement of the four-traffic warn	e ails also itrol
11/17 - 9/18	District-wide Engin Engineer for the Ma included: Size new of replaced with a solid previous reports, de perform nondestruct material testing, stre	neering Services, FD in Street Vertical Lift components (e.g. trur d light weight concrete fine current costs for tive testing inspection ess analysis, and prov	OT District Tw Bridge Trunnion mion, sheaves, l e deck, update th replacing the co and evaluation vide a fit for life a	o Structures Maintenance Office, FL : Senior Structural condition assessment and replacement study. The work bearings and wire ropes) to accommodate the existing gratin the counterweight trunnion replacement/rehabilitation costs fr unterweight trunnions, sheaves, bearings, and wire ropes, of the transition fillets, trunnion journals, and bearings, perfor assessment of the trunnions.	ig om orm
4/08 - 10/15	District-wide Engin QC Manager for this Hillsborough River. findings to develop of cracks in the arch sp coordination with Sta windows and awning design included repl	teering Services, FD task work order-bas WSP performed stru detail design plans ar oan and bascule piers ate Historic Preserva gs, keeping the histor acing the existing spa	OOT District Sev ed contract that ctural, mechanic of specifications is and crack repa- tion Office (SHP rical features wh an drives and co	Yen Structures Maintenance Office, FL : <i>Project Manager a</i> included repairs to the Kennedy Blvd. Bascule Bridge over the real, and electrical inspections for the bridge and used the for the 2015 rehabilitation. Structural details included repairs ir to the bascule pier and concrete sidewalk. With close O), the tender house received a facelift with new doors, ile improving functionality and safety. Electrical rehabilitation ntrols for the existing wound rotor a.c. drive motors and	<i>וחמ</i> he s to

	providing a new hardwired based control system. The motor and machinery brakes were replaced, and all traffic and pedestrian gate arms were replaced.
10/10 - 10/18	District-wide Complex and Movable Bridges Engineering Services, FDOT District Two Structures Maintenance Office, FL : <i>Project Manager and Quality Control Manager</i> for the Saint Mary's River Swing Bridge rehabilitation project. The project included rehabilitation of piers five and seven addressing underwater foundation deficiencies utilizing underwater hydrographic survey. Structural repairs included miscellaneous steel truss repairs including gusset and lacing bar replacement, ladder and platform replacement and steel painting. Mechanical rehabilitation of the center pivot pier assembly ensured manual key opening of the bridge was achievable which included the balance wheels, input shaft, bushing, and bearings
(11/03 - 10/05	John's Pass Final Design, FDOT District Seven, Pinellas County, FL: <i>Deputy Manager</i> for the replacement of the scour-critical bridge. The new bridge is a low-level bascule bridge consisting of two American Association of State Highway and Transportation Officials (AASHTO) girder approach spans on both sides of a 196.5-foot double-leaf bascule span.
9/09 - 10/13	District-wide Engineering Services, Florida Department of Transportation (FDOT) District Seven Structures Maintenance Office, FL : <i>Project Manager and QC Manager</i> for this task work order-based contract that included repairs to four (4) bascule bridges in Pinellas County. Work included cleaning and painting all structural steel on the movable spans and flanking spans including live load shoes, ladders, railings, span lock components, machinery and machinery supports. Work also included repair spalls and delamination, and replacement of lateral bracing, gusset plates, and angles. It also included the replacement of the fixed glass in the tender houses.

16. Staff Experience:					
WSP USA Inc.					
Hamid Yagho	Hamid Yaghoubi			Years of experience with this firm/employer	4
Supervising Structu	rai Engineer			Years of experience with other firm(s)/employer(s)	8
Degree(s) / Ye	ears / Specialization	Masters / 2020 / Bu MS / 2018 / Structur BS / 2015 / Civil En	siness Administr ral Engineering gineering	ation	L
Active re st	egistration number / ate / expiration date	NA			
	Year registered	NA	Discipline	Structural Engineering	
Contract role(s) / br	ief description of res	ponsibilities	Bridge Design	and Historic Bridge Preservation	
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant tion", etc. Experien	t to the propose ce dates should	d contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	",
12/21-Present	LADOTD, Statewide Rehabilitation of Movable Bridges, LA: <i>Structural engineer</i> for the inspection and rehabilitation/replacement of five movable bridges in the state of Louisiana. WSP USA is providing inspection/design services for the Louisiana Department of Transportation and Development for multiple movable bridges in the state of Louisiana. Hamid's duties include preparing the scope of woke proposal, fee proposal, and other project management work as needed. Hamid is also responsible for supporting the structural efforts throughout this project, including performing load rating analysis and design work as needed.			f t	
07/21-11/21	21-11/21 LADOTD, P3 Advisory Services On-call, LA: <i>Structural engineer</i> for this on-call project. WSP USA is providing advisory services for the Louisiana Department of Transportation and Development. Hamid's duties include providing structural engineering support as needed. The last task included performing a risk analysis on the Calcasieu bridge and conducting a ship impact study to provide recommendations for the client.		nd		
06/19-10/19	Texas Central Raily various bridge comp the project includes bridges. Hamid's du project, developing of worked with the Cor and their related cor	way, Texas High-Sp ponents. WSP USA is the design of several ties include analysis design calculations, p nplex Bridge Group in nponents including. v	eed Rail, Houst providing desig bridges includin and design of va preparing bridge n WSP and he d ving walls, and re	on, TX; Dallas, TX: Structural engineer for the design of n services for Texas Central Railway. The Structural portion g, typical prestressed and steel bridges, as well as complex rious components of different bridges per the demand of the final design plans, and conducting quality control. Hamid also esigned 10 ft, 20 ft, 30 ft, and 40 ft span Arch Culvert Bridges etaining walls for phase three of the project.	of o s
10/18- 05/20	NCDOT, I-485 over WSP USA provided Westinghouse Bould include modeling, ar as quality control of	Westinghouse Rd, design services for the evard. The project includes nalysis, and design of other prepared plans	Charlotte, NC : <i>I</i> he North Carolin cludes the replac f the prestressed	Bridge engineer for the design of a prestressed concrete brid a Department of Transportation for the design-build project of ement and widening of the existing bridges. Hamid's duties bridge along with preparing bridge final design plans, as we	lge. ≫ver ୬II

01/22-Present	Mississippi DOT, US 98 over Homochitto River, Charlotte, MS : <i>Bridge engineer</i> for the design of a concrete bridge. WSP USA is providing design services for the Mississippi Department of Transportation. The project includes the replacement of the existing bridge. Hamid's duties include modeling, analysis, and design of different bridge components. Hamid is also responsible for providing project management services as needed.
06/20-10/20	NCDOT, I-540 (R2828), Raleigh, NC : <i>Bridge engineer</i> for the design of a prestressed concrete bridge. WSP USA is providing design services for the North Carolina Department of Transportation. Hamid's duties include modeling, analysis, and design of the bridge superstructure and substructure along with preparing bridge final design plans.



Amaka Amalu-Anderson, P.E. Senior Director Mechanical Engineer

Years of experience with this firm/employer 2

Years of experience with other firm(s)/employer(s)	14
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Degree(s) / Years / Specialization		BS / 2006 / Mechanical Engineering			
Active registration number / state / expiration date		41985 / LA / 3/31/2024; / 75527 / FL / 02/28/2023; 29524			
	Year registered	NA	Discipline	Mechanical Engineering	
Contract role(s) / brid	ef description of res	ponsibilities	Mechanical Lea	ad	
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant tion", etc. Experien	to the propose ce dates should	d contract; <i>i.e.</i> , "designed drainage", "designed girders", I cover the time specified in the applicable MPR(s).	
3/08 – 8/13	LADOTD, Judge Se review and approval span lock replaceme	eber Vertical Lift Bi , and post design ser ent. The aggressive d	ridge, New Orle vices. Machiner esign schedule i	ans, LA : <i>Mechanical Engineer</i> responsible for shop drawing / rehabilitation included lifting ropes, counterweight guides, and required the design to be accomplished in three months.	
5/19 – 5/19	LADOTD, I-110 Rol leading mechanical	ling Bascule Bridge systems inspection a	Inspection Nev nd report produc	v Orleans, LA : <i>Lead Mechanical Engineer</i> responsible for tion.	
9/20 - 9/20	Port of New Orleans, Almonaster and Seabrook Bascule Bridges, New Orleans, LA: Lead Mechanical Engineer responsible for leading mechanical systems inspection.				
12/20 – 5/21	FDOT, CSX New River Bascule Rail Bridge Emergency Repair, Ft Lauderdale, FL : Senior Mechanical Engineer responsible for the overseeing and review of calculations, design, cost estimate, post design services, and field construction work for replacement of two pinion couplings exhibiting full depth cracks at the keyway (coupling fully split). Saved the Owner \$2 million in fees to CSX by preventing full closure of the bascule bridge to rail and marine traffic by utilizing a lock-out mechanism to operate the span with single pinion. This allowed one pinion coupling to be replaced at a time under an accelerated schedule.				
3/18 – 11/20	 MSDOT, SR-609 Movable Bascule Bridge Rehabilitation, MS: Lead Mechanical Engineer (EOR) responsible for the inspection, design, technical special provisions, and post design/construction review services for rehabilitation of the mechanical systems including HVAC/Water/Sewer systems. Design included replacing the existing primary reducer and open bull gearing with a primary and secondary planetary. Providing temporary hydraulic cylinder machinery to keep span operational during drive machinery replacement. Replacing and upsizing all drive bearings, shafts, and pinions. Machining of the trunnion shaft and replacement of the trunnion bushings due to flooding damage. Replacing the underdeck span lock system with an above deck, barrier housed span lock system for easier maintenance. Scope included design of new split HVAC system in tender house and control rooms. Design of new bathroom/kitchen sewer and water line runs between the tender utilities and the approach sewer and water connection main lines. 				

5/17 – 11/20	NCDOT, US 17 Swing Bridge over the Perquimans River Design-Build, Perquimans County, NC : <i>Lead Mechanical Engineer</i> (EOR) responsible for providing preliminary and final machinery engineering design, technical specifications, and post design machinery services to replace the existing swing bridge over the Perquimans River with a new off-line swing bridge. The machinery design included center pivot bronze disc bearings, balance wheels and track, center live load rollers, span lock machinery, and end lift rollers for the span supporting machinery. The span operating machinery consisted of circular rack and two pinions, with the pinion directly mounted to the reducer output shaft due to limited elevation spacing for machinery design. The span locking machinery consisted of two lockbars actuated by linear worm gear actuators. Amaka also designed the new split HVAC/Water/Sewer system in tender house.
6/12 – 11/20	Broward County, Andrews Avenue Bascule Bridge Rehabilitation over the New River, Broward County, FL: Mechanical Engineer (EOR) responsible for inspection, design, calculations, plan preparation, and technical special provisions. The scope of work included machinery rehabilitation of a single-leaf bascule span. Machinery rehabilitation included a new span drive hydraulic cylinder replacement, HPU rehabilitation with VFDs, trunnion hub bolts replacement, new hydraulic span lock assembly replacement work, and live load shoe repairs. Amaka also designed the new split HVAC/Water/Sewer system in tender house rehab.
9/16 – 11/20	Miami Dade County, SR 9 / NW 27th Avenue Bascule Bridge Rehabilitation over Miami River Bridges, Miami FL: Lead Mechanical Engineer (EOR) responsible for inspection, preparing mechanical design, calculations, plans and technical specifications and conducting field inspection of existing conditions required for the rehabilitation of the twin double-leaf bascule bridges. Scope of work included reliability and maintainability improvements with the rehabilitation and replacement of components of the span drive hydraulic system (new cylinders and refurbished hydraulic power units and motors), live load shoes and span lock assemblies.

Rol Seni	Dert Algazi, P.I or Mechanical Engir	E. neer		Years of experience with this firm/employer Years of experience with other firm(s)/employer(s)	4
Degree(s) / Ye	ars / Specialization	BS / 2013 / Aerospa	ace Engineering		
Active re sta	gistration number / ate / expiration date	44505 / LA / 9/30/20 4/30/2022; 6201070	022; 84279 / FL / 0152 / MI / 02/26	/ 02/28/2023; 101821 / NY / 07/31/22; 24GE05566700 / NJ / /2023; 37761 / SC / 06/30/2022; 20102852 / WA / 11/25/202	2
	Year registered	2020, 2017, 2019, 2019, 2020, 2020, 2020	Discipline	Mechanical Engineering	
Contract role(s) / bri	ef description of res	ponsibilities	Mechanical Le	ad	
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant tion", etc. Experien	to the propose ce dates shoul	ed contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	",
10/20 - Present	CSX New River Bri the design of the em Project included inve an accelerated sche impact railroad traffi machinery compone	dge Emergency Rep nergency coupling rep estigations into the ca edule. Couplings were c. Inspections include ents. Findings were co	Dair, Fort Laude Dacement for the ause of the failur successfully re observation of compiled into repo	erdale, FL: Senior Mechanical Engineer (EOR) responsible for e CX New River Bascule Bridge in Fort Lauderdale Florida. e and designing a replacement to correct the existing failure placed without requiring extended bridge outages which wou machinery and operation as well as applicable measurement ports that included recommendations.	or on Ild ts of
11/18 - Present	Massachusetts Movable Bridge Mechanical/Electrical Inspections, MA: Senior Mechanical Engineer responsible for leading the in-depth inspection of several movable bridges for the Massachusetts Department of Transportation. A total of 6 movable bridges have been inspected as a part of this Contract including 3 Trunnion Bascule Bridges, 1 Scherzer Type Bascule Bridge, 1 Swing Bridge, and 1 Vertical Lift Bridge, Inspections include observation of machinery and operation as well as applicable measurements of machinery components. Findings were compiled into reports that included recommendations				
2/19 - 10/20	Bobcaygeon Swing of the new swing bri with CSA bridge coor Trent-Severn Water hydraulic cylinders. machinery also inclu wheels, and new hydr	g Bridge Replaceme dge replacement. Pro le as well as providin way Channel Lock sy The hydraulic power udes a new center piv draulic center lock as	ent, ON: Senior I oject includes rev g technical supp rstem. The new s unit will be integ rot bearing, new semblies.	Mechanical Engineer responsible for performing a code revie view of all plans, calculations, and specifications for complian ort during the construction phase. The bridge is a part of the swing bridge span drive hydraulic machinery include two new rated with the nearby channel lock hydraulic system. The brid live load wheels, new balance wheels and track, new end lift	w nce v dge t
6/19 - Present	Center Street Swin of the bob-tail swing components to exter and pinion. The brid	g Bridge, Cleveland bridge. The goal of t nd the life of the bridg ge machinery also in	l, OH : <i>Senior Me</i> he project is to r ge. The bridge is cludes end lift w	echanical Engineer (EOR) leading the mechanical rehabilitati epair and replace deficient structural, mechanical, and electr operated by an electro-mechanical drive train and a main ra edges driven by a linear actuator which support the bridge	on ical ick

	corners, centers the span, and locks the span from rotation. Efforts include rehabilitating select operating machinery, span support ring bearings, and performing balance adjustments.
5/17 - 8/18	NCDOT, US 17 Swing Bridge over the Perquimans River Design-Build, Perquimans County, NC : <i>Mechanical Engineer</i> responsible for preliminary and final machinery engineering analysis, technical specifications, design, and post design services to replace the existing swing bridge over the Perquimans River with a new off-line swing bridge. The machinery design included center pivot bronze disc bearings, balance wheels and track, center live load rollers and end lift rollers for the span supporting machinery. The span operating machinery consisted of circular rack and two pinions, with the pinion directly mounted to the reducer output shaft due to limited elevation spacing for machinery design. The span locking machinery consisted of two lock bars actuated by linear worm gear actuators.
9/18 - Present	NJ Route 30 Over Beach Thorofare, Atlantic City, NJ: Senior Mechanical Engineer (EOR) responsible for the on-going mechanical rehabilitation of the single leaf trunnion bascule bridge. The span is driven by two 60 hp a/c electric motors which connect mechanical gear train and ends with a rack-pinion gearing at the bascule girder. The bridge also has a diesel engine auxiliary drive assembly which ties into the main gear train as well as a back-up generator. Efforts include replacing of the existing auxiliary drive system, rehabilitation of the selected span drive machinery components, and replacement of the primary speed reducer. Additionally, new span lock assemblies driven by a linear gear actuator, new industrial hydraulic shock buffers, and new live load shoes will be provided. Machinery components to be cleaned, lubricated, and painted in accordance with OSHA requirements.

Maame Assasie-Gyimah, EIT Assistant Mechanical Engineer				Years of experience with this firm/employer Years of experience with other firm(s)/employer(s)	3
Degree(s) / Ye	ears / Specialization	MS / 2019/ Mechan BS / 2018 / Mechan	ical Engineering		
Active re sta	gistration number / ate / expiration date	NA			
_	Year registered	NA	Discipline	Mechanical Engineering	
Contract role(s) / bri	ef description of res	ponsibilities	Mechanical Ins	pections	
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant tion", etc. Experien	t to the propose ce dates should	d contract; <i>i.e.</i> , "designed drainage", "designed girders' I cover the time specified in the applicable MPR(s).	"
02/21-Present	Belle Chasse and Harvey Tunnel Inspections, LA : <i>Mechanical Engineer</i> assisting in the inspection of the mechanical systems of the Harvey and Belle Chasse Tunnels in New Orleans, LA. The tunnel inspection involves an in-depth inspection of the ventilation system, the Pumping and Drainage System, the Fire Protection System, the Plumbing System, etc. that make up the tunnel. Inspection findings were compiled into in-depth reports.			al	
09/20-Present	LaSalle Causeway, ON : <i>Mechanical Engineer</i> assisting in the counterweight replacement study. The existing bridge is a Strauss Fixed Trunnion Bascule Bridge over the St. Lawrence River in Kingston, Ontario. Study involved evaluation several options for the replacement of the existing deteriorated counterweight			s a	
10/20 – Present	CSX New River Bridge Emergency Repair, FL : <i>Assistant Mechanical Engineer</i> responsible for the design of the emergency coupling replacement for the CSX New River Bascule Bridge in Fort Lauderdale Florida. Project included investigations into the cause of the failure and designing a replacement to correct the existing failure on an accelerated schedule.			d	
09/18-Present	Route 30 Bascule Bridge, State Road (SR) 30 over Beach Thorofare, Atlantic County, NJ : <i>Mechanical Engineer</i> assisting the on-going mechanical design rehabilitation of the single leaf bascule bridge. Efforts include replacing of the existing auxiliary drive system, rehabilitation of the selected span drive machinery components, span lock replacement, and air buffer replacement.			ıe ıt,	
10/19-10/20	Bobcaygeon Swing Bridge Replacement, ON : Assistant Mechanical Engineer responsible for code review of the new swing bridge replacement. Project includes review of all plans, calculations, and specifications for compliance with CSA bridge code. The bridge is a part of the Trent-Severn Waterway Channel Lock system. The new swing bridge span drive hydraulic system will be integrated with the nearby channel lock hydraulic system.			w A ve	
02/21-Present	Belle Chasse and Harvey Tunnel Inspections, LA : <i>Mechanical Engineer</i> assisting in the inspection of the mechanical systems of the Harvey and Belle Chasse Tunnels in New Orleans, LA. The tunnel inspection involves an in-depth inspection of the ventilation system, the Pumping and Drainage System, the Fire Protection System, the Plumbing System, etc. that make up the tunnel. Inspection findings were compiled into in-depth reports.				al

Elect	vin Walsh, P.E rical Engineer Lead			Years of experience with this firm/employer Years of experience with other firm(s)/employer(s)	8	
Degree(s) / Ye	ars / Specialization	BS / 2007 / Electrica	al Engineering			
Active re sta	gistration number / ite / expiration date	0044049 / LA / 3/31 24GE05175000 / N	44049 / LA / 3/31/2022; 78396 / FL / 2/28/2023;48485 / MD / 1/14/2022; 50267 / MA / 6/30/2022; GE05175000 / NJ / 4/30/22: 52962 / WA / 7/14/22			
	Year registered	2019; 2014; 2016; 2013; 2014; 2015	Discipline	Electrical Engineering		
Contract role(s) / brid	ef description of res	ponsibilities	Electrical Engi	neer Lead		
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant tion", etc. Experien	t to the propose ce dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders' d cover the time specified in the applicable MPR(s).	',	
2/21 - Present	Belle Chase and Ha (EOR) for the inspect Tunnels. Kevin perfor alarm systems, and	arvey Tunnel Inspect ction of the instrumen ormed visual and ope CO monitoring.	c tions, Plaquem tation controls a trational testing o	nines and Jefferson Parishes, LA: Lead Electrical Engineer nd automation (ICA) systems at the Belle Chase and the Har of the ICA systems including CCTV, remote monitoring and	vey	
3/19 - 06/19	Hood Canal Pontoon Bridge No.'s 104/5.1 and 5.2, WA: Lead Electrical Engineer (EOR) for the in-depth electrical inspection of this very complex floating concrete pontoon movable bridge which consists of with six separately operated hydraulic lift spans and two main draw spans. Kevin was responsible for performing visual inspection and operational testing of the electrical and control systems, performed power measurements, and insulation resistance testing. Kevin prepared reports outlining observations, deficiencies, recommendations, and cost estimates. Kevin assisted with management of scope, schedule, and budget					
2/19 - Present	Route 30 Single Leaf Bascule Bridge, NJ Route 30 over Beach Thorofare, Atlantic County, NJ : <i>Lead Electrical Engineer</i> (EOR) for this major structural, mechanical, and electrical rehabilitation project which includes work on the bascule span and approaches. Electrical work includes replacement of the traffic signals, resistance barrier gates, traffic warning gates and supporting platforms, programmable logic controller (PLC) system, electrical service and associated equipment, motor and machinery brakes, span locks, auxiliary direct drive diesel engine, CCTV system, PA systems, heat trace system, and a new standby generator.					
8/18 - 2/21	Wilson Pigott Doul Electrical Engineer (rehabilitation work. I and navigation lighti	ble Leaf Bascule Bri EOR) for this on-call Electrical work involve ng. Kevin also perfor	dge, FL State R services contrac es replacement of med post design	Road 31 over Caloosahatchee River, Lee County, FL: Lead of which includes structural, electrical, and mechanical of the PLC control system, all control console top components a construction services.	1 s,	
7/18 - 4/19	Tacony-Palmyra D Electrical Engineer f additional control sy developed.	ouble Leaf Bascule for this electrical reha stem components, ar	Bridge over the bilitation project.	• Delaware River, Tacony, PA and Palmyra, NJ: Lead . Scope includes replacement of the bridge control consoles a of the electrical wiring system. Preliminary 30% design was	and	

	Bridge of Lions Single Leaf Rolling Lift Bascule Bridge, FL State Road A1A over Matanzas River, St. Johns
	County, St. Augustine, FL: Lead Electrical Engineer (EOR) for this rehabilitation project which includes the replacement
1/16 1/10	of the span position indication limit switches from existing rotary cam type limit switches (mechanically coupled to the
1/10 - 1/19	machinery) to new magnetic proximity type limit switches for nearly raised, fully raised, nearly seated, and fully seated
	indications. Barrier gate fully raised, and fully lowered lever operated limit switches were also installed. Kevin performed
	post design review of various construction shop drawings and RFI's
	Maryland Movable Bridge Inspections (On-Call Services), MD: Lead Electrical Engineer (EOR) and assistant
	electrical engineer for the in-depth electrical inspections of over ten (10) movable bridges throughout the state including
4/14 - Present	bascule and swing bridges. performed the visual inspection and operational testing of the electrical and control systems
	and performed power measurements/ recording and insulation resistance testing. Kevin also prepared reports outlining
	observations, deficiencies, recommendations, and cost estimates, and managed the budget and schedule.
	New Jersey Movable Bridge Inspections (On-Call Services), NJ: Lead Electrical Engineer (EOR) for the inspection of
	several movable bridges throughout the state including bascule and vertical lift bridges. Kevin performed visual inspection
10/19 - Present	and operational testing of the electrical and control systems, traffic safety systems, and control systems. He prepared
	reports outlining observations, deficiencies, recommendations, and cost estimates, and managed the budget and
	schedule.
	Burlington Canal Vertical Lift Bridge, Hamilton, ON, CA: Electrical Engineer for this major electrical and mechanical
	rehabilitation which includes replacement of the bridge control system, instrumentation, partial power distribution system,
6/14 - 10/16	motor control centers, main drive motors, VFD's, motor brakes, and gates. Kevin's responsibilities included assisting in
	several design QA/QC reviews for the electrical and control system rehabilitation design, performing post design review
	of various construction shop drawings, and performing shop acceptance testing of the main drive motors, motor drives,
	and overall control system in the field.

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Ant Supe	conio Gonzalez ervising Engineer	z, P.E.	Years of experience with this firm/employer	4			
Degree(s) / Ye	ars / Specialization	BS / 2004 / Electrica	3S / 2004 / Electrical Engineering				
Active re sta	gistration number / ate / expiration date	38719 / LA / 09/30/2 4/30/2022; 094428 /	3719 / LA / 09/30/2022; 57770 / WA / 01/18/2022; 088943 / PA / 9/30/2023; 24GE05046600 / NJ / /30/2022: 094428 / NY / 12/31/22: 86300 / FL / 02/28/2023				
Year registered		2019; 2019; 2018; 2013; 2014; 2019	Discipline Electrical and Computer Engineering				
Contract role(s) / bri	ef description of res	ponsibilities	Electrical Desig	gn and Inspection			
Experience dates (mm/yy–mm/yy)	ates Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", (vv) "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).						
4/21 - 7/21	Harvey Tunnel, Harvey, LA: <i>Electrical Engineer</i> for the 2021 LADOTD Routine Electrical Tunnel Inspection of the Harvey Tunnel. Tasked to lead the electrical inspections team, inspecting the electrical systems associated with tunnel currently in use for vehicular traffic. Visual inspection and operational testing of all electrical systems throughout the tunnel. Report preparation of all electrical findings.						
2/21 - 5/21	Belle Chasse Tunnel, Plaquemines Parish, LA : <i>Electrical Engineer</i> for the 2021 LADOTD Routine Electrical Tunnel Inspection of the Belle Chasse Tunnel. Lead the electrical inspections team, inspected the electrical systems associated with tunnel currently in use for vehicular traffic. Visually inspected and operationally tested all electrical systems throughout the tunnel. Prepared report of all electrical findings.						
10/20 - Present	NJDOT Facilities Inventory Database, Trenton, NJ : <i>Electrical Engineer</i> tasked with developing a centralized database to track the primary critical electrical system components throughout NJDOT's Pump Stations, Flood Gate, Movable Bridges, and the Route 29 Tunnel facilities. The goal of the database is to provide a simplified reference of installed electrical equipment as well as critical facility based information for use by NJDOT's maintenance personnel.						
9/20	9/20 Kent Narrows Bascule Bridge, Grasonville, MD : Assistant Electrical Engineer for the 2020 MDOT Routine Electrical Bridge Inspection of the Kent Narrows Bridge. Visual inspection of electrical components including; drive and emerge motors, drives, PLC, ATS/MTS, generator, warning/barrier gates, traffic signals, brakes, span locks, MCC, limit switch navigation lighting, control console, panelboards, resistors and the CCTV and fire alarm systems. Performed power			l ıcy es,			

Graciela Patino, EIT Electrical Engineer Director				Years of experience with this firm/employer	22
Degree(s) / Ye	ears / Specialization	BS / 1996 / Electrica	al Engineering		
Active registration number / EIT - 1		EIT - 1100006540 /	- 1100006540 / FL / NA		
Year registered 2001		2001	Discipline	Electrical Engineering	
Contract role(s) / bri	ef description of res	ponsibilities	Technical Advi	sor; Electrical Engineer	
Experience dates Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed (mm/yy–mm/yy) "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(ed contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	",	
2/19 – Present	Route 30 Single Leaf Bascule Bridge, NJ Route 30 over Beach Thorofare, Atlantic County, NJ : <i>Technical Advisor</i> for this major structural, mechanical, and electrical rehabilitation project which includes work on the bascule span and approaches. Electrical work includes replacement of the traffic signals, resistance barrier gates, traffic warning gates and supporting platforms, programmable logic controller (PLC) system, electrical service and associated equipment, motor and machinery brakes, span locks, auxiliary direct drive diesel engine, CCTV system, PA systems, heat trace system, and a new standby generator. In addition to her Technical Advisor role, Graciela served as electrical engineer team member responsible for the quality control of the electrical rebabilitation design.				
3/19 – 06/19	Center Street Swing Bridge Rehabilitation, OH : <i>Technical Advisor</i> for the replacement of MCCs, panelboards, warning gates, traffic signal, fire alarm system, navigation lights, sidewalk lights, and surge protection device. Design included construction plans, special provisions, and construction cost estimate. In addition to her Technical Advisor role, Graciela served as electrical engineer team member responsible for the quality control of the electrical rehabilitation design.				
4/21 – 7/21	Harvey Tunnel, Harvey, LA: <i>Project Manager</i> for the 2021 LADOTD Routine Electrical Tunnel Inspection of the Harvey Tunnel. The scope included visual inspection and operational testing of all electrical systems throughout the tunnel, report preparation of all electrical findings.				
2/21 – 5/21	Belle Chasse Tunnel, Plaquemines Parish, LA: <i>Project Manager</i> for the 2021 LADOTD Routine Electrical Tunnel Inspection of the Belle Chasse Tunnel. The scope included visual inspection and operationally testing of all electrical systems throughout the tunnel, report preparation of all electrical findings.				
8/18 – 2/21	Wilson Pigott Double Leaf Bascule Bridge, FL State Road 31 over Caloosahatchee River, Lee County, FL: <i>Technical Advisor</i> for this on-call services contract which includes structural, electrical, and mechanical rehabilitation work. Electrical work involves replacement of the PLC control system, all control console top components, and navigation lighting. In addition to her Technical Advisor role, Graciela served as electrical engineer team member responsible for the guality control of the electrical rehabilitation design				
7/18 – 4/19	Tacony-Palmyra D Technical Advisor re the bridge control co Preliminary 30% des	Quality control of the electrical rehabilitation design. Tacony-Palmyra Double Leaf Bascule Bridge, NJ State Road 73 over the Delaware River, Burlington County, NJ: Technical Advisor responsible for the quality control of the electrical rehabilitation design. Scope included replacement of the bridge control consoles and additional control system components, and rehabilitation of the electrical wiring system. Preliminary 30% design was developed			NJ : It of m.

9/14 – 2/17	New Pass Single Leaf Bascule Bridge, FL State Road 789 over Sarasota Bay, Sarasota, FL: Technical Advisor for
	the electrical rehabilitation project of this single-leaf Hopkins Trunnion bascule bridge. Electrical rehabilitation scope
	included the design and integration of a partial replacement of the electrical and control system for replacement of traffic
	gates, two generators, control console top, PLC, submarine cable terminal box, navigation lighting, and partial power
	distribution replacement. C reviews for the electrical and control system rehabilitation design.
	Bridge of Lions Single Leaf Rolling Lift Bascule Bridge, FL State Road A1A over Matanzas River, St. Johns
	County, St. Augustine, FL: Electrical Engineer team member for this rehabilitation project which includes the
1/16 — 1/19	replacement of the span position indication limit switches from existing rotary cam type limit switches (mechanically
	coupled to the machinery) to new magnetic proximity type limit switches for nearly raised, fully raised, nearly seated, and
	fully seated indications. Barrier gate fully raised, and fully lowered lever operated limit switches were also installed.
11/13 – 5/17 6/04	Berkley Bridge Rehabilitation Peer Review and Value Engineering, Norfolk, VA: Electrical Engineer for the peer
	review and value engineering of electrical and controls system for this four-leaf rolling bascule bridge. The value
	engineering review and presenting electrical recommendations.
	James River Bridge Rehabilitation Peer Review and Value Engineering Study, Newport News, VA: Electrical
11/13 – 5/17	Engineer for the peer review and value engineering study of electrical and controls system for this vertical lift bridge.
	Responsible for performing the value engineering review and presenting electrical recommendations.

Edv Prince	ward M. Cinad	r, P.E. acility Inspection		Years of experience with this firm/employer	24		
				Years of experience with other firm(s)/employer(s)	3		
Degree(s) / Ye	ars / Specialization	Bachelor of Science Master of Science /	e / Civil Engineer Civil Engineerin	ing / 1995 / Ohio University g / 1997 / Ohio University			
Active registration number / state / expiration date		35390 / LA / 09/30/2	390 / LA / 09/30/2022				
	Year registered	2010	Discipline	P.E. (Civil)			
Contract role(s) / bri	ef description of res	ponsibilities	B&N Project O	versight & Field Evaluation QA			
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant tion", etc. Experien	t to the propose ce dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	",		
12/09 — 10/11	LADOTD State Proj. No. 700-99-0494: Lead bridge inspector, performed field inspection of major trusses and gusset plate inspection, gathered data for bridge load rating. Utilized industrial rope access for inspection. Teamed with SDR on the following bridges: LA-90/Morgan City, I-20/Vicksburg, I-10/Baton Rouge, LA-70/Donaldsonville, US-190/Krotz Springs, I-10/Calcasieu.						
04/16 – 01/18	LADOTD Contract No. 4400004920 (TO 1): Lead bridge inspector, performed field inspection & load ratings of major trusses including gusset plate inspection & rating on three major trusses, LA-47/IWGO, US-90/New Orleans River bound Expressway, and LA-2/Millers Bluff. Utilized industrial rope access for inspection.						
12/19 – 6/21	of load rating calculat	lo. 4400004920 (TO 5 tions, 29 total bridges.	i): Lead bridge in	nspector , performed field inspection of off-system bridges and	QA		
06/18 - Ongoing	Oregon DOT Agree Routine Inspections of Fremont Complex (s	ment B34825: Lead Ir of major bridges includ seven FC steel tub gi	nspector and Co ling Astoria-Meg irders and pier o	Intract Manager for Fracture Critical, Fatigue Prone, In-Depth, Ier trusses, Coos Bay/McCullough Memorial trusses, and V aps). Utilized industrial rope access for inspection.	and Vest		
04/21 - Ongoing	Oklahoma DOT Con Off-System truss and repair/rehab detail de	tract ID 2299A: Cont FC bridges. Project ir velopment. Utilizing in	ract Manager ar ncludes load ratin ndustrial rope acc	d Team Leader for Fracture Critical and Routine Inspections o gs and updates to include EV/SHV loadings and Critical Findin ess for inspection.	f 91 g		
04/21 - Ongoing	Oklahoma DOT Con On-System truss and	FC bridges. Utilizing	act Manager and industrial rope ac	Team Leader for Fracture Critical and Routine Inspections of cess for inspection.	50		
Certifications	 ATSSA TC Tech SPRAT Level II I Safety Inspection Inspection of Fra LRFR Bridge Loa ODOT LRFD Loa LRFD Training fo NDT Techniques 	nician, TC Supervisor Rope Access, 2022 n of In-Service Bridges cture Critical Bridge M ad Rating Training, 20 ads & General Overvie or Bridge Substructure 5 (DP, MP, UT) – Ediso	and TC Flagging s - FHWA/NHI, 20 lembers - FHWA 06 ew, 2007 s & Earth Retaini on Welding Institu	– Louisiana Associated General Contractors, 2018 008, 2011, 2016, 2021 /NHI, 2011 ng Structures, 2005 ute, 2020			

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Brendan J. Prendeville, P.E.

Senior Project Manager, Bridge Inspection Engineer

Years of experience with this firm/employer18

				Years of experience with other firm(s)/employer(s) 18		
Degree(s) / Ye	ears / Specialization	Bachelor of Science	Bachelor of Science / Civil Engineering / 2004 / Ohio State University			
Active registration number / state / expiration date		74728 / OH / 12/31/2023				
	Year registered	2010	Discipline	P.E. (Civil)		
Contract role(s) / bri	ef description of res	ponsibilities	B&N Field Eva	luation – Bridge Inspector		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girde "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).					
12/09 – 10/11	LADOTD State Proj. plate inspection, gath following bridges: LA 10/Calcasieu.	LADOTD State Proj. No. 700-99-0494: Bridge inspection engineer, performed field inspection of major trusses and gusset plate inspection, gathered data for bridge load rating. Utilized industrial rope access for inspection. Teamed with SDR on the following bridges: LA-90/Morgan City, I-20/Vicksburg, I-10/Baton Rouge, LA-70/Donaldsonville, US-190/Krotz Springs, I-10/Calcasieu.				
04/16 – 01/18	LADOTD Contract No. 4400004920 (TO 1): Bridge inspection engineer, performed field inspection & load ratings of major trusses including gusset plate inspection & rating on three major trusses, LA-47/IWGO, US-90/New Orleans River bound Expressway, and LA-2/Millers Bluff. Utilized industrial rope access for inspection.					
12/19 - Ongoing	LADOTD Contract No. 4400004920 (TO 5): Project Manager, Bridge inspection engineer, performed field inspection of off- system bridges and load rating calculations, 29 total bridges.					
03/20 - Ongoing	Ohio DOT Municipal Bridge Inspections & Load Ratings: Project Manager and Lead Bridge Inspection Engineer for 80 bridges, includes Routine and Fracture Critical Inspections and BrR load ratings of select structures including trusses.					
08/20 – Ongoing	Ohio DOT DEL-23 B structures, including including coring, Chlo	bridge & Structure Ev bridges, culverts, and bride Ion sampling, an	valuations: Proje drainage structur d other testing.	ect Manager and Lead Bridge Inspection Engineer for over 200 res. Bridge evaluation work includes in-depth assessment of decks		
06/18 - Ongoing	Oregon DOT Agreed Depth, and Routine I trusses, and West F inspection.	ment B34825: Projec nspections of major br Fremont Complex (se	t Manager & Brid ridges including A even FC steel tub	dge Inspection Engineer for Fracture Critical, Fatigue Prone, In- storia-Megler trusses, Coos Bay McCullough Memorial o girders and pier caps). Utilized industrial rope access for		
Certifications	 ATSSA TC Tech Safety Inspection Inspection of Fra Permit Required Bridge Climbing SPRAT Level II I NDT Techniques 	nician, TC Supervisor n of In-Service Bridges acture Critical Bridge M and SCBA Confined S & Industrial Rope Acc Rope Access 2008, 20 s (DP, MP, UT) – Ediso	and TC Flagging s - FHWA/NHI, 20 Members - FHWA Space Entry – Sa ess – B&N, 2003 012, 2015, 2018, 2 on Welding Institu	y – Louisiana Associated General Contractors, 2018 005, 2011, 2016, 2021 /NHI, 2011 feX - 2005, 2006 2022 ute, 2020		

Michael J. Kronander, P.E. Project Manager, Bridge Inspection Engineer			Years of experience with this firm/employer	7	
Degree(s) / Years / Specialization Bachelor of Science			e / Civil Engineer	ing / 2011 / Ohio State University	<u> </u>
Active registration number / state / expiration date 42172 / LA / 03/31/2		2024			
Year registered 2017			Discipline	P.E. (Civil)	
Contract role(s) / brief description of responsibilities		B&N Field Eva	luation – Bridge Inspector/Team Leader		
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant ction", etc. Experien	t to the propose ce dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	",
04/16 – 01/18	LADOTD Contract No. 4400004920 (TO 1): Bridge inspection engineer, performed field inspection & load ratings of major trusses including gusset plate inspection & rating on three major trusses, LA-47/IWGO, US-90/New Orleans River bound Expressway, and LA-2/Millers Bluff. Utilized industrial rope access for inspection.				
12/21 - Ongoing	LADOTD Contract No. 4400017264: Bridge Inspection Engineer for Inspection for Rehab of IWGO/LA47/Green Bridge.				·-
02/19 - Ongoing	Ohio DOT Voinovich Bridges In-Depth, Fracture Critical, & Routine Inspection. Serves as the Project Manager and Team Leader for inspections of two signature long-span steel delta-frame bridges. Utilized industrial rope access for inspection.				
06/18 - Ongoing	Oregon DOT Agreement B34825: Bridge Inspection Engineer for Fracture Critical, Fatigue Prone, In-Depth, and Routine Inspections of major bridges including Astoria-Megler trusses, Coos Bay/McCullough Memorial trusses, and West Fremont Complex (seven FC steel tub girders and pier caps). Utilized industrial rope access for inspection				е
04/21 - Ongoing	Oklahoma DOT Cor FC bridges. Project in development. Utilized	ntract ID 2299A: Tean ncludes load ratings an d industrial rope acces	n Leader for Frac nd updates to inc is for inspection.	ture Critical and Routine Inspections of 91 Off-System truss an lude EV/SHV loadings and Critical Finding repair/rehab detail	d
04/21 - Ongoing	Oklahoma DOT Cor bridges. Utilized indu	itract ID 2300: Team strial rope access for i	Leader for Fractunspection.	re Critical and Routine Inspections of 50 On-System truss and	FC
Certifications	 ATSSA TC T Safety Inspection of Permit Requi Bridge Climb SPRAT Leve NDT Techniq FAA UAV Pile PTI Level I C ASBI Grout C 	echnician, TC Supervi ction of In-Service Brid Fracture Critical Bridg red and SCBA Confine ing & Industrial Rope A I III Rope Access – 20 ues (DP, MP, UT) – E ot Certification - 2020 ertification – 2018 Certification - 2018	sor and TC Flagg lges - FHWA/NHI le Members - FHV ed Space Entry – Access – B&N, 20 21 dison Welding In:	ying – Louisiana Associated General Contractors, 2020 , 2015, 2020 WA/NHI, 2016 2015 015 stitute, 2020	

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James Appler, P.E.

Project Manager, Bridge Inspection Engineer

Years of experience with other firm(s)/employer(s) 12

Years of experience with this firm/employer

Degree(s) / Years / Specialization		Bachelor of Science / Civil Engineering / 2008 / University of South Florida				
Active re sta	gistration number / ate / expiration date	76076 / FL / 02/28/2023				
Year registered		2013	Discipline	P.E. (Civil)		
Contract role(s) / bri	ef description of res	ponsibilities	B&N Field Eva	uation – Bridge Inspector/Team Leader		
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relevant tion", etc. Experien	t to the propose ce dates should	d contract; <i>i.e.</i> , "designed drainage", "designed girders", I cover the time specified in the applicable MPR(s).		
12/21 - Ongoing	LADOTD Contract No. 4400017264: Bridge Inspection Engineer for Inspection for Rehab of IWGO/LA47/Green Bridge.					
08/20 - Ongoing	Oklahoma DOT Co and FC bridges. Pro detail development.	Oklahoma DOT Contract ID 2299A: Team Leader for Fracture Critical and Routine Inspections of 91 Off-System truss and FC bridges. Project includes load ratings and updates to include EV/SHV loadings and Critical Finding repair/rehab detail development. Utilized industrial rope access for inspection.				
08/20 - Ongoing	Oklahoma DOT Contract ID 2300: Team Leader for Fracture Critical and Routine Inspections of 50 On-System truss and FC bridges. Utilized industrial rope access for inspection.					
09/2020	Iowa DOT – Fracture Critical Inspection of Sioux City and Dubuque bridges. Bridge Inspection Engineer for inspection of two tied arch bridges over the Mississippi River. Utilized industrial rope access for inspection.					
09/2021	West Virginia DOT – In-depth Inspection of the New River Bridge: Bridge Inspection Engineer for in-depth and routine inspections of 3,000 ft long truss arch bridge. Utilized industrial rope access for inspection.					
08/20 - Ongoing	Mississippi OSARC System bridges inclu	Mississippi OSARC Bridge Inspections & Load Ratings: Team Leader for in-depth and routine inspections of Off- System bridges including timber, steel, and concrete structures. Load ratings performed in BrR. MIDAS and Excel.				
08/2012-12/2014	Florida DOT – In-depth Inspection of the Sunshine Skyway in Tampa, FL. Project Manager for inspection of 22,000 ft long cable-stay bridge. Performed QAQC duties for inspection, industrial rope access utilized for inspection.					
Certifications	 Safety Inspection of In-Service Bridges - FHWA/NHI, 2015, 2021 Inspection of Fracture Critical Bridge Members - FHWA/NHI, 2019 Inspection and Maintenance of Ancillary Structures – FHWA/NHI 2019 Bridge Climbing & Industrial Rope Access – B&N, 2020 SPRAT Level I Rope Access – 2022 FAA UAV Pilot Certification – 2021 Tunnel Safety Inspection – FHWA/NHI 2017/2022 First Aid & CPR – Red Cross 2022 					

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16. Staff Experience: Bridge Diagnostics, Inc. (BDI)

Brett Cor	mmander, P.E
Vice Preside	nt / Principal Engine
Degree(s) / Years / Sp	ecialization M.S. /

Vice President / Principal Engineer				Years of experience with this firm/employer 32
SI				Years of experience with other firm(s)/employer(s) 1
Degree(s) / Years / Specialization M.S. / 1989 / Str B.S. / 1986 / Civ		uctural Engineering il Engineering / Univ	/ University of Colorado /ersity of Colorado	
Active registration number / state / expiration date		Professional Eng	gineer: 35864 / LA /	3/31/2023
Year registered 2010		2010	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		QA/QC, Principal I	Engineer	
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed gird "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).			ed contract; <i>i.e.</i> , "designed drainage", "designed girders", d cover the time specified in the applicable MPR(s).
10/89 - Ongoing	Brett has over 30 years of experience with testing, monitoring, and evaluating measured structural responses on over 1000 structures. Brett has performed/oversaw complete structural analyses and load ratings on over 500 highway and railway bridges using a variety of design codes such as AASHTO and AREMA, and many state specific codes including Louisiana specifications. Brett also has designed/oversaw capacity testing projects of concrete and steel structures using various NDE techniques as well as implemented hundreds of structural monitoring systems.			
11/12 – Ongoing	US-90 Bayou Ramos Bridge Load Testing and Monitoring, LA – Due to unexpected cracking in PS concrete AASHTO beams, BDI performed load tests and load ratings to determine cause and effect of cracks in continuous multi-span PS/C girders. Load ratings were completed according to DOTD specifications. After the completion of the initial evaluation, monitoring systems were installed on the structure to monitor the state of two sections of structure. Structural Health Monitoring is still ongoing. As technical advisor/principal engineer, Brett oversaw live-load and thermal load monitoring that was performed during and after repairs to evaluate the performance of retrofit			
11/04 – 12/04 11/11 – Ongoing	Bonnet Carre Spillway Load Testing, Rating, and Monitoring, LA –BDI used its Integrated Approach to determine if a 500- ton load could cross the bridge safely. BDI then installed an event-based monitoring system that helps DOTD capture weigh-in- motion data, strains induced by heavy loads, and photos of heavy load. Health Monitoring is still ongoing. Over multiple contracts, Brett was the principle-in-charge on this project in its many phases which included responsibilities such as testing program oversight, structural analysis, load rating of structure for atypical load configurations, on-site data interpretation, report creation and submittal, and providing recommendations for future crossings.			
07/21 – Ongoing	NDE of the Whiskey Bay and Piot Channel Bridge Decks, LA – NDE of 3.5M sf of bridge deck on the structure carrying I-10 over the Atchafalaya Basin between Baton Rouge and Lafayette, LA. Testing included IR/HRI, CWSF GPR and SounDAR from BDI's mobile NDE testing van. IR/HRI bridge deck data was also collected via drone. BDI also performed substructure inspection to satisfy LADOTD's NBI requirements of the structure with IR/HRI via drone. The data will be used to quantify and locate areas for repair and preservation, and to report NBE and NBI data to FHWA. Mr. Commander is providing QA/QC and PE Review			
07/19 – 01/20	St. Claude Lift Bridg counterweight/span b Strauss Bascule Brid	ge Balance and O palance and friction ge. Strain gauge te	peration Testing, La calculations as well esting and various ins	 A – Brett was project principal engineer responsible for as structural performance evaluation on a double heal trunnion strumentation tasks were performed during investigation of a

	bearing failure on the span to counterweight link.
06/14 – Ongoing	Phinney Avenue Bridge Load Testing, Rating and NDE, WA – As part of BDI's SDOT On-Call, BDI was contracted by Seattle DOT to perform diagnostic load tests and structural reinforcement investigation on the Phinney Ave bridge in Seattle, WA. Instrumentation, load tests, and reinforcement investigation were performed with the overall goal of these tests was to better understand the structures' load distribution, reinforcement details, and in turn provide refined load ratings. Brett acted as the principal engineer and oversaw testing plan development, field-verified model calibration, load ratings performed according to SDOT/WSDOT specifications, and reporting.
08/18 – 12/20	Live Load Testing and Field-Verified Load Rating of 16 Bridges, VA – As part of BDI's VDOT On-Call, BDI provided load testing and field-verified load rating of 16 structures in the Fredericksburg and Richmond districts of VDOT. BDI was responsible for the design of load testing requirements, development of instrumentation plans, execution of field work and load testing, data analysis, finite element (FE) model creation and calibration, and eventual load rating per VDOT and AASHTO requirements. Brett acted as principal engineer and subject matter expert for this project and responsibilities included overseeing testing program development.

16. Staff Experience: Bridge Diagnostics, Inc. (BDI)



Brice Carpenter, P.E.

Senior Engineer / Engineering Department Lead

Years of experience with this firm/employer 13

				Years of experience with other firm(s)/employer(s)	2		
Degree(s) / Years / Specialization		M.S. / 2009 / Civ B.S. / 2007 / Str	N.S. / 2009 / Civil Engineering / New Mexico State University 3.S. / 2007 / Structural Engineering / New Mexico State University				
Active re st	egistration number / ate / expiration date	Professional Eng	gineer: 39341 / LA /	3/31/2023			
	Year registered	2014	Discipline	Civil Engineer			
Contract role(s) / br	ief description of res	ponsibilities	Senior Engineer /	Engineering Department Lead			
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relev tion", etc. Exper	ant to the propose rience dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders" d cover the time specified in the applicable MPR(s).	'' ' ,		
07/09 - Ongoing	During his tenure and Engineering Lead res reporting. Brice has b reinforced concrete, p such as AASHTO, Al experience in capacit	d more than 250 br sponsible for testin been involved with brestressed concre REMA, and many s ty testing of concre	ridges tested and loa g plan oversight, dat the testing, monitorin ete, in simple to comp state specific codes i ete and steel structure	d rated using advanced techniques, Brice has become BDI's a processing and investigation, structural analysis, load rating, a ng, and evaluation of hundreds of structures of various types (st plex geometry and configurations) using a variety of design code ncluding Louisiana specifications. Brice also has years of es using various NDE techniques.	and eel, es		
11/12 – Ongoing	US-90 Bayou Ramo performed load tests evaluation, monitorin ongoing. As lead ana system maintenance	s Bridge Load Te and load ratings to g systems were ins lysis engineer, Bri and troubleshootir	sting & Monitoring, o determine cause ar stalled on the structu ce performed field-ve ng.	LA – Due to unexpected cracking in PS concrete beams, BDI ad effect of cracks in continuous PS/C girders. After the initial re to monitor two sections of structure. Health Monitoring is still erified load ratings and acts as the project engineer for monitorin	וg		
11/11 - Ongoing	Bonnet Carre Spillw ton load could cross to stresses below its se in-motion data, strain for DOTD and curren	/ay Load Testing the bridge safely. E rviceability limit. In s induced by heav tly acts as the proj	and Monitoring, LA Based on provided co 2011, BDI installed y loads, and photos ject engineer for mor	In 2004, BDI used its Integrated Approach to determine if a 5 onfigurations, BDI determined the "superload" could cross with an event-based monitoring system that helps DOTD capture we of heavy load. Brice performed superload load ratings and repo- nitoring support to DOTD.	igh- rting		
07/19–12/19	St. Claude Lift Bridg responsible for count heal trunnion Strauss investigation of a bea	ge Balance and O erweight/span bala Bascule Bridge. S aring failure on the	peration Testing, L ance and friction calc Strain gauge testing a span to counterweig	A – Brice was the project engineer and field/analysis engineer sulations, and also structural performance evaluation on a double and various instrumentation tasks were performed during ht link.	е		
08/16–05/17	Live Load Testing of comprehensive diagr effects, observed dist	of Eight Culverts a nostic live-load test tribution, and gene	and Testing, LA – B ts that allowed these eral fixity at the culver	DI worked in coordination with LSU, LTRC, and DOTD to perfor structures to be better evaluated based on induced live-load t walls. BDI manufactured the structural testing system used for	m r		

this testing based on LSU's specifications and needs. Brice acted as a project and testing engineer on this project.

07/09 – 11/12	Load Testing and Rating of 35 Rhode Island Bridges, RI – BDI performed field testing on 35 bridges located throughout the state of Rhode Island. For all of the structures, BDI collected and reviewed the strain, displacement, and NDE (GPR) data and provided it directly to AECOM for evaluation. For select bridges, BDI also used the field data to calibrate finite element models and develop accurate load ratings using the AASHTO Manual of Bridge Evaluation. Brice acted as analysis and rating engineer
	Terminal 5 Pridge L and Testing and Pating WA. Terminal 5 bridge is used by beaut truck traffic to and from the Port of
11/20 – 06/21	Seattle, WA. As part of BDI's SDOT On-call, instrumentation and load tests were performed on PSC beam and steel girder spans (curved and straight) with the overall goal of to better understand the structures' load distribution and behavior and in turn provide refined load ratings. Brice acted as the lead analysis/rating engineer responsible for data processing, model calibration, and load ratings and reporting according to SDOT/WSDOT specifications.
05/15 10/15	Truss Monitoring on US 84 Over the Mississippi River, MS – During the pin replacements on the Natchez cantilever truss
05/15 - 10/15	over the Mississippi River, bbi performed Structural realth Monitoring (Srivi) on the childar truss members and temporary load
02/18 – 08/18	field installation, data analysis and reporting.

16. Staff Experience: Bridge Diagnostics, Inc. (BDI)

Cha None	arles Young, P destructive Evaluation	P.E. on Project Mana	ger	Years of experience with this firm/employer Years of experience with other firm(s)/employer(s)	4
Degree(s) / Ye	ars / Specialization	M.S. / 2017 / Str B.S. / 2012 / Arc	uctural Engineering hitectural Engineeri	/ Drexel University ng / Drexel University	<u>.</u>
Active re sta	gistration number / ate / expiration date	Professional Eng	gineer: 42773 / LA /	3/31/2023	
	Year registered	2018	Discipline	Civil Engineer	
Contract role(s) / bri	ef description of res	ponsibilities	Nondestructive Ev	aluation Project Manager and Engineer	
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relev ction", etc. Exper	ant to the propose ience dates should	d contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	;",
05/18 - Ongoing	Charles has 11 years of experience in nondestructive evaluation and testing (NDE/NDT), and structural monitoring and testing. BDI, Charles is responsible for project management, analysis, and field services related to NDT of civil infrastructure. He works closely with a multifaceted group of engineers and technicians to perform NDE on bridges, dams, culverts, pavements, and other civil infrastructures. Charles is heavily involved in testing and instrumentation of existing structures using NDE methods (acoustic, ultrasonic, electromagnetic and electrochemical), performing dynamic and digital signal processing and analysis, and numerical and finite element modelling of complex structures				ting. orks 1 ds , and
05/18 – 12/21	 Nondestructive Evaluation of Unknown Bridge Foundations, LA – This project aims at performing NDE of more than 500 bridges in the state of Louisiana to determine the unknown or undocumented depths of bridge foundation piles. A proofing step was performed on six bridges to estimate the depth of timber, concrete, and steel piles. Multiple BDI testing and analysis methods including Sonic Echo/Impulse Response (SE/IR), Ultraseismic (US), and Parallel Seismic Survey (PSS) were utilized 				
10/18 — 08/19	Sunshine Truss Em damaging a bottom c monitor the behavior strain gages on nearl replacement of the da project.	ergency Monitori hord member. As of the damage me by chord members amaged bottom ch	ng, LA – In 2018, the part of the M&M resp mber. Once a monito that were used to ev ord member. Charles	e Sunshine Truss Bridge was struck by a crane barge, significationse team, BDI quickly deployed a laser displacement sensor bring plan was developed and approved by the team, BDI instationary aluate the state of the structure before, during and after the stated as an installation technician, and site supervisor for this	intly to lled
01/19 - Ongoing	Bonnet Carre Spillw the Bonnet Carre Spi This work was perfor supplemental inspect multi-technology brid Thermography, and B	/ay Inspection an illway Bridge and ta med under an IDIC tion access technic ge deck assessme High-Resolution Im	d Nondestructive E argeted nondestruction Contract for Non-de ques including unmar ent including Deck Ac pagery. Charles is the	valuation, LA – This project involves an NHI routine inspection ve evaluation techniques at various critical portions of the struc estructive Evaluation of Structures for DOTD. Also included we ned aerial systems (UAS). Nondestructive evaluation includes oustic Response, Ground Penetrating Radar, Infrared e project engineer and lead bridge inspector for this project.	n of ⊧ture. re a

03/20 – 05/20	City Park Lake Bridge Inspection and Nondestructive Evaluation, LA – This project involved an NHI routine inspection of the City Park Lake Bridge and targeted nondestructive evaluation. This work was performed under an IDIQ Contract for Non- destructive Evaluation of Structures for DOTD. Nondestructive evaluation included a multi-technology bridge deck assessment including Deck Acoustic Response, Ground Penetrating Radar, Infrared Thermography, and High-Resolution Imagery. Also included in the nondestructive evaluation is Infrared Thermography of the superstructure and substructure of the bridge.
08/19 – 12/21	US Army Corps Evaluation of Advanced Weld Inspection Methods – As USACE's ongoing want to improve inspection techniques, BDI was awarded a Task Order under its IDIQ to identify and determine best practices for steel weld inspection utilizing advanced ultrasonic testing (UT) methods such as phased array ultrasonic testing (PAUT) and total focus method / full matrix capture (TFM/FMC). These advanced methods improve the reliability and repeatability of weld inspection and flaw sizing for fitness for service level analysis. Dr. Boone was the subject matter expert for this project and helped develop the testing means and methods that were performed on eight lab samples and four comprehensive in-field bridge weld inspections. Based on these findings, USACE expanded the scope to scan further areas of concern on one of the bridges.
06/20 – 09/20	West Seattle High Bridge, WA – BDI was contracted by Seattle DOT to provide a non-destructive testing and structural health monitoring program to help evaluate performance of the structure during first phase of retrofitted internal post-tensioning. The monitoring program helped the Seattle DOT make decisions and resulted in the next phase of strengthening to open the bridge by 2022. Charles acted as the Task Order Manager and Lead Field Engineer for this project.

16. Staff Experience: APS Engineering and Testing, LLC

951
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GEL

Sergio Aviles, P.E.

President

Years of experience with this firm/employer9Years of experience with other firm(s)/employer(s)10

Degree(s) / Ye	ars / Specialization	Bachelor of Science / 2001 / Geotechnical					
Active re sta	gistration number / ate / expiration date	P.E. 0033571 / L	_A / Exp. 3/31/24				
	Year registered	2007	Discipline	P.E./Civil			
Contract role(s) / bri	ef description of res	ponsibilities	Project Manager/D	esign guidance/Field Crew and lab management.			
Experience dates (mm/yy–mm/yy)	Experience and qu "designed intersec	alifications relev tion", etc. Exper	ant to the propose ience dates should	d contract; <i>i.</i> e., "designed drainage", "designed girders", I cover the time specified in the applicable MPR(s).			
(09/19 – 06/20	Project No. H.00410 drill and sample a to drillingand sampling waterborings and 44 (UU) and Atterberg I project.	Project No. H.004100: I-10 Widening LA 415 to Essen LN- A P S was tasked thru our DOTD geotechnical retainer to drill and sample a total of 52 deep borings starting at the Washington Exit and ending at the LSU lakes. Along with this drillingand sampling APS will also test for strength and engineering characteristics of the soils. A total of eight (8) over the waterborings and 44 land borings with approximate 1000 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits. Sergio was the project manager for the Geotechnical Investigations associated with CMAR					
08/16 – 10/19	Project No. H.0124 geotechnical retaine for strength and eng Drained Or Undraine Geotechnical Investi	22: I-10/I-110 Inte or to drill and samp ineering characte ed (UU) and Atter igations.	erchange Modification ole a total of six (6) of ristics of the soils w berg Limits by A P S	ion at Terrace Ave- A P S was tasked thru our DOTD leep borings for the design of the Terrace Ave exit. APS tested th approximate 100 Triaxial Compression, Unconsolidated S Laboratory. Sergio was the project manager for the			
11/17 – 2/18	Project No. H.0131 retainer to drill and s APS tested for stre Geotechnical Invest	93 US 61 Thomp sample a total of e ngth and engine igations.	son Creek Bridge eight (8) deep boring ering characteristics	Replacement- A P S was tasked thru our DOTD geotechnical s for the replacement bridge at US 61 over Thompson Creek. s of the soils. Sergio was the project manager for the			
11/19 – Present	Project No. H.001352 and H.002273 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge LA 67 and LA 19- A P S was selected with the winning team for the design of the diversion CMAR project. A P S will be the Geotechnical designers for the project. Mr. Aviles is the project manager for the project design team CMAR project						
03/19 – 05/19 03/19 – 05/19		44 US 190 over Bogue Falaya River- A P S was selected with the winning team for the igation and Design of the proposed new bridge. A total of 19 deep borings were drilled and tested for mmendation. Mr. Aviles is the project manager for the project design team.					
12/19 – 3/20	Project No. H.0101 Geotechnical Investi tested for Geotechni	55 US 90 Railroa igation and Desig ical recommendat	d Overpass SE of n for the proposed r tion. Mr. Aviles is the	_A 85- A P S was selected with the winning team for the ew overpass. A total of six (6) deep borings were drilled and project manager for the project design team.			

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

16. Staff Experience: APS Engineering and Testing, LLC

	Sai Chie	ram Eddanapı f Engineer	udi, P.E.		Years of experience with this firm/employer Years of experience with other firm(s)/employer(s)	9
	Degree(s) / Ye	ars / Specialization	Master of Science	ce / 2002 / Civil Eng	ineering / Lamar University	
	Active re	distration number /	Bachelor of Scie	nce / 1999 / Civil Ei	ngineering, Sri Venkateswara University, India	
	sta	ate / expiration date	P.E. 0035129 / L	_A / Exp. 3/31/23		
		Year registered	2008	Discipline	P.E./Civil	
Contra	act role(s) / bri	ef description of res	ponsibilities	Laboratory QA Ma project/QA/Design	nager- Will be in charge of all daily operation of the Engineer.	
Exper (mm	rience dates /yy–mm/yy)	Experience and qu "designed intersec	alifications relev tion", etc. Exper	ant to the propose ience dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders" d cover the time specified in the applicable MPR(s).	" "
C.	09/19 – Present	Project No. H.0041 drill and sample a to drillingand sampling waterborings and 44 (UU) and Atterberg	00: I-10 Widening tal of 52 deep bor APS will also test 4 land borings wit Limits, Sairam wa	g LA 415 to Essen ings starting at the V t for strength and en th approximate 100 as the project QA fo	LN- APS was tasked thru our DOTD geotechnical retainer Washington Exit and ending at the LSU lakes. Along with this gineering characteristics of the soils. A total of eight (8) over 0 Triaxial Compression, Unconsolidated Drained Or Undrain r the Geotechnical Investigations for the CMAR project.	r to ; r the ned
08/	16 – 10/19	Project No. H.012422: I-110 Interchange Modification at Terrace Ave- APS was tasked thru our DOTD geotechnical retainer to drill and sample a total of six (6) deep borings for the design of the Terrace Ave exit. APS tested for strength and engineering characteristics of the soils with approximate 100 Triaxial Compression, Unconsolidated Drained Or Undrained (UU) and Atterberg Limits by APS Laboratory. Sairam was QA for the Geotechnical Investigations.				
11	/17 – 2/18	Project No. H.0131 retainer to drill and s APS tested for stren	93: US 61 Thomp sample a total of e gth and engineeri	oson Creek Bridge eight (8) deep boring ing characteristics o	Replacement- A P S was tasked thru our DOTD geotechnic is for the replacement bridge at US 61 over Thompson Creek if the soils. Mr. Sai was QA for the Geotechnical Investigation	cal k. ns.
C.	11/19 – Present	Project No. H.0013 LA 67 and LA 19- A theGeotechnical des	352 and H.00227 A P S was selecter signers for the proj	3: Comite River Di ed with the winning t ect. Mr. Sai is the Se	version Bridge at LA 67, LA 19 and LA 19 Railroad Bridge team for the design of the diversion CMAR project. A P S will enior Design Engineer for the project design team.	e be
03/	19 – 05/19	Project No. H.0013 Geotechnical Investi for the foundationre	44: US 190 over igation and Desig commendation. S	Bogue Falaya Rive n of the proposed airam is the Senior	er- APS was selected with the winning team for the new bridge. A total of 19 deep borings were drilled and tes Design Engineer for the project design.	sted

16. Staff Experience:

APS Engineering and Testing, LLC

	Sur Staff	endra Raj Pat Engineer	hak, P.E.		Years of experience with this firm/employer Years of experience with other firm(s)/employer(s)	5
			Master of Science	ce / Civil Engineering	g / 2013 / Mississippi State University	<u> </u>
Degree	e(s) / Yea	ars / Specialization	Master of Science Bachelor of Scie	ce / Civil Engineerin nce / Civil Engineer	g / 2007 / Norwegian University of Science and Technology ing / 1998 / Madan Mohan Malaviya University of Technolog	JY
A	ctive ree sta	gistration number / te / expiration date	P.E. 0043487 / L	A / Exp. 9/30/23		
		Year registered	2019	Discipline	P.E./Civil	
Contract role	e(s) / brie	of description of res	ponsibilities	Staff Engineer-Rev	view field logs, lab data, and Design Engineer.	
Experience (mm/yy–mr	dates m/yy)	Experience and qu "designed intersec	alifications relev tion", etc. Exper	ant to the propose ience dates should	ed contract; <i>i.e.</i> , "designed drainage", "designed girders d cover the time specified in the applicable MPR(s).	",
09/1 Pres 08/16 – 10	19 – sent 0/19	Project No. H.0041 drill and sample a to drillingand sampling waterborings and 44 (UU) and Atterberg Project No. H.0124 geotechnicalretainer tested for strength a Drained Or Undrainer	00: I-10 Widening tal of 52 deep bor APS will also test 4 land borings wit Limits. Surendra 422: I-110 Interch to drill and samp and engineering ch ed (UU)and Atterb	g LA 415 to Essen ings starting at the V for strength and en th approximate 1000 was the project QC nange Modification ble a total of six (6) naracteristics of the s erg Limits by A P S	LN- APS was tasked thru our DOTD geotechnical retained Washington Exit and ending at the LSU lakes. Along with this gineering characteristics of the soils. A total of eight (8) over D Triaxial Compression, Unconsolidated Drained Or Undrain for the Geotechnical Investigations. at Terrace Ave- APS was tasked thru our DOTD deep borings for the design of the Terrace Ave exit. APS soils with approximate 100 Triaxial Compression, Unconsolidated Laboratory. Surendra was QC for the Geotechnical	r to the ned ated
11/17 – 2	/18	Investigations. Project No. H.0131 retainer to drill and a APS tested for strend Investigations.	93: US 61 Thomp sample a total of gth and engineeri	oson Creek Bridge eight (8) deep borin ng characteristics o	Replacement- APS was tasked thru our DOTD geotechnicangs for the replacement bridge at US 61 over Thompson Cruft the soils. Surendra was QC for the Geotechnical	al eek.
() 11/17 -	- 2/18	Project No. H.0022 Bridge LA 67 and L borings for the new a characteristics of the	73, H.000710, and A 19: APS was ta and replacement b soils. Surendra v	d H.001352 Comite asked thru our DOT pridges at Highway 1 was QC for the Geo	River Diversion Bridge at LA 67, LA 19 and LA 19 Railro D geotechnical retainer to drill and sample a total of 12 deep 9, 67, and 964. APS tested for strength and engineering technical Investigations.))
11/1 Pres	9 – ent	Project No. H.0013 LA 67 and LA 19- A theGeotechnical des	352 and H.00227 APS was selected signers for the pro	3: Comite River Div d with the winning te ject. Surendra is a c	version Bridge at LA 67, LA 19 and LA 19 Railroad Bridge am for the design of the diversion CMAR project. A P S will b lesign Engineer for the project design team.	e be

16. Staff Experience: Civil Design & Constru	iction, Inc. (CD&C)			
Ralph Burgess,	PLS			Years of experience with this employer	11
Topographic Survey				Years of experience with other employer(s)	12
Degree(s) / Year	s / Specialization	BS Industrial De	sign & Supervision	2004 / Southeastern LA University	
Active registration	n number / state / expiration date	PLS 5040 / Loui	siana / 09/30/22		
	Year registered	2010	Discipline	Professional Land Surveyor	
Contract role(s) / brief	description of res	ponsibilities	Ralph will serve as the project progres production, and pr Mr. Burgess has a LADOTD in accord has overseen proj well as those that	s the Survey Manager for this project. He will work to overse ss stays on schedule, aide in both crew coordination and offi ovide final QC on the firms' deliverable to the Prime Consult n extensive background in providing topographic surveys for dance with Location and Survey policies and procedures. He ects utilizing traditional means and methods of collecting dat include the use of 3D Terrestrial Scanning.	e ce ant. r ; a as
Experience dates (mm/yy–mm/yy)	Experience and girders", "desig MPR(s).	qualifications re ned intersection	levant to the prope ", etc. Experience	osed contract; <i>i.e.</i> , "designed drainage", "designed dates should cover the time specified in the applicable	
07/20 – 04/21	H.001352.5 and Baton Rouge Pa responsible for to merging of data f data for this proje	H.002273.5 Comi arish: Ralph was to pographic survey rom a previous sub- ect was collected to	ite River Diversion the Survey Manager ing the LA 67 and L prvey on one portion traditionally.	Bridge at LA 67, LA 19 and LA 19 Railroad Bridge, East for this project. CD&C as a sub-consultant on this project w A 19 sites of the Comite River Diversion project. This include of the site and field verifications of that data. The topograph	as ed iic
01/18-01/20	 H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA: Ralph was the surveying Manager for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415 including work on Tributaries of the Intercoastal Canal. This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every 500' for control verification and incorporation of the Mobile Lidar for the I-10 pavement. 				/ing tion the vork
07/17-12/18	H.010960.5-2, LA project. Duties in terrestrial scannin with project surve	A 30 Roundabout cluded meeting wi ng crew along with ey for final submitt	t at Tanger I-10, As ith LADOTD & Card n office personnel, c al to combine all pro	cension Parish, LA : Ralph served as Survey Manager for t no, Inc for utility locations, coordination of crews and 3D oordination. Special duties were merging of two state projec ojects together.	he ts
01/16-08/16	H.005733.5 US included complet began at the inter northerly direction and E. Boston St Scanning for the	190 Superstreet, e topographic sur rsection of US 190 n along US 190 fo . in Covington, LA main route.	St. Tammany Pari vey and drainage m 0 and Holiday Squa or approximately 2.9 This project also in	sh, LA : Ralph served as Survey Manager for the project. Du ap for this project including all utility coordination. The surve re Frontage Road. From this point, the survey proceeded in a miles to a point that is 700 feet South of Intersection of US included work in the Abita River and utilized 3D Terrestrial	ties y a 190

10/15-12/18 Introduction of utility companies on the project, review and verification of drainage crossing 110, merging of existing topographic survey of bridges from LADOTD and final review of all survey data for submittals 08/16-12/17 H.0110235 1.49 South at Verot School Road, Lafayette, LA: Ralph served as the Survey Manager for the project. Duties included meeting with LADOTD, and all consultants on the team, coordination of both traditional crews and 3D terrestrial scanning crew, coordination of survey crews with Cardno, Inc, utility locations on the project, met and review right of entry with landowners for project, review of drainage map, merging of existing topographic survey of the 1-49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. 07//14-10/15 H.011088.5 1-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic survey fuely for the topography via traditional means and methods along with 3D terrestrial sc
10/15-12/18 In the project. Duties includent meeting with LADOTD, coordination of drainage crossing 110, merging of existing topographic survey of bridges from LADOTD and final review of all survey data for submittals 08/16-12/17 H.011235 I-49 South at Verot School Road, Lafayette, LA: Ralph served as the Survey Manager for the project. Duties included meeting with LADOTD, and all consultants on the team, coordination of both traditional crews and 3D terrestrial scanning crew, coordination of survey crews with Cardno, Inc, utility locations on the project. Duties included meeting with LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. 07//14-10/15 H.011085. I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic survey ing. 03/14-06/14 H.01006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terebonne Parish, LA: Ralph served as Survey Manager on this project which included a c
08/16-12/17 H.011235 I-49 South at Verot School Road, Lafayette, LA: Ralph served as the Survey Manager for the project. Duties included meeting with LADOTD, and all consultants on the team, coordination of both traditional crews and 3D terrestrial scanning crew, coordination of survey crews with Cardno, Inc, utility locations on the project, met and review right of entry with landowners for project, review of drainage existing topographic survey of the I-49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. 07//14-10/15 H.011086.5 I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.01006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager for the project included data collection of the topographic survey ing. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US
08/16-12/17 Hol11235 L49 South at Verot School Road, Lafayette, LA: Ralph served as the Survey Manager for the project. Duties included meeting with LADOTD, and all consultants on the team, coordination of both traditional crews and 3D terrestrial scanning crew, coordination of survey crews with Cardno, Inc, utility locations on the project, met and review right of entry with landowners for project, review of drainage map, merging of existing topographic survey of the L49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. 07//14-10/15 H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project and loang the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager for the project included dat collection of the topographic survey, with the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.0400.76.717 H.00006.5-3 LA 58 Petit Caillou Bridge Aphabilitation (Sarah Bridge) for the project manager for the proj
08/16-12/17 Incomparison of the project. Source and the standard of the project. The project of the project of the project. Duties included meeting with LADOTD, and all consultants on the team, coordination of both traditional crews and 3D terrestrial scanning crew, coordination of survey crews with Cardno, Inc, utility locations on the project, met and review right of entry with landowners for project, review of drainage map, merging of existing topographic survey of the I-49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. 07//14-10/15 H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager for the project included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA:
08/16-12/17 Dutes included meeting with LADOTD, and an consultants on the team, coordination of both traditional clews and so terrestrial scanning crew, coordination of survey crews with Cardno, Inc, utility locations on the project, met and review right of entry with landowners for project, review of drainage map, merging of existing topographic survey of the I-49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. 07//14-10/15 H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that b
08/16-12/17 terrestrial scanning crew, coordination of survey crews with Cardno, inc, fullity locations on the project, met and review right of entry with landowners for project, review of drainage map, merging of existing topographic survey of the I-49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. 07//14-10/15 H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.01006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.00369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included </td
07//14-10/15 Indit of entry with landowners for project, review of drainage map, merging of existing topographic survey of the 1-49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. 07//14-10/15 H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross- sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.000369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hww 1000 and ended approximately 1000 ft. NW of intersection of I-59 and US
07//14-10/15 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. 07//14-10/15 H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included
07//14-10/15 H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross- sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US
07//14-10/15 H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA: Ralph served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing creash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross- sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.0080 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hww 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US
07//14-10/15 Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included
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04/17-07/17 coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090, and ended approximately 1000 ft. NW of intersection of I-59 and US
04/17-07/17 Project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US
research of all drainage structures that enter and leave the project area. Image: 04/17-07/17 H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Ralph served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included
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 04/17-07/17 sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included
03/14-06/14 data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090, and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included
hydrographic surveying. 03/14-06/14 hydrographic surveying. H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US
03/14-06/14 H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Ralph served as the project manager for the project. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included
03/14-06/14 CD&C was responsible for the topographic survey that began approximately 2400 ft. NW of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included
03/14-06/14 Hwy 1090 and ended approximately 1000 ft NW of intersection of L59 and US Hwy 1090. The survey also included
500 ft. of Cleo Road and 175 ft. of Avenue D.
H.009288 LA 1 Railroad Bridge at DOW, West Baton Rouge, LA: Survey Manager for this project located in West
Baton Rouge Parish. The intent is to create a grade separation at the intersection of LA 1 and the R/R spur for DOW.
05/13-07/13 CD&C is performing all of the topographic survey for this project including utility coordination and R/R coordination and
permits so that CD&C can survey the spur and parallel line.
H.011088.5 West Prien Lake, Lake Charles, LA; Ralph served as the Survey Manager for this project. This project
10/14-12/14 was to provide topographic survey for a new route to be constructed. Topographic survey and DTM was required
along the proposed alignment including all utilities and all drainage with the survey limits
H 010620 I-49 Design Build: Ralph managed and supervised all field work utility coordination, and review of existing
02/14-03/17 survey data for final topographic survey submittal CD&C also produced ROW maps for the project. Ralph's duties for
this portion also included title reports, review of property surveys and final submittal of final existing right of way plans

16. Staff Experience:					
Civil Design & Constru	ction, Inc. (CD&C)			
Chris Ballard, P	LS			Years of experience with this employer	6
Topographic Survey				Years of experience with other employer(s)	19
Degree(s) / Years	/ Specialization	Bachelor of Sci	ence / 2004 / Biologi	ical Science, Southeastern University	
Active registration	number / state / expiration date	PLS 5033 / Lou	uisiana / 09/30/22		
	Year registered	2010	Discipline	Professional Land Surveyor	
Contract role(s) / brief description of responsibilities			Chris serve as the Survey Project Manager for this project. He will work to oversee the project progress stays on schedule, aide in both crew coordination and office production, and provide final QC on the firms' deliverable to the Prime Consultant. Chris has an extensive background in providing topographic surveys for LADOTD in accordance with Location and Survey policies and procedures. He has overseen projects utilizing traditional means and methods of collecting data as well as those that include the use of 3D Terrestrial Scanning.		
Experience dates (mm/yy–mm/yy)	Experience and girders", "desig MPR(s).	l qualifications i gned intersectio	relevant to the prop on", etc. Experience	oosed contract; <i>i.e.</i> , "designed drainage", "designed e dates should cover the time specified in the applicable	
01/18 – 01/20	 MPR(s). H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA Chris is the Surveying Project Manager for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415 including work on Tributaries of the Intercoastal Canal. This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every 500' for control verification and incorporation of the Mobile Lidar for the I-10 pavement. 				
04/17 – 07/17	 for control verification and incorporation of the Mobile Lidar for the I-10 pavement. H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA Chris served as the firms Survey Project Manager on this project which included a complete topographic survey, utility coordination, channel cross sections, and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. 				
02/19 – 09/19	Bridge Replacements in East Feliciana Parish, Rural East Feliciana Parish, LA Chris is serving Survey Project Manager for this project for East Feliciana Parish Police Jury. It includes the replacement of 2 bridges which were damaged from flooding and the repairs to many rural roadways throughout the parish. These projects are being funded thru FEMA and all documentation has to be in accordance with FEMA's policies and procedures.				ect
01/17 – 12/17	 damaged from flooding and the repairs to many rural roadways throughout the parish. These projects are being funded thru FEMA and all documentation has to be in accordance with FEMA's policies and procedures. East Baton Rouge Parish Bridges, East Baton Rouge Parish, LA In 2017, CD&C has performed topographic surveys for at least 4 Bridge Replacement Projects throughout East Baton Rouge Parish. Chris served as Survey Project Manager on each of these projects which included cross-sectioning and tracing the channel at each location. These included bridges over Dawson Creek, Clavcut Bayou, Copper Mill Bayou, and Cypress Bayou 			on.	

10/16 – 11/16	H.012728.5 LA 443: Tangi River Bridge Replacement, Tangipahoa Parish, LA Chris served as the Project Manager for this Project. Among the duties performed for the project were review of the crew work conditions, review and processing of the survey data, verification and review of final submittal. CD&C completed a topographic survey which included all utilities with depths, all drainage, all building information including finish floor elevations, and all super/substructure of the bridge over the Tangipahoa River. Additional information regarding the river was located by traditional means upstream and downstream for the engineer's design of the new bridge. To utilize data collection of the failed bridge, 3D Terrestrial Scanning was incorporated in conjunction with traditional means to complete the topographic survey. Due to the nature of the project being an Emergency Bridge replacement all staff worked on this project non-stop until field work was completed in less than 3 weeks.
09/17 – 12/17	H.012650.5-1 District62 Bridges, Livingston and Tangipahoa Parishes, LA Chris served as a Survey Project Manager for this project which included 5 bridge sites in District 62. In addition to all of the existing data for the bridge and roadway at each site, each channel was cross-sectioned both upstream and downstream of the bridge. These included bridges over the US 190 Bridge over Gray's creek, 2 bridges on LA 442 both crossing East Hog Branch, LA 1063 over the Natalbany River, and US 51 over Ponchatoula Creek. Several of these bridges including the US190 one were surveyed utilizing 3D Terrestrial Scanning.
10/15 – 12/18	H.003184.5 I-10 Texas State Line – East of Coone Gully, Calcasieu Parish, LA Chris served as the Survey Project Manager on this project which is a 6-lane widening of I-10. Duties performed on this project included the review of the survey information from crew, verification of project delivery schedule, processing of data and final review of submittal of project. 3D Terrestrial Scanning was used in conjunction with traditional means and methods for the completion of this project.
01/16 – 08/16	H.005733.5 US 190 Superstreet, St. Tammany Parish, LA Chris served as the Survey Project Manager on this project. CD&C provided a complete topo survey & drainage map along with utility coordination for the project. Project duties included processing of data, review of field notes and weeklies, & performing final punch list. This project also included work in the Abita River utilized 3D Terrestrial Scanning for the main route.
10/15 – 01/16	H.011773 Hanks Dr/Landis Drive Pedestrian Improvements, East Baton Rouge Parish, LA Chris served as the Survey Project Manager on this project that included a topographic survey and establishment of the ROW for Hanks Dr. for installation of new sidewalk.
06/11 – 09/13	260-01-0028, H.002372 LA 42 Widening and Improvements, Ascension Parish, LA Chris worked as a PLS on this project which included boundary and topography, establishing the existing ROW and acquisition of additional ROW.
07/17 – 12/18	H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA Chris served as the Survey Project Manager on this project that includes a complete topo survey, utility coordination and drainage, along with finish floor elevations of all buildings that fall within the survey limits. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning.

16. Staff Experience:							
Civil Design & Const	ruction, Inc. (CD&C	5)		F			
Philip Dupree Survey Party Chief				Years of experience with this employer	10		
				Years of experience with other employer(s)	30		
Degree(s) / Years / Specialization N/A							
Active registration number / state / N/A expiration date		N/A	-				
	Year registered	N/A	Discipline	N/A			
Contract role(s) / brief description of responsibilities		Philip is the Senior Survey Party chief who will work to oversee a crew as well as aide in coordinating all crews with Survey PM to ensure field work is being completed timely and accurately.					
Experience dates (mm/yy–mm/yy)	Experience and girders", "desig MPR(s).	l qualifications gned intersectio	relevant to the prop on", etc. Experience	oosed contract; <i>i.e.</i> , "designed drainage", "designed a dates should cover the time specified in the applicable	;		
07/20 – 04/21	H.001352.5 and Baton Rouge P consultant on the Diversion projec	H.001352.5 and H.002273.5 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge, East Baton Rouge Parish: Philip was the Senior Party Chief & Field Coordinator for this project. CD&C as a sub- consultant on this project was responsible for topographic surveying the LA 67 and LA 19 sites of the Comite River Diversion project. The topographic data for this project was collected traditionally.					
01/18-02/2020	H.004100 I-10: I Party Chief for th portion of I-10 in approach of the	H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA: Philip is the Survey Party Chief for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415.					
07/17-12/2018	H.010960.5-2, L this project by w the topography.	H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA: Philip is serving as Field coordinator on this project by working specifically to set the control on the job and overseeing field crews as they work to complete the topography.					
10/15-12/2018	H.011235 I-49 S resurrected the o the R/R and also completed accur	H.011235 I-49 South at Verot School Road, Lafayette, LA: Philip served as Field coordinator on this project. He resurrected the original control set on the project and oversaw the checking of it. Philip was the field coordinator with the R/R and also the SUE contractor on the project. He oversaw all field crews and ensured that the project was completed accurately and timely.					
01/16-08/2016	H.005733.5 US roadway topogra progress of both	H.005733.5 US 190 Superstreet, St. Tammany Parish, LA: Philip served as Field coordinator on this urban roadway topography project that included 3D scanning in addition to traditional topography. He oversaw the daily progress of both traditional field crews and scan crews and completed the project accurately and on schedule.					
10/16-11/2016	H.012728.5 LA on this project. O information inclu Additional inform engineer's desig incorporated in o	H.012728.5 LA 443: Tangi River Bridge Replacement, Tangipahoa Parish, LA: Philip served as Field coordinator on this project. CD&C completed a topographic survey which included all utilities with depths, all drainage, all building information including finish floor elevations, and all super/substructure of the bridge over the Tangipahoa River. Additional information regarding the river was located by traditional means upstream and downstream for the engineer's design of the new bridge. To utilize data collection of the failed bridge, 3D Terrestrial Scanning was incorporated in conjunction with traditional means to complete the topographic survey.					

07/14/10/2015	H.010319.5 I-110 North St. to Plank Road, Baton Rouge, LA: Philip served as Field coordinator on this heavily traveled Interstate project that included 3D scanning in addition to traditional topography. He oversaw the daily progress of both traditional field crews and scan crews and completed the project accurately and on schedule. He also coordinated with the district and state police to oversee the rolling lane closure that was required to obtain the drainage invert data.
05/13-07/13	H.009288 LA 1 Railroad Bridge at DOW, West Baton Rouge, LA: Philip served as Senior Party Chief for this project located in West Baton Rouge Parish. The intent is to create a grade separation at the intersection of LA 1 and the R/R spur for DOW. CD&C is performing all of the topographic survey for this project including utility coordination and R/R coordination and permits so that CD&C can survey the spur and parallel line.
10/14-12/14	H.011088.5 West Prien Lake, Lake Charles, LA : Philip served as the Senior Party Chief for this project working to collect all field data as required by the project. This project was to provide topographic survey for a new route to be constructed. Topographic survey and DTM was required along the proposed alignment including all utilities and all drainage with the survey limits.
02/14-03/17	H.010620 I-49 Design Build : Philip served as the Senior Party Chief for this project working to collect all field data as required by the project. CD&C also produced ROW maps for the project. Philip also was the lead Party Chief for the property surveys on this project.
Certifications	 NSPS Certified Survey Technician, Level III, Boundary Cert. No. 0799-1106 / Nationwide/ 06/30/2019; ATSSA Certified as Registered Flagger / 07/12/2021 ATSSA Certified Traffic Control Tech & Traffic Control Supervisor / 07/12/2021

16. Staff Experience:							
Civil Design & Constr	uction, Inc. (CD&C)					
Jason Stoehr				Years of experience with this employer	5		
Survey Party Chief				Years of experience with other employer(s)	0		
Degree(s) / Years / Specialization N/A		N/A					
Active registration number / state / expiration date		N/A					
	Year registered	N/A	Discipline	N/A			
Contract role(s) / brief description of responsibilities		ponsibilities	Jason will serve as a Survey Party Chief managing a crew to collect topographic data in the field in accordance with LADOTD Location and Survey means and methods.				
Experience dates (mm/yy–mm/yy)	Experience and girders", "desig MPR(s).	l qualifications gned intersection	relevant to the propon", etc. Experience	bosed contract; <i>i.e.</i> , "designed drainage", "designed e dates should cover the time specified in the applicable			
07/20 – 04/21	H.001352.5 and H.002273.5 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge, East Baton Rouge Parish: Jason was a Party Chief on this project. CD&C as a sub-consultant on this project was responsible for topographic surveying the LA 67 and LA 19 sites of the Comite River Diversion project. The topographic data for this project was collected traditionally.						
01/18-01/2020	H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA: Jason is the Survey Party Chief for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415.						
07/17-12/2018	H.010960.5-2, LA 30 Roundabouts at Tanger I-10, Ascension Parish, LA: Jason served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.						
08/16-01/2018	H.011235 I-49 managing a crew	H.011235 I-49 Verot School Road, Lafayette, LA: Jason served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.					
02/19 - 09/19	Bridge Replace Chief this projec from flooding an FEMA and all do	Bridge Replacements in East Feliciana Parish, Rural East Feliciana Parish, LA : Jason served as a Jr. Party Chief this project for East Feliciana Parish Police Jury. It includes the replacement of 2 bridges which were damaged from flooding and the repairs to many rural roadways throughout the parish. These projects are being funded thru FEMA and all documentation has to be in accordance with FEMA's policies and procedures.					
7/17 – 12/18	H.003184.5 I-10 aiding the crew i	H.003184.5 I-10 Texas State Line East of Coone Gully: Jason served as an instrument man on this project by aiding the crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.					
Certifications	ATSSA Traffic	ATSSA Traffic Control Technician, Flagger					

16. Staff Experience: Civil Design & Construction, Inc. (CD&C) **Trent Norris** Years of experience with this employer 8 Senior Technician Years of experience with other employer(s) 0 Degree(s) / Years / Specialization N/A Active registration number / state / N/A expiration date Year registered Discipline N/A N/A Trent serves as the firm's 3D Scanning Technician who will aide in field data Contract role(s) / brief description of responsibilities collection as well as process all 3D scan data in the office and assist in any other processing to complete the submittal. Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed **Experience** dates girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable (mm/yy–mm/yy) MPR(s). H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA: Trent was the #3D Scanning Technician for this project. CD&C as a sub-consultant on this project is responsible for topographic 01/18 - 01/2020 surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415. H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA: Trent served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the 07/17 - 12/18necessary topographic data from them thru TopoDot to put into InRoads. H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Trent served as 04/17 - 07/17the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary topographic data from them thru TopoDot to put into InRoads. H.011235 I-49 Verot School Road, Lafayette, LA: Trent served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary topographic 08/16 - 01/18data from them thru TopoDot to put into InRoads. H.012728.5 LA 443 Emergency Bridge Replacement, Tangipahoa Parish, LA: Trent served as the firm's 3D 10/16 - 10/16Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary topographic data from them thru TopoDot to put into InRoads. H.003184.5 I-10 TX State Line-E of Coone Gully, Calcasieu Parish, LA: Trent served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the 10/15 - 12/18necessary topographic data from them thru TopoDot to put into InRoads. H.005733.5 US 190 Superstreet, St. Tammany Parish, LA: Trent served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting all of the necessary 01/16 - 07/16topographic data from them thru TopoDot to put into InRoads. NSPS Certified Survey Technician, Level I Boundary Certificate No.: 0418-5963 Certifications ATSSA Traffic Control Supervisor, Technician & Flagger | 02/28/2021
16. Staff Experience: Civil Design & Construction, Inc. (CD&C) Years of experience with this employer 5 Scott Benton Senior Technician Years of experience with other employer(s) 5 Degree(s) / Years / Specialization N/A Active registration number / state / N/A expiration date Year registered N/A Discipline N/A Scott serves as a Senior Technician specializing in 3D Terrestrial Scanning, Contract role(s) / brief description of responsibilities processing, and extraction. Experience and gualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed **Experience dates** girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable (mm/yy-mm/yy)MPR(s). H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12. West and East Baton Rouge. LA: Scott served as a #3D Scanning Technician for this project. CD&C as a sub-consultant on this project is responsible for topographic 12/19 - 01/2020surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415. H.008369 Cleo Road Roundabout, St. Tammany Parish, LA: Scott served as a Senior Technician on this project processing survey field data. CD&C was responsible for the topographic survey that began approximately 2400 ft. NW 03/14 - 06/14 of intersection of I-59 and US Hwy 1090 and ended approximately 1000 ft. NW of intersection of I-59 and US Hwy 1090. The survey also included 500 ft. of Cleo Road and 175 ft. of Avenue D. H.009288 LA 1 Railroad Bridge at DOW, West Baton Rouge, LA: Scott served as a Survey Crew Instrument Man and later as a technician on this project processing survey field data. The intent is to create a grade separation at the 05/13 - 07/13intersection of LA 1 and the R/R spur for DOW. CD&C is performing all of the topographic survey for this project including utility coordination and R/R coordination and permits so that CD&C can survey the spur and parallel line. H.005693 LA 447, Walker, LA: Scott served as a Survey Crew Instrument Man and later as a technician on this project processing survey field data. CD&C's responsibilities included all field work, utility coordination, review of existing survey data provided by LADOTD and all office work to produce the final product; this includes merging of 02/13 - 06/13supplied survey from LADOTD and survey by CD&C. CD&C also performed the tie-in of the new survey to the existing survey provided by LADOTD to produce an overall deliverable to be utilized in this design. H.011088.5 West Prien Lake, Lake Charles, LA: Scott served as Survey technician on this project processing survey field data. This project was to provide topographic survey for a new route to be constructed. Topographic 10/14 - 12/14survey and DTM was required along the proposed alignment including all utilities and all drainage with the survey limits. H.010319.5 I-110 North St. to Plank Road, Baton Rouge, LA: Scott served as the firm's 3D Scanning Tech on this project by working with the scan crew in the field, post processing the scans, and extracting necessary topographic 07/14 - 10/15data from them thru TopoDot to put into InRoads. Certifications ATSSA Traffic Control Supervisor, Technician & Flagger | 02/28/2021

16. Staff Experience:						
Civil Design & Constru	uction, Inc. (CD&C					
Jacob Stoehr				Years of experience with this employer	7	
Survey Party Chief	Survey Party Chief			Years of experience with other employer(s)	1.5	
Degree(s) / Year	s / Specialization	N/A				
Active registration	n number / state / expiration date	N/A	A			
	Year registered	N/A	Discipline	N/A		
Contract role(s) / brief	description of res	ponsibilities	Jacob will serve as data in the field in methods.	a Survey Party Chief managing a crew to collect topographi accordance with LADOTD Location and Survey means and	С	
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).					
01/18-01/2020	H.004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA: Jacob served as a Survey Party Chief for this project. CD&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415.				/ing	
07/17-12/2018	H.010960.5-2, L Party Chiefs on t Field Codes.	H.010960.5-2, LA 30 Roundabouts at Tanger I-10, Ascension Parish, LA: Jacob served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.				
08/16-01/2018	H.011235 I-49 M managing a crev	Verot School Ro	oad, Lafayette, LA: g of topographic data	Jacob served as one of the Survey Party Chiefs on this proje a in the field utilizing LADOTD Field Codes.	ct by	
05/17-07/2017	 H.011909.5-2 Roundabout US 171 at Boone Street, Vernon Parish, LA: Jacob served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes. 					
01/16 – 08/16	H.005733.5 US 190 Superstreet, St. Tammany Parish, LA: Jacob served as one of the Survey Party Chiefs on this project by managing a crew in the collecting of topographic data in the field utilizing LADOTD Field Codes.					
10/15 – 12/2018	H.003184.5 I-10 project by manag	<u>) Texas State L</u> ging a crew in th	ine East of Coone G ne collecting of topog	Gully: Jacob served as one of the Survey Party Chiefs on this raphic data in the field utilizing LADOTD Field Codes.	3	
10/16 – 11/16	H.012728.5 LA Party Chiefs on t Field Codes.	143 Emergency this project by m	<u>y Bridge Replaceme</u> nanaging a crew in th	nt, Tangipahoa Parish, LA: Jacob served as one of the Sur e collecting of topographic data in the field utilizing LADOTD	vey	
Certifications	ATSSA Traff	ic Control Super	rvisor, Technician & I			

16. Staff Experience:					
Civil Design & Constru	iction, Inc. (CD&C				
Madison Mills, I	_SI			Years of experience with this employer	1
Land Survey Intern				Years of experience with other employer(s)	4
Degree(s) / Years	s / Specialization	Bachelor of Sc	ience / 2016 / Civil E	ngineering	
Active registration	number / state / expiration date	0000716 / Land	d Surveyor Intern/Lou	lisiana	
	Year registered	2021	Discipline	Land Surveyor Intern	
Contract role(s) / brief	description of res	ponsibilities	Madison joined CD his PLS exam in 20 manage field crews	&C in 2021 as a Land Surveying Intern. Madison will be takin 22. He serves as a Survey Technician for CD&C working to a process field crew data, and finalize deliverables.	ıg
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).				
02/21 - Ongoing	H.013955 LA 961 Bride at Sandy Creek, : Madison worked as a LSI on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client He also worked on property surveys and ROW mapping.			's, ent.	
02/21 - Ongoing	H.013955 LA 961 Bride at Sandy Creek, West Feliciana Parish, LA : Madison worked as a LSI on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client. He also worked on property surveys and ROW mapping				⊣e e
02/21 - Ongoing	ngoing H.013956 LA 961 Bridge at Beamon Rd. Bayou Maringouin, Pointe Coupee Parish, LA: Madison worked as a on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client. He also worked on property surveys and ROW mapping.			LSI	
07/21 – 11/21	H.009290.5 Safe Routes to Schools – LSU Sidewalk Improvement near LSU Lab School, Baton Rouge, LA: Madison worked as a LSI on this project. He has helped manage crews, processed field data, created punch-lists, worked with utilities, and helped complete the final deliverables to the client.				
02/21 – 05/21	H.010108 Safe I this project. He h complete the fina	Routes to Scho nas helped mana al deliverables to	ols – Independence age crews, processec the client.	Sidewalks, Baton Rouge, LA: Madison worked as a LSI or I field data, created punch-lists, worked with utilities, and help	ו ced
07/21 – 12/21	H.0014560.5 LA helped manage deliverables to th	94 Vermillion F crews, processe ne client.	River, St. Martin Par d field data, created ∣	ish, LA: Madison worked as a LSI on this project. He has punch-lists, worked with utilities, and helped complete the fination of the fination	al

16. Staff Experience:					
Matrix New World En	gineering				
Chao	d Turner			Years of experience with this employer	6
Senior	r Environmental Sc	ientist		Years of experience with other employer(s)	6
Degree(s) / Years / S	pecialization	Bachelor of S	cience / 2008 / Biolog	ical Sciences / Louisiana State University	
Active registration nu expiration date	umber / state /	N/A			
Year registered		N/A	Discipline	N/A	
Contract role(s) / brie	of description of res	ponsibilities	Environmental Pr Study, and Permi	o and Biologist/Wetlands for Solicitation of Views, Wetland ts	
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).				
05/09 — 06/13	 While employed as an Environmental Impact Specialist with the DOTD Environmental Section: Conducted wetland delineations and compiled Categorical Exclusion documentation for 29 off-system bridges throughout Louisiana Prepared all NEPA documentation and secured approval of Categorical Exclusions for 25+ on-system projects throughout Louisiana Conducted 100+ on-site field surveys and wetland delineation reports for use in United States Army Corps of Engineers jurisdictional determinations (JDs) and Section 10/404 permit applications 				
04/14 — 07/14	 Provided wetland delineations and USACE permitting compliance assistance for 7 off-system bridge replacements in East Baton Rouge Parish, LA: Port Hudson Pride Road Bridge over Little Sandy Creek (City-Parish Project No. 13-BR-LA 0013) Milldale Road Bridge over Beaver Bayou (City-Parish Project No. 13-BR-LA 0023) Morvant Road Bridge (1) and (2) over Drainage Bayou (City-Parish Project Nos. 13-BR-LA 00(09-10)) Albert Drive Bridge over Urainage Canal (City-Parish Project No. 13-BR-LA 0003) Claycut Road Bridge over Ward Creek (City-Parish Project No. 13-BR-LA 0014) Mollylea Drive Bridge over Jones Creek (City-Parish Project No. 13-BR-LA 0012) 				
08/14 – 09/14	 Mollylea Drive Bridge over Jones Creek (City-Parish Project No. 13-BR-LA 0012) Assisted in the wetland delineation for the proposed construction of an approximate 9.39-mile, six-inch-diameter pipeline to convey natural gas liquids from Norco, St. Charles Parish, LA to an interconnect alor existing ten-inch-diameter pipeline northeast of LaPlace, St. John the Baptist Parish, LA. Route crossed vasensitive/protected habitats, including Maurepas Swamp WMA, Bonnett Carre Spillway, and Bayou Trepagnier S River 				j an ious enic
11/14 – 01/16	Provided wetlan proposed cryog stations, and an way, pine plantat	d delineations enic plant, app electrical sub ion, active cattle	and USACE permit proximately 16 miles station near Arcadia e pasture, bottomland	ting compliance for 383 acres of potential plant locations of associated pipeline rights-of-way and supporting met a, LA. Delineation habitats included existing maintained rights I hardwood depressions, and riparian hardwoods.	, a : er 5-of-

06/	/15 – 07/15	Provided the wetland delineation and managed GIS responsibilities for construction of an interchange at I-10 and Pecue Lane (DOTD Project No. 700-17-0221, Federal Aid Project No. IM-1709(507)). In addition to the interchange, the project included the replacement of a two-lane overpass bridge and Pecue Lane/Wards Creek bridge, as well as an extension to Reiger Road.
08/	/16 – 02/17	Provided/managed the wetland delineation and secured JD for a 2,817.29-acre tract for a proposed wetland mitigation bank in Livingston Parish, LA. Delineation habitats included pine plantation, riparian hardwoods, and bottomland hardwood depressions. In addition to the field work, responsible for wetland data report production and coordination with the USACE during the JD review process, as well as management of all GIS responsibilities.
01/	/18 – 02/19	Provided/managed the wetland delineations for a 3,098.17-acre tract for the Hickory Branch Mitigation Bank in Calcasieu Parish, LA. Delineation habitats included pine plantation, riparian hardwoods, and bottomland hardwood depressions. Tract consisted largely of pimple mound topography, which necessitated the use of transects during the delineation. In addition to the field work, responsible for wetland data report production and coordination with the USACE during the JD review process, as well as management of all GIS responsibilities.
07/	/19 – 01/21	Provided/managed the wetland delineation and secured JDs for 12 tracts totaling 71.93 acres for a proposed petrochemical facility expansion in Ascension Parish, LA. Scope of work was spread across four separate mobilizations, resulting in three JDs issued. In addition to the field work, responsible for wetland data report production and coordination with the USACE during the JD review process, as well as management of all GIS responsibilities.
Q 05	5/20 – Ongoing	 Provided/managed in wetland delineations and GIS responsibilities, and will provide permitting, for 5 MOVEBR projects in East Baton Rouge Parish: Old Hammond Highway Segment 1, Phases A and B (City-Parish Project No. 19-CP-HC-0034) Widening from 4 to 6 lanes, with a roundabout at Flannery Rd. and additional pedestrian facilities; total length of 1.25 miles Bluebonnet Boulevard (Perkins Road to Picardy Boulevard) (City-Parish Project No. 19-CP-HC-0034) Widening from 4 to 6 lanes, with additional pedestrian facilities; total length of 0.7 mile Highland Road at Siegen Lane Intersection (City-Parish Project No. 20-CP-HC-0004) Intersection improvements potentially consisting of a roundabout or additional/longer turn lanes Sherwood Forest Extension (Greenwell Springs Road to Joor Road) (City-Parish Project No. 20-CP-HC-0014)

16. Staff Experience:					
Matrix New World Engi	neering				
Linda McConnell, P.E.		P.E.		Years of experience with this employer	2
				Years of experience with other employer(s)	32
Degree(s) / Years / Spe	cialization	Bachelor of Scie	nce / 1972 / Mathe	matics / Louisiana State University	
Active registration nun expiration date	nber / state /	P.E. 20434 / LA	/ 03/31/2023	-	
Year registered		1983	Discipline	P.E./Civil	
Contract role(s) / brief	description of res	ponsibilities	Environmental En	gineer	
Experience dates (mm/yy–mm/yy)	Experience and girders", "desig MPR(s).	qualifications re ned intersection	levant to the prope ", etc. Experience	osed contract; <i>i.e.</i> , "designed drainage", "designed dates should cover the time specified in the applicable	
10/14 – 12/18	Project Manager Improvements, I Assessment (EA) (Phase II), City/P East Baton Roug threatened and e and evaluation of	r: East Baton Rouge, LA Baton Rouge, LA) for expansion of arish Project No.: e Parish, Louisian ndangered specie impact to air.	uge City-Parish, E Managed environ Old Hammond High 12-CS-HC-0045, S a. The EA included s, and cultural reso	nvironmental Assessment for Old Hammond Highway mental investigations and completed NEPA Environmental hway (LA 426) from Boulevard de Province to Millerville Road tate Project No.: H.007970, F.A.P. No.: H007970, Baton Rou I Phase I ESA, evaluation of wetlands and other water bodies burces, as well noise survey and modeling for impact assess	d uge, s, ment
09/12 – 04/14	East Baton Rouge, La Baton Rouge, La Impact) for expar Studies included and cultural resou	ge City-Parish, E A. Managed envir nsion of Old Hamn Phase I ESA, eva urces, as well nois	nvironmental Revi onmental investigat nond Highway (LA luation of wetlands se survey and mode	iews for FONSI for Old Hammond Highway Improvement ions and prepared Findings for FONSI (Finding of No Signific 426) from Boulevard de Province to Millerville Road (Phase I and other water bodies, threatened and endangered species eling for impact assessment and evaluation of impact to air.	; s, cant I). ₃,
05/16 – 07/17	Project Manager extension, Livin	r: Livingston Par gston Parish, LA	ish, NEPA Enviror Managed environ	mental Reviews for Cook Road Improvements and mental investigations and prepared documents for NEPA EA	۱.
01/10 – 12/11	Project Manager Government, con Port Eads in the a Resources, Office 0966-EPP), Louis 171168/CER 201	r: Port Eads Reco ducted environme aftermath of Hurric e of Coastal Mana siana Department 00001), and other	onstruction Project ental reviews and ap cane Katrina. Permi gement, Coastal Us of Environmental C r related consultatio	et, Plaquemines Parish, LA. – On behalf of Plaquemines Parish, LA. – On behalf of Plaquemines Parish oplied for and obtained permits related to the reconstruction its/approvals included Louisiana Department of Natural se Permit (P20100263), Corps of Engineers Permit (MVN-20 Quality Water Quality Certification (WQC 100521-01/Al ons.	arish of)10-

	Project Manager: St. James Rail Terminal, New Rail Terminal Permitting, St. James, Louisiana. Managed
	environmental services, including permitting, for a new rail terminal providing unit train delivery of crude oil. The project
	also included a pipeline from the offloading pipe rack to the receiving terminal, on an adjacent property. Work included
	initial Environmental Site Assessment of property, Phase II Baseline Assessment, wetlands delineation, Joint
01/09 – 12/11	Application to the Louisiana Department of Natural Resources, Office of Coastal Management, for a Coastal Use
	Permit, and to the Corps of Engineers, New Orleans District, for a Nationwide General Permit 3; application to the
	Louisiana Department of Environmental Quality for Water Quality Certification; preparation of a Stormwater Pollution
	Prevention Plan and Spill Prevention, Control, and Countermeasures Plan; coordination of application to the State Fire
	Marshal for construction permit approval.
	Project Manager, FERC 7(c) Pipeline Certification; Tarpon Gas Storage; Houston, TX. Preparation of
	environmental resource reports for the Federal Energy Regulatory Commission 7(c) permits. Managed environmental
01/06 12/08	investigations and preparation of NEPA documents for FERC. Work included oversight of field investigations and
01/00 - 12/08	report preparation for fish, wildlife, and vegetation reports; coordination and/or preparation of reports on land use,
	recreation, and aesthetics, alternatives, cultural resources, soils, and geological resources, as well as summary of
	NEPA potential impacts.
	Project Engineer: FEMA, Flood Insurance Studies, Southwest LA. Project Engineer for several Flood Insurance
01/05 02/07	Studies in southwestern Louisiana. Participated in numerous other flood study and channel design projects. Studies
01/05 - 05/07	included field surveys and data collection, report preparation, participation in public meetings, modeling of hydrology
	and hydraulics, determination of base flood elevations, floodway boundaries, etc.

16. Staff Experience:					
Matrix New World Eng	jineering				
Lee Womack Senior Environmental Scientist				Years of experience with this employer	6 9
				reals of experience with other employer(s)	5
Degree(s) / Years / Sp	ecialization	Master of Science Bachelor of Scie	ce / 2006 / Wildlife / ence / 2004 / Wildlife	Louisiana State University e and Fisheries Conservation / Louisiana State University	
Active registration nu expiration date	mber / state /	N/A			
Year registered		N/A	Discipline	N/A	
Contract role(s) / brief	description of res	sponsibilities	Environmental Pro Study, and Permit	o and Biologist/Wetlands for Solicitation of Views, Wetland s	
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).				
01/08 – 01/10	Provided multiple wetland delineations and associated regulatory permitting as part of the DOTD Environmental Permitting Retainer Contract, Task Orders 1-3, State Project No. 700-99-0439, Federal Aid Project No. STP-9907 (526) / IM-1709(507), Louisiana Department of Transportation and Development, Statewide, LA. Project tasks included conducting 34 wetland delineations, four threatened and endangered species surveys, and obtaining state and federal permits for 63 individual bridge and road improvement projects throughout Louisiana			:S	
05/08 – 12/09	Provided wetland delineations and associated regulatory permitting for the DOTD Fort Buhlow Bridges and Approaches, Route US 71 to US 165, State Project No. 840-43-0001, Task 1: 701-65-1002, Rapides Parish, LA Project consisted of the replacement of the O.K. Allen Bridge over Lake Buhlow, the KCS Railroad Bridge, and widening/reconstruction of 1.3 miles of roadway approaches. Project tasks included wetlands delineation, USACE Section 10/404, U.S. Capat Cuard Bridge, and Bad Biver, Atabafalava, and Bayay Basyaf Lavas District permitting			۱ ۹.	
10/08 – 05/09	Provided a wetla Replacement, S replacement of C Use, USACE, an bottom dredging.	and delineation a tate Project No. (Caminada Bay Bric d U.S. Coast Gua	ind associated reg 064-01-0040, Task lge on LA 1 near Gr rd Bridge permitting	ulatory permitting for DOTD, Caminada Bay Bridge 1: 701-65-1002, Jefferson Parish, LA. Project consisted of f and Isle. Project tasks included a wetland delineation, Coast , in addition to coordination with LDWF regarding state water	the al
11/08 – 03/10	Provided a weth Bridge Replaced the replacement delineation and L	and delineation a ment, State Proje of the Jefferson S JSACE Section 10	and associated reg ect No. 823-42-000 treet Bridge over Ba 0/404 permitting.	ulatory permitting for the DOTD LA 3156 Bayou Teche 5, Task 1: 701-65-1002, Iberia Parish, LA. Project consisted ayou Teche on LA 3156. Project tasks included a wetland	of

06/15 – 07/15	Provided the wetland delineation and managed GIS responsibilities for construction of an interchange at I-10 and Pecue Lane (DOTD Project No. 700-17-0221, Federal Aid Project No. IM-1709(507)). In addition to the interchange, the project included the replacement of a two-lane overpass bridge and Pecue Lane/Wards Creek bridge, as well as an extension to Reiger Road.
01/09 – 08/12	Provided a wetland delineation and associated regulatory permitting for the DOTD LA 1088 Interchange, State Project No. 454-04-0038, Task 1: 701-65-1002, St. Tammany Parish, LA. Project consisted of the construction of a "clover-leaf" interchange at LA 1088 and Interstate 12. Controversial project due to extent of wetlands impacts and the opening up of a prime corridor for development into the Florida parishes, which state and federal agencies historically rejected. Project tasks included Coastal Use, and USACE permitting, and a threatened and endangered species survey (red-cockaded woodpecker) per USFWS requirements.
02/10 - 10/10	Provided wetland delineations for seven off-system bridge replacements in St. Helena Parish, LA. Work was completed as a subconsultant to Aucoin & Associates.
10/10 – 11/12	Provided USACE Section 404 permitting and associated regulatory permitting support (LDEQ, LDWF) for the DOTD Amite River Bridge @ Magnolia, LA 64, State Project No. 262-31-0016, Task 2: 701-65-1231, Livingston Parish, LA.
04/14 – 07/14	 Managed the wetland delineations and USACE permitting compliance assistance for 7 off-system bridge replacements in East Baton Rouge Parish, LA: Port Hudson Pride Road Bridge over Little Sandy Creek (City-Parish Project No. 13-BR-LA 0013) Milldale Road Bridge over Beaver Bayou (City-Parish Project No. 13-BR-LA 0023) Morvant Road Bridge (1) and (2) over Drainage Bayou (City-Parish Project Nos. 13-BR-LA 00(09-10)) Albert Drive Bridge over Drainage Canal (City-Parish Project No. 13-BR-LA 0003) Claycut Road Bridge over Ward Creek (City-Parish Project No. 13-BR-LA 0014) Mollylea Drive Bridge over Jones Creek (City-Parish Project No. 13-BR-LA 0012)
06/15 – 07/15	Managed the wetland delineation for construction of an interchange at I-10 and Pecue Lane (DOTD Project No. 700-17-0221, Federal Aid Project No. IM-1709(507)). In addition to the interchange, the project included the replacement of a two-lane overpass bridge and Pecue Lane/Wards Creek bridge, as well as an extension to Reiger Road.
03/17 – Ongoing	Provided a wetland delineation, and serves as the regulatory manager for wetlands, threatened and endangered species, USACE Section 10/404 permitting, and air and water quality compliance for 877 acres for an active sand mining operation along the Red River in Caddo and Bossier Parishes, Louisiana.
04/17 – 03/18	Provided the wetland delineation and secured JD for a 275.59-acre tract for the pending Three Creeks Mitigation Bank in Claiborne Parish, LA. Delineation habitats consisted of heavily bedded pine plantation and riparian hardwoods. During the delineation, documented the remnants of three intermittent streams destroyed by ongoing silvicultural activities. Assisted in the development of the stream and wetland restoration work plans, currently under review by the USACE Vicksburg District.
05/20 – 07/21	Assisted in wetland delineation for the MOVEBR project Sherwood Forest Extension (Greenwell Springs Road to Joor Road) (City-Parish Project No. 20-CP-HC-0014) in East Baton Rouge Parish, LA. Project consisted of a new two-lane roadway connecting Sherwood Forest to Joor Road, with a new bridge spanning the Comite River

16. Staff Experience: Matrix New World Engineering **Angela Singletary** Years of experience with this employer 2 Senior Environmental Scientist Years of experience with other employer(s) 5 Degree(s) / Years / Specialization Bachelor of Arts / 2010 / Geography / University of New Orleans Active registration number / state / N/A expiration date Discipline Year registered N/A N/A Contract role(s) / brief description of responsibilities Biologist/Wetlands for Wetland Study and Permits Experience and qualifications relevant to the proposed contract: *i.e.*, "designed drainage", "designed Experience dates girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable (mm/yy–mm/yy) MPR(s). Assisted in wetland delineations and USACE permitting compliance assistance for 7 off-system bridge replacements in East Baton Rouge Parish, LA: - Port Hudson Pride Road Bridge over Little Sandy Creek (City-Parish Project No. 13-BR-LA 0013) - Milldale Road Bridge over Beaver Bayou (City-Parish Project No. 13-BR-LA 0023) 04/14 - 07/14- Morvant Road Bridge (1) and (2) over Drainage Bayou (City-Parish Project Nos, 13-BR-LA 00(09-10) - Albert Drive Bridge over Drainage Canal (City-Parish Project No. 13-BR-LA 0003) - Claycut Road Bridge over Ward Creek (City-Parish Project No. 13-BR-LA 0014) - Mollylea Drive Bridge over Jones Creek (City-Parish Project No. 13-BR-LA 0012) Assisted in wetland delineations for construction of an interchange at I-10 and Pecue Lane (DOTD Project No. 700-17-0221, Federal Aid Project No. IM-1709(507)). In addition to the interchange, the project included the 06/15 - 07/15replacement of a two-lane overpass bridge and Pecue Lane/Wards Creek bridge, as well as an extension to Reiger Road. In addition to the field work, responsible for data form and photo exhibit production. Assisted in wetland delineations for a 3,098.17-acre tract for the Hickory Branch Mitigation Bank in Calcasieu Parish, LA. Delineation habitats included pine plantation, riparian hardwoods, and bottomland hardwood depressions. 01/18 - 02/19Tract consisted largely of pimple mound topography, which necessitated the use of transects during the delineation. In addition to the field work, responsible for data form and photo exhibit production. Assisted in wetland delineations for a 5,960.52-acre tract for the Pontchartrain Basin Umbrella Mitigation Bank 11/18 - 05/19 in Livingston Parish, LA. Delineation habitats included pine plantation, riparian hardwoods, and bottomland hardwood depressions. In addition to the field work, responsible for data form and photo exhibit production. Assisted in wetland delineations for 12 tracts totaling 71.93 acres for a proposed petrochemical facility expansion in Ascension Parish, LA. Scope of work was spread across four separate mobilizations, resulting in three 07/19 - 01/21JDs issued. In addition to the field work, responsible for data form and photo exhibit production.

16. Staff Experience:					
Jame Directo	es Papia, AIA, or of Architecture	NCARB, C	SI	Years of experience with this employer Years of experience with other employer(s)	11 28
Degree(s) / Years / S	pecialization	Bachelor of Scie	ence / 1981 / Archite	ecture	L
Active registration ne expiration date	umber / state /	3423 / LA / 12/3	1/2022		
Year registered		1984	Discipline	Architecture	
Contract role(s) / brie	ef description of res	ponsibilities	Design & Inspection	on of Operating & Machine Houses	
Experience dates (mm/yy–mm/yy)	Experience and girders", "desig MPR(s).	qualifications re ned intersection	levant to the prope ", etc. Experience	osed contract; <i>i.e.</i> , "designed drainage", "designed dates should cover the time specified in the applicable	
06/07 – 12/09	Lafitte Multipurpose Facility Jefferson Parish: Lead Architect for the Architectural Design Services a multipur facility that incorporated a library, auditorium, civic center, and museum. Mr. Papia was the lead architect on the project which included preparation of the design schedule and cost estimates. Mr. Papia also directed the Meyer architecture and the engineering consultants during the schematic design, design development and construction document phases Throughout the course of the project Mr. Papia provided quality control services to ensure that the project was deliver time and under budget. After publicly advertised bids were opened, Mr. Papia assisted The Town of Jean Lafitte in negotiating with the apparent low bidder to a more reasonable price. Mr. Papia assisted the Contract Administration Department during the contract administration				on
09/11 - 07/13	Port of South Lo Design and Cons Papia was the prir documents. Mr. P project including the agreement. Mr. Pa Construction Clos	uisiana Guard/Sc struction Services mary designer for t apia also prepared he Owner/Architec apia reviewed all s eout. Mr. Papia als	ale House St. Joh s for the design of the he building, prepared the project schedule t Agreement, Agreer hop drawings and su so helped cut the ribb	In the Baptist Parish: Project Manager for the Architectural e new Guard and Scale House for the Port of South Louisiana. I all construction details and specifications for the construction e and cost estimates. Mr. Papia also prepared all contracts for t ments between Architect and Consultants and Owner / Contract abmittal data, assisted in Construction Administration and bon at the grand opening of the Scale House.	Mr. he or
10/12 – 07/15	Regional Transit for the Architectu maintenance and for this project. Mr Papia directed the architectural staff between Meyer ar the project schedu	Authority Carroll ral Design Servic storage facility. Me Papia managed t research necessa members and supe nd the MEP and strule.	ton Streetcar Facili ses for the historic buryer Engineers was to the project for Meyer ary to preserve this h ervised development ructural consultants f	ty Renovation and Upgrade Orleans Parish: Lead Archite uilding that was built in the late 1800's to serve as a streetcar he consulting Architect and structural engineer to Royal Engine for the architectural and structural engineering department. Mr. istoric structure. Mr. Papia delegated the restoration work to se to f the construction documents. Mr. Papia coordinated the work for the projects including preparation of contracts and preparation	ct ers vera

	Slidell I-59 DOTD Rest Area St. Tammany Parish: Lead Architect for the Architectural Design and Construction
	Services for the renovations and upgrades to the DOTD Rest Area in Slidell, Louisiana. Mr. Papia directed the schematic
	design, design development, and construction document phases of the project, including project scheduling and cost
01/16 00/15	estimating. Since the rest areas are widely used by the public, accessibility was of paramount concern. Mr. Papia, a certified
01/10-09/13	ADA expert, conducted extensive research regarding ADA accessibility to the facility to ensure that all parts of the entire rest
	area was accessible. Mr. Papia was the Quality Control manager for the project and reviewed all drawing and specifications
	prior to public bidding. During construction, Mr. Papia made several visits to the site to ensure that the project was being
	constructed in accordance with the construction documents.
	Port of South Louisiana Administration Building St. John the Baptist Parish: Lead Architect for the Architectural
	Design and Construction Services for the new 30,000 square feet facility located on the Mississippi River in Reserve,
	Louisiana. For the Port, Mr. Papia developed the project and established the budget for the project. Mr. Papia directed the
	programming team in the development of a good, solid, working program describing in detail the spatial and functional
	needs of the Port Authority. After programming, Mr. Papia supervised the design team in creating an exciting building image
07/16 - Present	that the Port Authority desired. In addition to managing the overall preparation of the construction documents, Mr. Papia
	assisted in developing extensive details of the building in the construction documents phase. Mr. Papia was the Quality
	Control manager for the project and reviewed all drawing and specifications prior to public bidding. Mr. Papia is also
	assisting the Port Authority with the selection of Furniture, Fixtures and Equipment (FF&E). Now that construction is in
	progress, Mr. Papia is assisting in reviewing shop drawings, product data and material and color selections. Throughout the
	entire project process, Mr. Papia regularly attended Port Authority Board Meetings to report on the status of the project.

Mever Engineers, Ltd.					
Alfonso Romero, NCARB			Years of experience with this employer		
Architect	·			Years of experience with other employer(s)	34
Degree(s) / Years / Spe	cialization	Bachelor of Scie	nce / 1985 / Archite	cture	
Active registration num expiration date	nber / state /	9367 / LA / 12/3 ⁻	1/2022		
Year registered		2020	Discipline	Architecture	
Contract role(s) / brief	description of res	ponsibilities	Project Architect		
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).				
01/22 - Present	Causeway Bridge Bascule Bridge Tender's House Jefferson Parish: Project Manager for the rehabilitation of the upper two levels of the Bridge Tender's House. The work consists of removing and replacing all existing windows at the operator's level with new impact resistant glazing, reconfiguring one of the windows into an impact resistant, operable door to allow direct access to the catwalk outside, painting all interior surfaces, removing and replacing existing flooring, removi and replacing all furniture/millwork with new construction, providing better lighting, upgrading the air conditioning, recovering the existing roof surface, repairing the access ladder to the roof and installing new safety railings, and patching and repairing any structural damage.				
02/21 – Present	Skelly Rupp Stac and investigated the building codes, an striping, stormwate fencing with entry press box, handica controls to the spot Also renovate and masonry repairs a facilities. The proje	lium Repairs Or he required scope of LSHAA standard er drainage, signag gates. The stadiun ap ramps, bleacher orts facility and rest I refurbish all restro nd cleaning, interio ect is FEMA fundeo	leans Parish: Proje of work to make the ls due to damage fro ge, repair and preven n improvements cons r entry steps, roof, st oring connections ar boms, concession sta or refinishing, replacin d.	ct Manager responsible for review of the conditions of the facili entire stadium and sports facility to be operational, compliant wi m Hurricane Katrina. The work included parking lot resurfacing, at soil subsidence, compliance with ADA, lighting, and perimeter sist of repair and replacement of the aluminum bleacher/stand, ructural repairs, improved lighting and sound system, electrical and operations of the score board, air conditioning in the press bo and, ticket booth, offices, including repairs to roof and roofing, ng code compliant drinking water fountains, exterior grounds an	ty ith
02/21 – Present	Frederick Sigur C Roof Site Observa Zeta in October 20 ballroom at the Fro lightweight insulat or may be required FEMA funded.	Civic Center Roof ation Report on the D20. The project co ederick Sigur Civic ing concrete metal d to correct damag	Replacement – Bal current conditions of nsists of removing th Center. The work ind deck. In addition to a e to the existing struct	Iroom Orleans Parish: Project Manager for completion of t f the existing roof on the building that was caused by Hurricane he 22,900 SF existing modified bitumen roofing assembly over t cludes the installation of modified bitumen roof assembly over addressing the roof leaks, the project includes various work that cture due to the long-term effects of the roof leaks. The project	he he t is is

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Gresham Smith		Evaluation Disciplin	e(s)* Bridge			
Complex Brid Spring Street	ge Inspections ID Emergency Bridg	Firm responsibility (prime or sub?)		Prime		
Project number		Owner's name	Louisiana Departme	ent of Transporta	tion and Development	
Project location	Shreveport, Louisiana Owner's Project Manager			Heather Patton, P.E.		
Owner's address, phone, email	1201 Capitol Access Roa	d, Baton Rouge, LA /	225.379.1306 / Heatl	ner.Patton@la.g	ον	
Services commence	ed by this firm (mm/yy)	04/20	Total consultant contract cost (\$1,000's)		\$142	
Services completed by this firm (mm/yy)		09/20	09/20 Cost of consultant services (\$1,000's)		ded by this firm	\$130
Describe the project	including the firm's role :	and members involv	ed (Highlight staff t	o he used in th	is proposal) *If there i	s more than

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 category included in the advertisement, then indicate which past performance evaluation discipline(s) this project is being used to represent.

LADOTD selected Gresham Smith for a 5-year IDIQ Design contract to perform Complex Bridge Inspection and Design Repairs. Gresham Smith is currently in the second year of this contract; having completed three task orders and entering contract phase on the 4th task order.

17. Firm Experience:

In April 2020, a train derailment impacted the US 71 Bridge over KCS Railroad in downtown Shreveport, causing the emergency closure of the bridge. LADOTD assigned Gresham Smith under TO #2 to prepare design plans to replace bent three and to install a concrete crash wall for



future protection. Gresham Smith performed an emergency inspection of the bridge to perform measurements and evaluate potential repairs. Coordination with the railroad staff was performed to minimize impacts from on-going rail traffic. A contractor was selected to perform the construction, and Gresham Smith coordinated with the contractor and DOTD on potential repair details, similar to a formal Construction Management at Risk (CMAR) contract arrangement.

Repairs included the installation of helical piles to resist the railroad crash loads on the foundations and utilization of rolled shapes to expedite steel fabrication. A strongback system to support the structure during the removal of the damaged bent was designed by the contractor. Gresham Smith reviewed and approved the system, then performed a field review to verify installed compliance with the design. Geotechnical evaluations were completed and utilized for the design of the helical piles and concrete wall footer.

Nature of firm's responsibility: Prime Consultant; Overall responsibility for entire contract.

Firm members involved include: Bert Moore, John Weres, Courtney Rome and Emery Sayre.

ice.					
	Past Performance	Evaluation Disciplin	ne(s)* Bridge		
Maintenance and	Repair On-Ca	all	Firm respons	ibility (prime or sub?)	Prime
N/A	Owner's name	Tennessee Departm	ent of Transport	ation	
Statewide, TN		Owner's Project Manager Ted Kniazewycz, P.E. Structures, State Brid		Ted Kniazewycz, P.E., Di Structures, State Bridge I	rector of Engineer
James K. Polk Building, Su	uite 100, 505 Deaderio	ck Street, Nashville, T	N 37243-0032 /	615.741.3351 / ted.kniazev	wycz@tn.gov
ed by this firm (mm/yy)	y) 09/2010 Total consultant contract cost (\$1,000's)		\$12,500		
d by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm (\$1,000's)		\$12,500	
	Maintenance and N/A Statewide, TN James K. Polk Building, Su ed by this firm (mm/yy)	Past Performance Maintenance and Repair On-Ca N/A Owner's name Statewide, TN James K. Polk Building, Suite 100, 505 Deadering ed by this firm (mm/yy) 09/2010 d by this firm (mm/yy) Ongoing	Past Performance Evaluation Disciplin Maintenance and Repair On-Call N/A Owner's name Tennessee Departm Statewide, TN Owner's Proj James K. Polk Building, Suite 100, 505 Deaderick Street, Nashville, T ed by this firm (mm/yy) 09/2010 Total consultant co Description Cost of consultant	Past Performance Evaluation Discipline(s)* Bridge Maintenance and Repair On-Call Firm response N/A Owner's name Tennessee Department of Transport Statewide, TN Owner's Project Manager James K. Polk Building, Suite 100, 505 Deaderick Street, Nashville, TN 37243-0032 / ed by this firm (mm/yy) 09/2010 Total consultant contract cost (\$1 d by this firm (mm/yy) Ongoing	Past Performance Evaluation Discipline(s)* Bridge Maintenance and Repair On-Call Firm responsibility (prime or sub?) N/A Owner's name Tennessee Department of Transportation Statewide, TN Owner's Project Manager Ted Kniazewycz, P.E., Di Structures, State Bridge E James K. Polk Building, Suite 100, 505 Deaderick Street, Nashville, TN 37243-0032 / 615.741.3351 / ted.kniazew ed by this firm (mm/yy) 09/2010 d by this firm (mm/yy) Ongoing Cost of consultant services provided by this firm (\$1,000's)

Gresham Smith has performed bridge maintenance evaluations, inspections, load ratings, structural analysis and design, and construction plans for bridge repairs, rehabilitations, widenings and replacements on hundreds of structures across the state of Tennessee over the last twelve years. Task order assignments have included both pedestrian and vehicular bridges using steel, prestressed concrete, reinforced concrete and timber materials. Structure types include trusses, steel box beams and I-girders, cast-in-place concrete and precast concrete bridges. Work completed includes expansion joint repairs, bridge railing repairs and upgrades, full and partial depth deck repairs, deck overlays, bearing replacements, beam impact damage repairs, steel fatigue, section loss, and painting repairs, miscellaneous general bridge repairs, bridge widenings, safety improvements, superstructure replacements and underwater bridge inspections for scour and other deficiencies. Some of the assigned projects currently under development or already completed include:



- SR 13 over Trace Creek/SR1/CSX RR in Humphreys County (Complete Replacement)
- Load Ratings and reports for over 200 routine and complex bridges across Tennessee
- I-65 over CSX RR and Rivergate Pkwy in Davidson County (expansion joint repair)
- I-65 over SR 76 in Robertson County (repair truck impact damage to railing and box superstructure, install inspection ports)
- Underwater Bridge Inspections and reports for over 35 structures across Tennessee

Nature of firm's responsibility: Prime Consultant; Overall responsibility for entire contract. **Firm members involved include:** John Weres, Courtney Rome, Adam Davidson, Tom Tran, Emery Sayre and Yun Lin.

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17. Firm Experience: Gresham Smith

Past Performance Evaluation Discipline(s)* Bridge

GDOT Bridge Contract	e Maintenance Eng	gineering Serv	vices On-Call	Firm respons	ibility (prime or sub?)	Prime		
Project number	N/A	Owner's name	Georgia Department	of Transportation	on			
Project location	Statewide		Owner's Proje	ect Manager	Robbie Koirala			
Owner's address, phone, email	935 United Avenue, SE Bu	35 United Avenue, SE Building 24, 4 th Floor Atlanta, GA 30316 / rkoirala@dot.ga.gov						
Services commend	ced by this firm (mm/yy)	08/20	Total consultant co	ntract cost (\$1	,000's)	\$829		
Services complete	d by this firm (mm/yy)	Ongoing	Cost of consultant	services provid	led by this firm (\$1,000's)	\$780		
Describe the projec	t including the firm's role a	and members involv	ed. (Highlight memb	ers to be used	in this proposal.)			

GDOT contracted with Gresham Smith to provide On-Call Bridge Maintenance Engineering Services Statewide. This contract primary involves developing repair plans for bridge maintenance and bridge repair projects. Gresham Smith is task with inspection of the bridge to verify and identified areas of repair needed, design and produce specifications and repair plans for bid. Project typically involves roadway, and environmental support and may require other disciplines such as survey and geotechnical support.

Other tasks includes:

- Working to update GDOT's Bridge Asset Management Program (TAMP, BrM, Inspect X, TAPE)
- Help complete GDOT Tunnel Inspection Policy and Procedures Manual.
- Help rewrite QA/QC policy for Bridge Inspection.
- Provide embedded employees at GDOT to:
 - o Inspect bridges and produce repair plans
 - Provide quality control on repair plans
 - Train GDOT staff

Nature of firm's responsibility: Prime Consultant; Overall responsibility for entire contract.

Firm members involved include: Tom Tran





17. Firm Experience: Gresham Smith

Past Performance Evaluation Discipline(s)* Bridge

SR 178 Bento Twin-Cell Bo	on County – Repla x Culvert	cement of 2 B	ridges and a	Firm respons	ibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Mississippi Departme	ent of Transport	ation	
Project location	Benton County, MS		Owner's Proje	ect Manager	Scott Westerfield. P.E.	
Owner's address,	401 North West Street, Jac	kson, MS / 601.359.7	200 / swesterfield@m	ndot.ms.gov		

phone, email			
Services commenced by this firm (mm/yy)	11/17	Total consultant contract cost (\$1,000's)	\$417
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm (\$1,000's)	\$417

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.) Gresham Smith holds a 3-year IDIQ Bridge Retainer with MDOT. Under Work Assignment 1, Gresham Smith was tasked for completing Phase B (Final Design) for the reconstruction of two bridges and associated roadway. A third bridge was replaced with a twin-cell box culvert. To reduce the overall construction costs, Gresham Smith was requested to re-design the previously prepared (by others) Phase A roadway design for Bridge 47.1 to utilize the existing alignment, rather than an off-line alternative designed by others.

To reduce the total structure depth and improve the bridge hydraulics, the superstructures were designed with Florida I-Beam (FIB) shaped prestressed concrete girders. As one of the longer spans in Mississippi to utilize the FIB shapes, Gresham Smith also performed a haul analysis and constructability review to verify that the 135' long, 70-ton girders could be delivered and erected at this rural location. For the multi-span structure, the bridge spans were designed as simply supported beams with a "link-slab" detail utilized to eliminate the deck joints. The span arrangements are as follows:

- Bridge 51.3 (Bridge A) FIB-45; 3 spans = 80' 100' 80' = 260'
- Bridge 47.1 (Bridge B) FIB 54; 1 span = 135'

Nature of firm's responsibility: Prime Consultant; Overall responsibility for entire contract.

Firm members involved include: John Weres, Courtney Rome and Emery Sayre

New 3-Span Bridge with FIB Girders

Previous Benton County Bridge



New 2-Span Culvert

17. Firm Experience: Gresham Smith

Past Performance Evaluation Category(ies)* | Road / Bridge

LADOTD, LRSP Task Orders #17 & #22, West Feliciana Firm responsibility (prime or sub?) Prime Signing & Striping **Project number** H.012527.1-2 **Owner's name** Louisiana Department of Transportation and Development West Feliciana Parish. **Project location Owner's Project Manager** Mark Morvant Louisiana Owner's address. 1201 Capitol Access Road, Baton Rouge, LA / 225.379.1143 / 225.379.1205 / mark.morvant@la.gov phone, email \$197 Services commenced by this firm (mm/yy) Total consultant contract cost (\$1,000's) 07/18 Cost of consultant services provided by this firm Services completed by this firm (mm/yy) 02/21\$161 (\$1,000's)

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

As part of Local Road Safety Program (LRSP) / Safe Routes to Schools (SRTS) retainer contract, Gresham Smith was tasked to investigate safety issues on 10 local routes in West Feliciana Parish and to develop recommendations for signing and striping of curves along the roadways, based on ball bank analysis. Gresham Smith was also requested to perform field inspections on 15 off-system bridges, including timber, rail car, and concrete structures. The study recommended barrier improvements for the timber and steel bridge railings to meet current MASH standards.

Nature of firm's responsibility: Prime Consultant; Overall responsibility for entire contract. Firm members involved include: Ronnie Robinson, Brennon Hughes, Bert Moore, Rebecca Murray, and Richard Savoie.

Project Highlights

- Ball-Bank Analysis
- Construction Cost Estimates
- Bridge Services Report, Including Incorporating new MASH Guardrail Transitions
- Signing and Pavement Marking Improvements
- MASH Barrier Rails to be Added for Timber Bridges



17. Firm Experience: WSP USA Inc.

Past Performance Evaluation Discipline(s)* Bridge

Johns Pass Bascule Bridge Replacement				Firm responsibility (prime or sub?)		Prime				
Project number	71127	Owner's name Florida Department of Transportation, District 7								
Project location	Tampa, FL		Owner's Proj	ect Manager	Thomas A. Andres, PE					
Owner's address, phone, email	605 Suwannee St., MS 33	605 Suwannee St., MS 33 Tallahassee, FL 32399-0450; 850.414.4269; thomas.andres@dot.state.fl.us								
Services commenced by this firm (mm/yy) 10/03		Total consultant co	ntract cost (\$1	,000's)	\$2,929					

Services completed by this firm (mm/yy)9/13Cost of consultant services provided by this firm (\$1,000's)

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

The first bridge was built in the early 1930s and was a low-level, two-lane drawbridge. A second bridge, a new twin-span, was built and opened in 1971 along a different alignment to save right-of-way costs. Replacement was necessary since the first bridge was in danger of collapsing should a major storm occur. The original span to the east was demolished. In 1981, the bridge began having problems and additional piers were installed underneath the existing pier bents for support. The new bridge is a four-leaf bascule (twin parallel bridges) replacing an existing bridge over a swift moving channel and are built on the same alignment as the existing bascule structures



\$2.300

Firm Role: WSP provided project management, inspection, preliminary, final and post design services. The foundations for the existing twin double-leaf bascule bridge were undermined due to scour caused by the prevalent swift tidal currents. WSP designed the new twin double-leaf bascule bridges to resist the scour and meet all current design standards, including accommodating a wider 100-foot navigational channel compared to the existing 60-foot channel.

Highlights: *Structural*: To help reduce scour, the piers were built parallel to the channel and with "Vee" shaped faces to improve hydrodynamics. The bridge features Exodermic Deck System, a closed, relatively light-weight deck system, to provide improved ride and noise reduction. The deck was constructed in phases to minimize impact on marine traffic. The short counterweight was critical in keeping the pit elevation relatively high and building a water-line bascule pier foundation; *Mechanical*: Each leaf, including the counterweight, weighed approximately 2,700,000 pounds. The operating machinery design utilizes a traditional rack and pinion configuration with redundancy in the drive motors and controls.; *Electrical*: Enclosed speed reducers were utilized to ensure easier maintainability. The drives will be modern low maintenance electronic d.c. drives connected to a modern industrial hardened programmable logic control system.; *Architectural/Aesthetics*: Steel box girder superstructure was chosen to combine enhanced aesthetics with increased torsional rigidity. Also, the tender house, bridge piers and other structural elements were designed to incorporate aesthetics in the structural shapes and geometry.

Staff: Trevor Johnson, Graciela Patino, Chris Ray

17. Firm Experience:

WSP USA Inc.

West Columbus Drive Swing Bridge over the
Hillsborough River Pass Bascule Bridge ReplacementFirm responsibility (prime or sub?)

Project number	15565	Owner's name	Florida Department of Transportation	n, District 7					
Project location	Tampa, FL		Owner's Project Manager	Mike Williams					
Owner's address, phone, email	601 E. Kennedy Blvd., Tan)1 E. Kennedy Blvd., Tampa, FL 33602; 813.307.1851; williamsm@hillsboroughcounty.org							
Services commend	ed by this firm (mm/yy)	09/08	Total consultant contract cost (\$1,	000's)	\$2,400				
Services complete	d by this firm (mm/yy)	04/15	Cost of consultant services provid	led by this firm (\$1,000's)	\$2,014				

Past Performance Evaluation Discipline(s)*

Bridge

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

The West Columbus Dr. bridge was constructed in 1926, carries four lanes of vehicular traffic with two sidewalks. The bridge is listed in the National Register of Historic Places in the City of Tampa. The bridge consists of 11 approach spans flanking a movable swing span. The swing span is comprised of asymmetrical, "bob-tail" type steel pony trusses.

Firm Role: WSP conducted a PD&E study including roadway and structural engineering; natural, physical, and social environmental impacts; and bridge aesthetics to evaluate the best engineering solution for the bridge. WSP provided the rehabilitation design which included structural, mechanical, and electrical components for this historic structure. In-Depth structural, mechanical, and electrical inspections were performed with an extended service life objective. The bridge development report (BDR) was completed by WSP.

Highlights: Collaboration with SHPO to preserve the historic elements of the structure. Modifications to the control house within SHPO guidelines to provide adequate working clearance around the electrical and mechanical equipment were made. Awards: 2013 Preservation Award (Tampa Preservation, Inc.); *Steel Swing Span Structure* - Replace steel stringers from the long arm, lateral bracing gusset plate and single angles, truss lower chord splice plates and chord stay (batten) plates, truss chord lacing bars, fascia plates from the sidewalk support framing, interior channels from the sidewalk support framing, vertical curb plates, open steel grid deck on the long arm, concrete-filled grid deck on the long arm, concrete deck slab on the short arm, concrete barriers with steel post and tubular rail traffic barriers concrete sidewalk slabs. Replace or repair several vehicle-impacted truss members. Install steel post and tubular rail traffic barriers along swing span curb-lines. Rehabilitate ornate steel bridge railings along fascia. Refurbish the machinery room at the Pivot Pier. Repair spalled/cracked concrete in the substructure.; *Mechanical* - The machinery consists of an electro-mechanical drive system that operates the main drive pinion that engages a semi-circular rack, center and end wedges and end locks. The movable span pivots on an aluminum-bronze center bearing and balance wheels located on the pivot pier. Rehabilitated wedge machinery reducer and rack pinion shaft bearings. Replace wedge machinery brake and main drive rack pinion.; **Electrical** - Replace and relocate the traffic gates, the submarine cables, control cabinet and control panels, motor control center, emergency generator and automatic transfer switch, and main drive motor and controller for semi-automatic operation with Variable Frequency Drives. Provide lightning protection, intercom, and public address systems.

Staff: Trevor Johnson, Graciela Patino, Kevin Walsh



Prime

l7. Firm	Experience:
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WSP USA Inc.	Past Performance Evaluation Discipline(s)* Bridge							
Brantley Roa	d over Lake Fishe	r Bridge Repla	acement	Firm respons	ibility (prime or sub?)	Prime		
Project number	173610	Owner's name	North Carolina Depar	rtment of Transp	portation			
Project location	Cabarrus County, NC		Owner's Project Manager Khaled Al-Akhdar		Khaled Al-Akhdar			
Owner's address, phone, email	1020 Birch Ridge Drive, R	1020 Birch Ridge Drive, Raleigh, NC 27610; (919) 707-6321; kalakhdar@ncdot.gov						
Services commend	ed by this firm (mm/yy)	06/17	Total consultant co	ntract cost (\$1	,000's)	\$220		
Services complete	d by this firm (mm/yy)	06/21	Cost of consultant	services provid	led by this firm (\$1,000's)	\$220		

WSP was the lead design engineer for the Brantley Road over Lake Fisher Bridge Replacement. Design work was performed under a supplemental agreement to the NCDOT TIP I-3802A project in Cabarrus County, NC which included 16 total bridge designs. Design required close coordination between structures, hydraulics, roadway, and other related disciplines to determine bridge types. The proposed bridge replaces an existing structurally deficient bridge and was constructed using a road closure.

The proposed replacement structure was a three-span bridge constructed of precast prestressed concrete cored slab units. The bridge design was set to allow an existing 8-inch water main to remain in place during construction.

Firm Role: WSP final design services for this project. **Staff**: Thomas Harris



17. Firm Experience:

Burgess & Niple, Inc. (B&N)

Past Performance E	valuation Disci	pline(s)*	Bridge
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Complex Bridge Rating (On-System Trusses & Other Complex Bridges)

Firm responsibility (prime or sub?)

Sub

Project number	Contract No. 4400004920	Owner's name	LADOTD					
Project location	Various, LA		Owner's Project Manager Billy Metcalf					
Owner's address, phone, email	1201 Capitol Access Road	201 Capitol Access Road, Baton Rouge, LA / 225.379.1060 / william.metcalf@la.gov						
Services commend	ed by this firm (mm/yy)	04/16	Total consultant co	ntract cost (\$1	000's)	\$3,600		
Services complete	d by this firm (mm/yy)	Ongoing	Cost of consultant s	services provid	led by this firm (\$1,000's)	\$615		

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

B&N's role, as part of TRC's team, included hands-on, in-depth inspections of multiple On-System trusses, including the main spans of the LA47 Intracoastal Waterway Gulf Outlet (IWGO/MRGO) bridge, LA2 over Red River (Millers Bluff), and the deck truss spans of US90 Riverbound in New Orleans. Specialized, adapted rope access techniques were utilized in the field to minimize and/or eliminate the need for costly, time-consuming mechanical access and traffic control. Accurate and detailed field notes were developed for the purposes of load rating all primary truss & floor system members and gusset plates, as well. Tablet computers (iPads) and digitized notes were utilized to add efficiencies to and streamline all phases of the project - mobilization, field work, and reporting. Detailed measurements of section loss, deterioration, misaligned members, and other significant deficiencies were obtained for the purposes of load rating the bridges in accordance with the LRFR methodology. B&N was also responsible for the load rating of the LA2 (Millers Bluff) bridge. Additional work performed as part of Task Order 5 included field assessments and load ratings of 29 Off-System bridges in northwest Louisiana.

Staff: Cinadr, Prendeville, Poorman, Kronander, Appler, Case, Goodrich, Richardson, Langdon, Bowie

17. Firm Experier	ice:						
Burgess & Niple,	Inc. (B&N)	Past Performance	e Eval	uation Disciplin	e(s)* Bridge		
Oklahoma DOT Off-System Truss & FC Bridge				Firm responsibility (prime or sub?)		Prime	
Inspections						······································	
Project number	CI-2299A	Owner's name	Okla	homa DOT			
Project location	Statewide, OK			Owner's Project Manager Wes Kellogg, P.E.			
Owner's address, phone, email	200 NE 21st Street, Oklaho	oma City, OK 73105 /	/ 405.5	522.4819 / wkello	ogg@odot.org		-
Services commenced by this firm (mm/yy) 04/21 Total consultant contract cost (\$1,000's)		,000's)	\$1,738				
Services completed by this firm (mm/yy) Ongoing Cost of consultant services provided by this firm (\$1,000's		\$1,738					

This project includes NBIS FC, Routine, and In-Depth bridge inspections of 91 steel truss and girder bridge structures (local agency owned) located throughout the state. Tasks on each structure include inspecting FC members at arm's length with industrial rope access and modified fall protection techniques and beam rolling of floorbeams to access FC members and fatigue prone details. Bridges are inspected at a range in which cracks, section loss, and loose or missing bolts or rivets can be identified in steel members and cracks larger than hairline can be identified in concrete components. Bearings and bearing seats are accessed at arm's length distance. An indepth narrative for each bridge containing observed conditions, repair recommendations, and condition photographs is developed in addition to BrM database reports. Magnetic Particle, Dye Penetrant, and/or UT measurements are performed to define the limits of any cracking and very accurately measure significant section loss and other deterioration that affects member capacity. Drones/UAV's are also utilized to augment inspection capabilities.

Staff: Cinadr, Prendeville, Poorman, Kronander, Hyland, Fillmore, Strehler, Case, Goodrich, Langdon, Aker, Whaley, Bowie

17. Firm Experie	nce:					
Bridge Diagnosti	cs, Inc. (BDI)	Past Performance	Evaluation Disciplin	ne(s)* Bridge		
Advanced In	spection of City Pa	ark Lake Bridg	ges	Firm respons	ibility (prime or sub?)	Prime
Project number	H.009730.5	Owner's name	Louisiana DOTD			
Project location	Baton Rouge, Louisiana		Owner's Proje	ect Manager	Wei Peng	
Owner's address, phone, email	1201 Capitol Access Road	l, Baton Rouge, LA 70	0802 / 225.379.1486 /	wei.peng@la.go	v V	
Services commen	ced by this firm (mm/yy)	08/19	Total consultant co	ntract cost (\$1	,000's)	\$86
Services complete	ed by this firm (mm/yy)	07/20	Cost of consultant	services provid	ded by this firm (\$1,000's)	\$61

BDI performed a NHI visual inspection of bridges 052690 and 052680 carrying I-10 over City Park Lake, which was supplemented by a comprehensive multi-technology nondestructive evaluation (NDE). 052690 and 052680 are a set of sister bridges that each carry 7 spans of I-10. The superstructure is a continuous steel multi-girder design with pin and hanger details and built-up members. Both the EB and WB structures consists of three built-up continuous girders spaced at 20' with WF diaphragms and ST Lateral Wind Bracing. The substructure of the bridge consists of cast in place reinforced concrete bents on round cast-in-place concrete piles and precast concrete piles. NHI visual inspection encompassed the entirety of the structure, while NDE was focused on the reinforced concrete bridge deck and substructure units. The NDE of the substructure included infrared thermography to locate and quantify square footages of delaminations of the piers and pier caps. The NDE of the bridge deck included Infrared Thermography (IR), High-Resolution Imagery (HRI), Deck Acoustic Response (DAR), and GRP, all at highway speeds, to locate and quantify square footages of shallow delaminations and rebar cover of the bridge deck. The visual inspection was conducted using a 360 camera and remote imaging techniques. Footage was collected of the entirety of the substructure and superstructure and reviewed per NHI procedures for any notable deficiencies or maintenance items. The final deliverables of the NDE and visual inspection included the following:

- Stitched High-Resolution images of the entirety of the bridge decks, with overlaid IR, GPR, DAR, and GPR results
- Total quantities of patching, spalling, and delaminations of the bridge decks
- Findings of the visual inspection with all photos, descriptions, and locations of any notable deficiencies and/or maintenance items.
- Synthesis of the visual inspection and NDE to obtain AASHTO Element Level Condition states quantities for the deck and superstructure, which were then uploaded into the owner's asset management program.

Firm members involved include: Shane Boone, Subject Matter Expert; Charlie Young, Project Manager and Lead Bridge & NDE Inspector



Project Relevance:

- LADOTD project
- Instrumentation
- Nondestructive testing

IDIQ Contract for Complex Bridge Load Rating Services Task 5 – Off-System Bridge Ratings and Evaluation Statewide

Firm responsibility (prime or sub?) Sub

Project number 4400010099 Louisiana DOTD Owner's name **Project location** Various, Louisiana **Owner's Project Manager** Wei Peng Owner's address. 1201 Capitol Access Road, Baton Rouge, LA / 225.379.1486 / wei.peng@la.gov phone, email Services commenced by this firm (mm/yy) 10/21 Total consultant contract cost (\$1,000's) Unknown Services completed by this firm (mm/yy) Ongoing Cost of consultant services provided by this firm (\$1,000's) \$456

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

As part of the scope of Task Order 5 of this contract, BDI performed live-load testing and field-verified load ratings on ten (10) off-system structures. These structures were selected from a list of structures that were determined to require load posting based on load ratings previously performed in this contract and included three (3) reinforced concrete slab bridges and seven (7) metal culverts of various types/configurations. These selected structures are intended to be representative of a larger sample set of similar structures that the results are intended to make broader assumptions about the group of bridges as a whole.

Live load tests were performed to aid in evaluating the structures in their current condition. The overall goal of these tests was to better understand the structure's behavior and in turn provide field-verified load ratings for each structure. To achieve this goal, the collected structural responses were used to generate a field-verified finite-element model (FEM) of the structure.

This field-verified FEM was then used to compute field-verifed load ratings according to the AASHTO Manual for Bridge Evaluation (MBE) and the LADOTD Bridge Design and Evaluation Manual (BDEM).

Firm members involved include: Brett Commander, Principal Engineer; Brice Carpenter, Lead Analysis/Rating Engineer; Jesse Sipple, QC Engineer/Project Manager



Project Relevance:

- LADOTD project
- Assessment of instrumentation needs
- Instrumentation plan preparation
- Field instrumentation installation
- Data acquisition and communication
- Instrumentation maintenance and problem resolution
- Load testing, data analysis, and load rating

17. Firm	Experience:
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APS		Past Performance	Evaluation Disciplin	ne(s)* G	Geotec	h		
I-10 Widening	g LA 415 to Essen	LN		Firm res	ponsi	bility (prime or sub?)	Sub	
Project number	H.004100	Owner's name	Owner's name Louisiana Department of Transportation					
Project location	Baton Rouge, LA	Owner's Proje	Owner's Project Manager Kristy Smi		Kristy Smith, P.E.			
Owner's address, phone, email	1201 Capitol Access Rd., Baton Rouge, La. 70802-4438 / 225.379.1016 / Kristy.Smith2@la.gov							
Services commenced by this firm (mm/yy) 09/19		Total consultant contract cost (\$1,000's)			N/A			
Services completed by this firm (mm/yy) Ongoing Co			Cost of consultant services provided by this firm (\$1,000's)			\$400		

Geotechnical investigation to provide client with the necessary information for planning and design I-10 widening. APS was asked thru our LADOTD geotechnical retainer to drill and sample a total of 52 deep borings starting at the washington exit and ending at the LSU lakes. Along with this drilling and sampling APS will also test for strength and engineering characteristics of the soils. A total of eight (8) over the water borings and 44 land borings with approximate 1000 triaxial compression, unconsolidated drained or undrained and atterberg limits.

Members involved:

Engineering Sergio Aviles, P.E., Project Manager Sairam Eddanapudi, P.E., Project Engineer

Surendra raj pathak, P.E., Staff Engineer

Laboratory testing Sergio Aviles, P.E., QA/QC Sairam Eddanapudi, P.E., QA/QC

Drilling

Melvin Vasquez, Driller Tech Van George, Driller Eric Bateaste, Driller





17. Firm	Experience:
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APS

Past Performance Evaluation Discipline(s)* Geotech

Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge						Firm responsibility (prime or sub?)		
Project number	H.001352 and H.002273	Owner's name	Huval & Associates, Inc.					
Project location	East Baton Rouge Parish, LA			Owner's Project Manager Thomas M. Gattle, I			<u>.</u>	
Owner's address, phone, email	Huval & Associates, Inc. / 922 West Pont Des Mouton Road Lafayette, LA 70507 / 337.234.3798 / tgattle@huvalassoc.com							
Services commenced by this firm (mm/yy) 05/20			Total consultant contract cost (\$1,000's)			N/A		
Services completed by this firm (mm/yy) Ongoing			Cost of consultant services provided by this firm (\$1,000's)				\$115	

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

Geotechnical engineering to provide client with the necessary information for planning and build of LA 19 rr bridge - slope stability (embankment), LA 19 rr bridge embankment/ mse wall settlement/ retaining wall, LA 19 twin bridges - ppc piles, LA 67 bridge - drilled shafts. All the necessary design will be done by APS. No issue as of today. APS also drilled and sampled all the borings for LADOTD thru the geotechnical retainer and tested in house by APS laboratory.

Members involved:

Engineering

Sergio Aviles, P.E., Project Manager Sairam Eddanapudi, P.E., Project Engineer Surendra raj pathak, P.E., Staff Engineer

Laboratory testing

Sergio Aviles, P.E., QA/QC Sairam Eddanapudi, P.E., QA/QC Donna Easterly, Lab Manager Cindy falks, Lab Tech **Drilling** Melvin Vasquez, Driller Tech Van George, Driller Eric Bateaste, Driller Oscar johnson, Driller Tech Trenton Anderson, Driller Tech



17. Firm Experience:

Civil Design & Construction, Inc.				Past Perf	Past Performance Evaluation Discipline(s)* Survey					
Rural Bridge	e Initiativ	e			Firm responsi sub?)	bility (prime or	Sub			
Project number	H.013955, H etc.	I. 013956,	Owner's name	Louisia	na Department of Transportati	ion and Developme	ent			
Project location	Vernon Parisl	n, LA			Owner's Project Manager	(Sub to BKI)				
Owner's address, email	, phone,	Unknown								
Services commenced by this firm (mm/yy) 07/20 T			Total consu	Itant contract cost (\$1,000's	N/A					

Services completed by this firm (mm/yy) 04/21 Cost of consultant services provided by this firm (\$1,000's) \$338 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 category included in the advertisement, then indicate which past performance evaluation discipline(s) this project is being used to represent.

Project Description:

The intent of this project was all necessary engineering and related services required for developing plans for the replacement of 35 bridges on the State Highway System and/or local roadways, LA. CD&C provided survey for 6 of these sites. Those include H.013955, H.013956, H.013957, H.013958, H.013959, & H.013989. CD&C used Mobile LiDAR and traditional means and methods to survey the sites in accordance with LADOTD Location and Survey Manual.

CD&C's Role:

CD&C performed a topography within the existing right of way on each of the 6 sites our firm was tasked. CD&C also located all utilities within the designated areas of the bridge site and cross-sectioned each channel up and downstream of the bridge. Utilities were marked by LA One Call. 3D Terrestrial Scanning was used in conjunction with traditional surveying means and methods to collect data for the project.

Members Involved: Karla E. Weston, P.E., Ralph Burgess, PLS, Chris Ballard, PLS John Ewing, Phil Dupree, Jacob Stoehr, Scott Benton, Madison Mills, LSI & Trenton Norris

Performed in LA: 100%



17. Finn Experien	ice.										
Civil Design & Construction, Inc.				Past Perf	Past Performance Evaluation Discipline(s)* Survey						
LA 58: Petit Bridge	Caillou B	ridge Rel	nabilitatio	on / Sara	ah	Firm responsil sub?)	bility (prime or	Sub			
Project number	H.013955, H. 013956, Owner's etc. name			Louisiar	Louisiana Department of Transportation and Development						
Project location	Terrebonne P	arish, LA			Owner's Project Manager Thomas Gattle (Huval & Assoc)						
Owner's address, phone, email 922 W. Point Des Mouton R				Rd., Lafayett	te, LA 705007	7 / 337.234.3798	/ tgattle@tgattle@ht	uvalassoc.com			
Services commenced by this firm (mm/yy) 04/17 To			Total consu	otal consultant contract cost (\$1,000's)			N/A				
Services completed by this firm (mm/yy) 07/17 Co				Cost of con	ost of consultant services provided by this firm (\$1,000's) \$31						
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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 category included in the advertisement, then indicate which past performance evaluation discipline(s) this project is being used to represent.

Project Description: The purpose of this project is to provide a structural, architectural, mechanical, and electrical rehabilitation of the movable bridge and approaches that shall allow it to remain in service for an additional 50 years with routine maintenance along with various other repairs and updates to the site. CD&C was tasked with performing the topographic survey and DTM for this movable bridge structure and site.

<u>CD&C's Role:</u> CD&C performed a topography survey along LA 58 from Little Caillou Road to Bayside Drive within the existing right of way. Also, CD&C located all utilities within the designated areas of the bridge site and cross-sectioned this large bayou up and downstream of the bridge. Utilities were marked by LA One Call. **3D Terrestrial Scanning** was



used in conjunction with single beam hydrographic surveying in addition to traditional means and methods to collect data for the project. To obtain all critical information for design the bridge had to be scanned at both raised and lowered positions.

<u>Members Involved:</u> CD&C employees involved in the project included Ralph Burgess, PLS, Survey Manager; Christopher Ballard, PLS Survey Project Manager; Trent Norris, 3D Scanning Technician; John Ewing, Survey Technician

Performed in LA: 100%

17. Firm Experier	ice:							
Matrix New World	Engineering	Past Performance Evaluation Discipline(s)* Environmental						
Sherwood Forest Extension (Greenwell Springs Road to Joor Road)					Firm responsibility (prime or sub?)			
Project number	20-CP-HC-0014	Owner's name	City of Baton, Parish					
Project location	Iberia Parish, LA	Owner's Project Manager Tom Stephens						
Owner's address, phone, email	3773 Harding Boulevard, E	aton Rouge / 225.38	9.3000 / tstephens@b	orla.gov				
Services commenced by this firm (mm/yy) 09/20		Total consultant contract cost (\$1,000's)			\$27			
Services completed by this firm (mm/yy) Ongoing			Cost of consultant services provided by this firm (\$1,000's)			\$27		

Matrix New World Engineering (Matrix) was selected by the City of Baton Rouge and Parish of East Baton Rouge to conduct wetland delineation fieldwork, wetland data reports and jurisdictional determination requests for the MOVEBR project Sherwood Forest Extension (Greenwell Springs Road to Joor Road). The proposed project consists of a new bridge crossing the Comite River.

Matrix staff (Chad Turner, Angela Singletary, and Lee Womack) were responsible for conducting the wetland delineation and obtaining a preliminary jurisdictional determination for the proposed project corridor. The proposed project consisted of a new two-lane roadway connecting Sherwood Forest to Joor Road, with a new bridge spanning the Comite River. The limits of delineation for the proposed project totaled 246.31 acres. During the field work, Matrix staff encountered multiple land uses/habitats, including an active construction landfill, a co-located pipeline and powerline right-of-way, abandoned sewage disposal ponds, and native hardwood forests typical of the Comite River floodplain. Matrix staff documented and mapped 62.67 acres of jurisdictional wetlands. Additionally, 52.70 acres of non-wetland waters were documented. Of that total, 49.98 acres were Section 10 waters, which are areas determined to be within the mean high water mark of the Comite River. This determination was made based on observed evidence of high water marks in the field, as well as calculated mean high water elevations based on water gages and point cloud LIDAR data. The preliminary jurisdictional determination was received on 5/18/2021 without requiring a site visit with the USACE.

Additionally, Matrix will be providing assistance to Atlas Technical Consultants during the Preliminary Design phase. During this phase, Atlas will develop multiple corridor alignment alternatives, analyzing impacts on key analysis criteria such as environmental, wetlands, drainage, and traffic impacts. Matrix will provide assistance on tasks including, but not limited to, preliminary corridor survey, design constraints corridor, design study, alternatives analysis, alignment selection, wetland/floodplain impact analysis, East Baton Rouge Parish fill mitigation ordinance, cost/benefit analysis, green infrastructure planning, and wetland mitigation cost analysis.

17. Firm Experier	ice:									
Matrix New World Engineering Past Performance E				aluation Disciplin	e(s)* Enviror	nmental				
Old Hammon	Old Hammond Highway, Segment 1, Phases A & B Firm responsibility (prime or sub?) F									
Project number	06-CS-HC-0028	Owner's name	Cit	y of Baton Rouge						
Project location	East Baton Rouge Parish, LA			Owner's Project Manager Tom Stephens		Tom Stephens				
Owner's address, phone, email	3773 Harding Boulevard, E	3773 Harding Boulevard, Baton Rouge / 225.389.3000 / tstephens@brla.gov								
Services commenced by this firm (mm/yy) 02/20 To			Total consultant contract cost (\$1,000's)			\$27				
Services completed by this firm (mm/yy) Ongoing Co			Cost of consultant services provided by this firm (\$1,000's)			\$27				

Matrix New World Engineering (Matrix) was selected by the City of Baton Rouge and Parish of East Baton Rouge to conduct wetland delineation fieldwork, wetland data reports and jurisdictional determination requests, and U.S. Army Corps of Engineers permitting for two MOVEBR Projects, Old Hammond Highway, Segment 1, Phases A and B.

Matrix staff (Chad Turner and Angela Singletary) were responsible for conducting the wetland delineation and obtaining an Approved Jurisdictional Determination (under the newly promulgated Navigable Waters Protection Rule) for the proposed project corridor. The proposed project consisted of widening Old Hammond Highway from 4 to 6 lanes, with a roundabout at Flannery Rd. and additional pedestrian facilities. The project corridor, totaling 1.25 miles in length, encompassed one bridge over Lively Bayou and multiple cross culverts. Matrix staff collected thorough and sufficient field data to determine that 0.41 acres of wetlands and 1.41 acres of non-wetland waters were non-jurisdictional under the Navigable Waters Protection Rule. Two separate approved jurisdictional determination were received for the projects: on 11/17/2020 for Phase A and 5/13/2021 for Phase B.

Currently, Matrix is preparing Pre-Construction Notifications for Nationwide Permit 14 for submittal to the USACE New Orleans District, Central Evaluation Section.



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17. Firm Experience:

Meyer Engineers,	Past Performance Evaluation Discipline(s)*			Facilities/Landscape Management (Not Rated)		(Not		
Causeway Br	use	Firm responsibility (prime or sub?)			Sub			
Project number	N/A	Owner's name	Gr	Greater New Orleans Expressway Commission sub to GEC				
Project location	Jefferson Parish, LA			Owner's Project Manager Mr. Cary A. Bourgeois,			Mr. Cary A. Bourgeois, P.I	Ξ.
Owner's address, phone, email	8282 Goodwood Blvd., Baton Rouge, LA 70806 / 225.405.9513 / cbourgeois@gecinc.com							
Services commenced by this firm (mm/yy) 01/22 To			Total consultant contract cost (\$1,000's)			\$25		
Services complete	Ongoing	Co	ost of consultant s	service	s provid	ed by this firm (\$1,000's)	\$25	

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

The project includes the rehabilitation of the upper two levels of the Bridge Tender's House located on the Causeway Bridge, Lake Pontchartrain, Louisiana. Meyer Engineers, Ltd. (Meyer) reviewed the existing conditions of the structure, and in conjunction with Gulf South Engineers & Consultants have determined that the Scope of Work is as follows:

Removing and replacing all existing windows at the operator's level with new, impact resistant glazing. All new glazing will be tinted or have interior shading devices installed to minimize heat gain into the tender's work environment.

- Reconfigure one of the tender's windows into an impact resistant, operable door to allow direct access to the catwalk outside.
- Paint all interior surfaces.
- Remove and replace all finish flooring with new material.
- Remove and replace all furniture/millwork with new construction to facilitate a more efficient layout for tenders.
- Provide better lighting for nighttime operations.
- Reduce ambient noise by installing acoustical absorbent materials.
- Upgrade existing air conditioning units and ventilation.
- Remove and replace stair tread anti-slip strips.
- Recover existing roof surface with new seamless waterproofing membrane.
- Repair access ladder to roof and install new roof safety railings.
- Patch and repair any structural damage within the scope of work.

The lower level holds the critical electronic equipment vital to the operation of the bridge. Even though the room is provided with adequate air conditioning, the dispersal of tempered air from this room percolates into the upper two floors. This adds to the imbalance in the ambient air temperature making it uncomfortable for the tenders. This imbalance will be investigated and will be rectified as part of this project. **Team members:** James Papia and Alfonso Romero



17. Firm Experience:

Meyer Engineers, Ltd. Past Performance E				• Evaluation Discipline(s)* Facilities/Landscape Management Rated)			t (Not	
Northshore Toll Plaza Renovation				Firm responsibility (prime or sub?) F			Prime	
Project number	N/A	Owner's name	Gre	Greater New Orleans Expressway Commission (GNOEC)				
Project location	Mandeville, LA (St. Tammany Parish)			Owner's Project Manager Robert Lambert				
Owner's address, phone, email	3939 Causeway Blvd., Suit	e 201, Metairie, LA 7	000	2 / 504.835.3118 /	rlamb	ert@gnoe	ec.org	
Services commenced by this firm (mm/yy) 04/02			Total consultant contract cost (\$1,000's)				\$136	
Services completed by this firm (mm/yy) 11/07			Cost of consultant services provided by this firm (\$1,000's)			\$136		

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

The project consisted of miscellaneous modifications to the North Shore Toll Plaza. The work included new exterior beautification scheme for the entire complex along with renovations to two existing buildings: main office and the garage and landscaping the buildings and toll plaza.

The main office renovations consisted of interior and exterior work; computer room, interior and accessible restroom, an exterior accessible public restroom, and provide for accessibility to the building entrance, restrooms, and common areas.

The garage building renovations consisted of interior and exterior work; DWI interview room, employee locker/work room, multi-purpose break room, unisex restroom, tool maintenance office, mechanical/storage room, and electrical/technical room and provide for accessibility to the building entrance, restrooms, and common areas.

Also assisted in the renovation of the Police Auxiliary Building.

Team members: Elena Anderson





18. Approach and Methodology:

Project Approach – Team Qualifications

To successfully meet the requirements of this contract and assist the LA DOTD in properly maintaining and preserving their critical infrastructure, our Gresham Smith team has been assembled to provide the highest level of expertise and proven experience to complete any task order assignment. Our team includes three primary bridge firms to perform any and all bridge inspections, ratings, and preservation designs:

- Gresham Smith a regional firm holding similar contracts with Mississippi DOT, Tennessee DOT and Georgia DOT
- WSP, a national leader for movable bridges including mechanical, electrical, and structural engineering.
- Burgess & Niple, a national firm to provide expertise with inspection rope access and bridge rehabilitations.

Gresham Smith currently holds one of two IDIQ contracts for complex bridge inspections. Our staff understands the operational aspects of the DOTD Task Order process, and our staff is familiar with many of the structures in the DOTD system and the typical types of deterioration associated with the aging infrastructure inventory.

To supplement the three primary bridge firms, we have teamed with specialty consultants to support our team, each having held similar roles on the current Complex Bridge Inspection contract and key components of our team:

- CD&C, a certified DBE will provide survey services, including any imaging requirements.
- APS, a certified DBE, will provide geotechnical investigations for all structures.
- Bridge Diagnostics Inc. (BDI) will perform non-destructive testing and Bridge Health Monitoring. BDI performed ultrasonic pin testing and substructure movement monitoring on our current complex bridge inspection contract.
- Matrix New World Engineering will provide environmental and permitting services associated with repair plans.

• Meyer Engineers, LTD will assist with the preservation design of any required tender structures for movable bridges.

Project Approach – Staff Qualifications

The Gresham Smith bridge staff provides unparalleled experience with bridge preservations through our numerous preservation contracts with several different DOTs. For Mississippi DOT, Gresham Smith is one of 9 firms providing MDOT with bridge design expertise. MDOT has reselected our firm based on providing quality design services including 15 bridge replacements over the past 5 years. For Tennessee DOT, Gresham Smith holds a Bridge Preservation contract, including 3 reselections. Projects have included repairs, inspections, and load ratings. The ratings work have included rating for the new Emergency Vehicles (EV). For Georgia DOT, Gresham Smith is a trusted advisor for bridge management and preservation, including providing embedded staff to GDOT Bridge Maintenance.

Project Approach – Bridge Assessments

As proven in our current and past assignments, our team has demonstrated expertise on a wide array of bridge inspections including the following bridge inspections for LADOTD and MDOT:

- Major Trusses/River Crossings Under our current contract, we inspected Bridge 036110, Simmesport Truss over Red River. Members of our team have also inspected I-10 Mississippi River Bridge at Baton Rouge, I-20 Mississippi River Bridge at Vicksburg, US 84 Mississippi River Bridge at Natchez (MDOT) and LA 47 (Green Bridge) over Intracoastal Waterway.
- Segmental Structures Under Task Order 1 of our current contract, our team inspected Bridge 037532 LA 8 Boyce Bridge over the Red River, including confined space inspection techniques inside the post-tensioned segmental boxes.
- Cable-stayed Bridges Key members of our team have inspected cables and hangers for major cable stayed bridges, including SPRAT rope access techniques.

 Movable Bridges – Under Task Orders 1, 3 and 4, our team members have inspected 10 movable bridges including vertical lift bridges and swing bridges. From our inspection experience, our staff is very adept at identifying required items for both maintenance and preservation, and programming the required repairs accordingly.

Our team has the expertise to generate proposed repair recommendations directly from the inspection reports that properly prioritize the required inspections to best leverage limited funding while maximizing the benefits for the overall system. Several of our staff members, including our PM, have experience working directly for DOTs and facility owners with the understanding of balancing needs with opportunities to best implement repair recommendations.

Project Approach – Bridge Preservation Design

In addition to bridge inspection expertise, our team has also proven experience with repair and preservation design for a variety of repairs. For Task Order 2 under our current complex bridge inspection contract, Gresham Smith was asked to assist the DOTD in an emergency response for severe damage to the US 71 Spring Street Bridge in Shreveport.

In April 2020, a Union Pacific train derailed and caused substantial damage to Bent 3, requiring the emergency replacement of the bent. Working closely with DOTD and the selected contractor, our engineers performed an emergency inspection to access the damage and to measure and document the necessary repairs. Initially, a temporary strongback system was installed to support the structure for the removal of the damaged members. Temporary sheeting was designed to support the adjacent railroad tracks and helical piles were designed to support overturning loads from the railroad. A crashwall was designed and installed to protect the historic bridge from future derailments.

Project Approach – Typical Design Process

As part of our scoping process for each task order, our team will draw from our staff experience to develop the proposed preservation techniques while also identifying the proper team members with the related experience and expertise. Our team can utilize the entire bridge preservation toolbox to establish the full required scope. These tolls could include the following:

Initial Planning Tasks:

A good preservation program begins with proper planning for a thorough bridge assessment. The plan would include an assessment of the critical details and an evaluation of the recommended repairs. Our team is experienced in a variety of preservation plans including the following typical types of repairs:

- 1. Hydroblasting and Latex Modified Concrete overlays.
- 2. Deck joint modifications and replacements.
- 3. Fatigue crack arresting and modifications to steel fracture critical details.
- 4. Fiber wrapping to strengthen substructure units or to improve the load capacity of structural beams.
- 5. Pile splicing and modifications to improve the capacity of substructure units.
- 6. Bridge barrier renovations and guard rail end treatment modifications.
- 7. Jacking systems for resetting or replacing bearings, or for raising bridge beams to improve vertical underclearance.
- 8. Bridge drainage system repairs.
- 9. Our team has extensive experience in strengthening trusses and other structural steel members. John Weres with his Pennsylvania background and Courtney Rome with his Arkansas background have a great deal of experience in steel bridge design and rehabilitations. Repair experience includes many techniques from simple splicing and reinforcing to cable backup systems for truss members.



Project Approach – Team Leadership

Our team leaders are recognized on a national basis and have the proven experience and expertise to proper lead this project. Our Project Manager **John Weres**, **P.E.** has been involved with bridge inspection and design for 40 years. He began his career working for the City of Pittsburgh Bridge Department inspecting large trusses and arches.

Gresham Smith's Project Executive (Principal), **Herbert "Bert" Moore II**, **P.E.**, **PLS**, **PTOE** has over 23 years of experience in traffic engineering and operations and has served as both a consultant and as LADOTD's District 61 Traffic Operations Engineer (DTOE) for six years. Throughout his career, Bert has worked as a traffic engineer working with traffic patterns, traffic growth, traffic signals and Transportation Management Plans (TMP). As project executive, Bert will provide overall management and direction for our team, ensuring that LADOTD's vision for the project is achieved. Bert will conduct monthly budget review meetings with the PM to ensure the project is on schedule and under budget. Along with **Rebecca Murray**, **P.E.**, **PTOE**, **RSP1**, our traffic team has the highest skills and experience levels available for this assignment.

Our roadway team will be managed by **Brennon Hughes**, **P.E.** with support provided by **Richard Savoie**, **P.E.** and **Ronnie Robinson**, **P.E.**

All of our roadway design leaders are former DOTD Roadway Group staff with proven experience on DOTD projects. As former Chief Engineer for the Department and as former Permits Manager for District 61, Richard and Ronnie have overseen the development of hundreds of bid packages. The roadway managers will also work closely with the hydraulics staff during the initial evaluations to verify that any proposed grade adjustments required for meeting hydraulics can be accommodated in the approaches with minimal impacts to side slopes and adjacent properties and drainage facilities.

Our bridge team includes 5 Louisiana Professional Engineers and support staff. **John Weres, P.E.** will serve as Project Manager and Lead Structures Engineer. John brings over 40 years of experience including DOTD experience, railroad overpass experience, major program management with multiple bridges and experience with compact girder designs such as LG-25 shaped girders.

Tom Tran, P.E. will provide Quality Assurance for the bridge team. Tom has managed bridge designs for hundreds of bridges. Tom also designed the "butterfly" sign structure on the I-10 twin spans in Louisiana. **Emery Sayre, P.E.** has served as Engineer of Record for multiple bridges utilizing the LG-25 beam shape type of girders, without a top flange, for MDOT. Emery has also worked for contractors and is well versed in temporary works, jacking plans and erection plans. **Courtney Rome, P.E.** will assist with both the bridge designs and inspection assignments. Courtney's experience includes the foundation designs for the US 71 Emergency Repairs project (Featured Project) which included close coordination with Union Pacific and KCS Railroads.

Any survey requirements will be performed by Civil Design & Construction (CD&C). CD&C is led by **Karla Weston, P.E.** and they have proven expertise in surveying for DOTD structures and for right-of-way map development. CD&C is a certified DBE firm. Geotechnical services will be provided by APS, a certified DBE firm with statewide experience in foundations designs, slide stability and underpinning of structural foundations.

Quality Program

John Weres, P.E. will serve as the structural Engineer-of-Record for; while Tom Tran, P.E. will provide the quality assurance verification for all of the designs. The roadway designs and contract documents will be led
by either Brennon Hughes, PE or Richard Savoie, PE. Our project specific QA/QC plan is included in Section 21 and addresses not only the bridge design tasks, but all design related tasks. At Gresham Smith, Quality is an essential component of each task and not simply a process to be completed. Each of our task leads are provided the authority to properly ensure that all team members understand the project requirements and that they follow the prescribed systems to ensure reliability in the design process.

Project Knowledge & Schedule

With the possible infusion of new federal funding, our team has the depth and flexibility to expedite projects in order to complete multiple and concurrent assignments. For a typical design project, we will develop a milestone tracking spreadsheet and will list the proposed dates/actual dates for the following and be submitted with each monthly invoice:

- Topographic Survey
- Environmental Clearance
- Core Boring Program/Foundation Recommendations
- 60% Preliminary Submission
- 95% Preliminary Submission
- Plan in Hand Meeting
- 95% Final Plans (for technical review)

- 98% Final Plans (for Chief Engineer approval)
- 100% Final Plans for letting
- Letting Date

Our proposed team has the experience and proper size to work on multiple assignments concurrently. Typically we are performing a bridge inspection and assessment, multiple designs, developing bid packages and supporting construction engineering services on multiple projects, and would be able to support numerous task order assignments concurrently as well.

Demonstrated Ability to meet Multiple Schedules

Gresham Smith has held various IDIQ retainer contracts for LA DOTD including for Complex bridge Inspection, Traffic, ITS, Safety, and Local Roadway Design. We have completed numerous task order assignments for all of these contracts with multiple assignments occurring concurrently. Our highly skilled team has the experience to perform professionally and to ensure that required letting dates are met for multiple critical assignments. The chart below demonstrates that while we can be working on multiple task orders at the same time, proper project management and adherence to schedules allows our teams to focus on the task at hand and to perform multiple concurrent assignments. Our team has the flexibility to adjust our processes to meet the needs of the DOTD, particularly with the anticipated influx of additional federal funds.



19. Workload:

Firm	Past Performance Evaluation Disciplines(s) *	State Project Number	Project Name and Location	Remaining unpaid balance**	
4400005890 - LADOTD Retainer Contract for Traffic Engineering					
Gresham Smith	Traffic	H.12018.5	Lafayette Adaptive Traffic Signals	\$166,999	
Gresham Smith	Road	H.013271.5-2	LRSP/SRTS Tangipahoa Striping and Signage	\$7,414	
Gresham Smith	Road	H.012279.5	LRSP/SRTS Endom Bridge Construction Support Supplement	\$4,450	
Gresham Smith	Road	H.012527.5	LRSP/SRTS West Feliciana Signs, Striping and Guardrail	\$3	
Gresham Smith	CE&I/OV / ITS	H.011500.6	Lake Charles ITS Phase 3	\$38,557	
Gresham Smith	CE&I/OV / ITS	H.012381.6-2	Fiber Optic Mapping and Management Services – Lafayette, West Baton Rouge, point Coupee, St. Landry and Rapides	\$14,803	
Gresham Smith	CE&I/OV / ITS	H.012381.6	Fiber Optic Mapping and Management Services - Calcasieu, Jefferson, Orleans, Ouachita, Plaquemines and St. Charles	\$453,467	
Gresham Smith	Bridge	H.009730.5	Complex Bridge Inspection TO#4	\$169,523	
Gresham Smith	Bridge	H.009730.5	Complex Bridge Inspection TO#5	\$382,280	
Gresham Smith	Road	H.013720.5	LRSP Signs and Stripping - Bonner Street Bridge Pedestrian Improvements	\$14,065	
Gresham Smith	Road	H.013767.5	LRSP Signs and Stripping - St. Landry and St. Martin Parishes	\$158,356	
Gresham Smith	CE&I/OV	H.009308.6	TO#1 New Orleans DPW SRTS Sidewalk Project	\$38,538	
WSP USA, Inc.	Bridge	H.010565.5	ELEC. & MECH. ENG. ON CALL TO4	\$5,001	
WSP USA, Inc.	Bridge	H.972249	ELEC. & MECH. ENG. ON CALL TO5	\$24,921	
WSP USA, Inc.	Bridge	H.010253.5	ELEC. & MECH. ENG. ON CALL TO6	\$9,888	
WSP USA, Inc.	Bridge	H.010251.5	ELEC. & MECH. ENG. ON CALL TO8	\$6,281	
WSP USA, Inc.	Bridge	H.010253.5	ELEC. & MECH. ENG. ON CALL TO9	\$85,239	
WSP USA, Inc.	Bridge	H.010253.5	ELEC. & MECH. ENG. ON CALL TO10	\$21,303	
WSP USA, Inc.	Bridge	H.004791	BELLE CHASSE BRIDGE & TUNNEL	\$357,712	
WSP USA, Inc.	Bridge	H.004791	BELLE CHASSE TUNNEL INSPECTION	\$26,432	
WSP USA, Inc.	Bridge	H.003931.5	LADOTD P3 Advisory Svcs On Call TO1	\$437,167	
WSP USA, Inc.	Bridge	H.003931.5	LADOTD P3 Advisory Svcs On Call TO2	\$462,286	
Burgess & Niple	N/A	N/A	N/A	N/A	
Bridge Diagnostics, Inc.	Bridge	H.009730.5 44 17163	IDIQ Non Destructive Evaluation of Structures via SounDAR Whiskey Bay and Pilot Channel – Task Order 10	\$47,869	
Bridge Diagnostics, Inc.	Bridge	H.014703.5 44-17163	IDIQ for Non-Destructive Evaluation of Structures Calcasieu Parish – Task Order 9	\$24	
Bridge Diagnostics, Inc.	Bridge	H.009730.5 44-17163	IDIQ I-10 for Non Destructive Evaluation of Structures Atchafalaya Floodway and I-10 over Whiskey Bay Pilot Channel Bridge decks – Task Order 8	\$69,198.38	

Firm	Past Performance Evaluation Disciplines(s) *	State Project Number	Project Name and Location	Remaining unpaid balance**
Bridge Diagnostics, Inc.	Bridge	H.012280.1 44-09224	IDIQ for testing of Unknown Foundations, Statewide – Task Order 3 – 1802005	\$0
Bridge Diagnostics, Inc.	Bridge	H.009730.5 44-17163	Retainer for Non Destructive Evaluation of Structures Task Order 1 General Services BDI1904004	\$3,679
Bridge Diagnostics, Inc.	Bridge	H.009730.5 44-17163	Retainer for Non Destructive Evaluation of Structures Task Order 7 Bonnet Carre Spillway 2006002	\$94,864
Bridge Diagnostics, Inc.	Bridge	H.009859.5 44-02791	Bonnet Carre & Bayou Ramos Monitoring System Maintenance	\$0
Bridge Diagnostics, Inc.	Bridge	H.010603.6 44-02538	Mississippi Bridge at Vicksburg GPS Monitoring – 150901	\$2,933
Bridge Diagnostics, Inc.	Bridge	H.012485.1 44-10099	IDIQ for Bridge Load Rating Services Statewide	\$0
APS	Geotech	H.013127	Retainer Contract for Geotechnical Services	\$53,996
APS	Geotech	H.013144	Retainer Contract for Geotechnical Services	\$45,457
Civil Design & Construction, Inc.	Surveying	4400017597	Rural Bridge Replacement Initiative (Districts 03, 07, 61, & 62)	\$7,000
Civil Design & Construction, Inc.	Surveying	4400017091/ TO-2	LWI Statewide Modeling R5 – Task Order #2	\$148,000
Civil Design & Construction, Inc.	Surveying	4400017091/ TO-3	LWI Statewide Modeling R5 – Task Order #3	\$246,000
Matrix	N/A	N/A	N/A	N/A
Meyer Engineers, Ltd.	CE&I/OV	H.001498	LA 24 & LA 316 Company Canal Bridge	\$377,489
Meyer Engineers, Ltd.	CE&I/OV	H.007331.6	Pakenham Drive (LA 46 – LA 39)	\$4,783
Meyer Engineers, Ltd.	CE&I/OV	H.007175	Lapalco (Victory – Westwood)	\$77,014
Meyer Engineers, Ltd.	Road	H.004727	Howard Avenue Extension (Loyola Avenue – LaSalle Street)	\$5,693
Meyer Engineers, Ltd.	CE&I/OV	H.014048	S.Tangipahoa Roads Pavement Rehab	\$707,683





















Overview of 1D and 2D Unsteady Flow Modeling

on

June 19, 2014

FTN Associates, Ltd. 3 Innwood, Suite 220 Little Rock, AR 72211 (501) 225-7779

Marc Cohnson, PE, CFM Instructor



Location: Little Rock, Arkansas

Hours of Instruction (PDH): 4.5

Continuing Education Units: 0.45

Senior Structural Engineer Federal Highway Administration Resource Center

Dates: April 9, 2014

(SDC A & B)







National Highway Institute Certificate of Training



Emery L. Sayre

FHWA-NHI-130078 Fracture Critical Inspection Techniques for Steel Bridges

hosted by

Alabama DOT

Date:September 15-18, 2015Location:Tuscaloosa, AL

Hours of Instruction: 25

Stever J. Milles Instructor Calvin 9. Kurpe

Serranter Local Coordinator 1201 Bang

Richard Barnaby, Director National Highway Institute





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

Please see our team's QA/QC plan included in the following pages.



DOTD Project Nos. 44-23921, 44-23922, 44-23923, 44-24185, 44-24186, 44-24187, 44-24188, and 44-24189 IDIQ CONTRACTS FOR BRIDGE PRESERVATION

Bridge Design QC/QA Plan

Meeting our Client's Needs and Expectations for TECHNICAL QUALITY, SERVICE EXCELLENCE, and CONSISTENT PERFORMANCE

May 2022



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1.0 INTRODUCTION TO THE BRIDGE DESIGN QC/QA PLAN

A QC/QA program is an essential component of a successful project. The process, when executed properly by a committed bridge team, will eliminate critical errors and conflicts in the ratings and design and improve plan accuracy and quality. Most importantly, the process promotes confidence in the owner and engineer that the rating, design and construction documents reduce liability and financial risk to them. The LA DOTD's Bridge Design and Evaluation Manual – Revision 9 (updated 8/8/2019) includes the Department's *Policy for Quality Control and Quality Assurance* which establishes the process for all bridge designs performed on LA DOTD projects. This QC/QA Plan has been developed with respect to both the LA DOTD and GRESHAM SMITH policies specifically for the IDIQ Contracts for Bridge Preservation.

1.1 Alignment of LA DOTD and GRESHAM SMITH'S QC/QA Policies

The LA DOTD policy is well aligned with GRESHAM SMITH's QC/QA program. One key difference in the two policies is that the LA DOTD Bridge QC/QA policy is specific to the design of bridges exclusively, while the GRESHAM SMITH Quality Management System (QMS) is applicable to all disciplines associated with a specific project.

GRESHAM SMITH's commitment to quality is rooted in our desire to meet our clients' needs and expectations for technical quality, service excellence and consistent performance. Quality is a pillar within our overall Practice Excellence model and includes a QMS that is built-in to our processes throughout a project life-cycle.

GRESHAM SMITH is a practice-led organization dedicated to the success of our clients and the development of our employees. Through our QMS, we strive for the continuous improvement of our work practices through the consistent application of established processes for the mutual success of GRESHAM SMITH's clients and the firm. The executive management team is fully committed to our QMS as a means to achieve firmwide operational goals. Our QMS is based on criteria found in the International Standard ISO-9001.

We are committed to accomplishing the following:

- Partnering with our clients to provide them with consistent quality in our deliverables, meeting their needs and expectations, and providing a service experience that results in repeat clients,
- Planning our work so that we deliver on our obligations,
- Providing the tools and processes to our employees to accomplish their work in a consistent and efficient manner,
- Training our employees to meet the requirements of the business and our clients,
- Promoting a practice that fosters collaboration and incorporates innovation,



- Measuring our performance against objectives to confirm we are improving, and communicating results throughout the firm and to our clients,
- Auditing our processes to benchmark new goals, verify compliance through multiple points of feedback, and identify opportunities for improvement,
- Continually improving our QMS to enhance its effectiveness,
- Utilizing a dedicated Quality Director responsible for monitoring the quality system and reporting regularly to the Management Team on the system's implementation, status and effectiveness.

1.2 Responsibility for QC/QA and the LA DOTD's Oversight Role

In conversations with the LA DOTD's staff and from review of the LA DOTD's Bridge QC/QA policy, it is apparent that the primary expectation is that consulting engineers contracting with the LA DOTD take full responsibility for their submittals at all stages of the bridge design process. By the assignment of this responsibility, the LA DOTD's bridge design staff expects to provide oversight on the design process but does not expect to be responsible for the checking of bridge designs and plan documents. Specifically, the LA DOTD's Bridge Task Manager will be responsible for the following project tasks, as described in the LA DOTD's Bridge QC/QA policy:

- Develop the bridge design scope of work, labor estimate, design team personnel requirements, and selection evaluation criteria for preparation of the solicitation.
- Participate in the proposal evaluation committee and the selection of the most qualified design team, evaluating design team qualifications, experience and QC/QA plan.
- Initiate a bridge design/rating kickoff meeting, covering items such as the staffing plan, QC/QA plan, project schedule and budget, share expectations and consultant rating criteria, bridge design criteria, and other project management agenda items per the LA DOTD checklist.
- Review and approve the Design Criteria and TS&L submittals for designs. Coordinate revisions in the Design Criteria with the design team for the project duration.
- Monitor the Design Team's implementation of their QC/QA plan.
- Maintain a Project Log sheet recording all major project activities (Project Meetings, Submittals, LA DOTD Review Comments, Major Decisions, etc).
- Review all Design Team submittals, intended to be a cursory review for constructability, consistency and clarity. These reviews are not intended to be a secondary QC of the Design Team's work.
- Monitor project schedule and milestone deliverables.
- Monitor Design Team effort with respect to scope and budget; process supplemental agreements; monitor claims avoidance.



- Review and approve invoices; verify Design Team staff is consistent with proposal; Review and approve qualifications of replacement staff proposed by the Design Team, if necessary.
- Perform a consultant rating for each formal submittal by the Design Team; share ratings and provide feedback to Design Team.
- Archive final bridge design files.

1.3 Definitions of QC and QA

An understanding of the definition of Quality Control (QC) and Quality Assurance (QA), as well as the responsibilities contained in these processes is an important component of GRESHAM SMITH's QMS and the LA DOTD's Bridge QC/QA policy. These key definitions are summarized below:

- Quality Control (QC): This process involves the procedure of checking the accuracy and consistency of calculations and drawings, detecting conflicts, design errors and omissions, and the procedure for resolution of internal comments, correcting and verification of revisions. Also, specific to bridge design, the process verifies that all bridge components are adequately designed for the specified limit stated in the AASHTO LRFD Bridge Design Specifications and the LA DOTD Bridge Design Manual and Memoranda.
- Quality Assurance (QA): This process involves the review of the QC documents to verify that the Quality Control (QC) procedure has been completed in accordance with GRESHAM SMITH's QMS and the LA DOTD Bridge QC/QA policy. In addition, the QA process verifies that the QC process was effective in preventing design and plan errors and assuring consistency.

1.4 Evidence/Verification of QC and QA Activities

GRESHAM SMITH's QMS fully documents the QC and QA processes for all intermediate and final submittals, providing evidence to the LA DOTD that our design team has executed the QC/QA procedures in accordance with the policy.



2.0 ROLES AND RESPONSIBILITIES

Meeting or exceeding the provisions of the LA DOTD Bridge QC/QA policy, the GRESHAM SMITH QMS requires that the quality control processes be completed for all design disciplines for all submittals. For this Program, as it pertains to QC/QA, the roles and responsibilities of the design team are described below, with identification of specific staff shown in the Organization Chart.

2.1 Quality Assurance Manager

The QA Manager (Tom Tran, PE) will be responsible for assurance that the QC process has been completed, documented and properly filed in project records. The QA Manager will oversee the communication and training of the QC procedures to the project team, including subconsultants. The QA Manager is responsible for the documentation of this training (sign in sheet, development of the training course) and for filing these documents in the project directory, available for audit. The QA Manager is responsible for certifying that a submittal deliverable has met the requirements of the GRESHAM SMITH QMS and the LA DOTD Bridge QC/QA policy and can be released to the client.

2.2 Original Designers and CADD Design Personnel

The original designers are responsible for preparing original calculations and plan drawings in accordance with the direction provided by the Project Plan and associated pre-planning references and design tools (i.e. – Design Criteria, Technical Task Protocols, Design Tools, Validated Software, etc.). In the QC/QA process, the original designers are responsible for the timely, complete and effective preparation of the calculations and plans, incorporating weekly design coordination directives during the design development. The original designers may be professional engineers or engineering interns.

The original designers are responsible for actively resolving comments received at each level of QC (Discipline, Independent Peer, and Inter-Discipline) and for making the necessary corrections in advance of the next level of QC or QA reviews. All design personnel (Engineering and CADD designers) will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory, available for audit.

2.3 Discipline QC Reviewers

This level of review will be completed by experienced engineers who are responsible for the detailed checking of all calculations, specifications, special provisions and plan documents. For this program, we anticipate this level of review will be performed by GRESHAM SMITH staff or the corresponding subconsultant, as indicated in the organization chart. If the original calculations are prepared by a professional engineer, the Discipline QC reviewer may be either another professional engineer or an

experienced engineering intern. If the original calculations are prepared by an engineering intern, the Discipline Review will be completed by an experienced professional engineer. This approach is in compliance with LA DOTD policy. A LA professional engineer will serve as either the lead design engineer or the QC reviewer.

The Discipline QC reviewer will be responsible for documenting all comments, pursuing resolution with the original designer or detailer and for progressing the QC documents (calculations, plans and QC forms) to completion prior to forwarding to the Independent Peer QC and Inter-Discipline QC reviewers. The Discipline QC reviewers will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory, available for audit.

2.4 Independent Peer QC Reviewers

Independent peer reviews are not anticipated for this project due to the non-complex classification assigned to this project. Should a future supplement or task order require such an evaluation, an amendment to this document will be provided. Standard forms for independent peer reviews are included in the appendix for general reference.

2.5 Inter-Discipline QC Reviewers

This level of review will be completed by Discipline Task Leaders (i.e. – Bridge, Geotechnical, Roadway, MOT, Drainage, Traffic, CADD, etc) who are responsible for an oversight review of the plans intended to identify conflicts between the disciplines and to identify plan consistency issues not identified in the more detailed Discipline QC review. For this project, we anticipate this level of review will be completed by the Discipline Leads, comprising of GRESHAM SMITH and our teaming partners. This level of review is required by GRESHAM SMITH's QMS policy and is not intended to replace the Independent Peer Bridge QC review.

The Inter-Discipline QC reviewer will be responsible for documenting all comments, pursuing resolution with the original designer or detailer and for progressing the QC documents (calculations, plans and QC forms) to completion prior to forwarding to the Quality Assurance Manager for his QA review. All design personnel, including each Inter-Discipline QC reviewer will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory and available for audit.

2.6 Engineer of Record

The Engineer of Record for this project will be assigned by the supervisor or discipline lead on the project team for each task assignment. The Engineer of Record is responsible for the supervision of the calculation, plan and special provision preparation, and is responsible for participation in or oversight of the QC and QA review processes. The Engineer of Record must be licensed to practice engineering in the State of Louisiana; and must have demonstrated experience in the design of



similar structures. In addition to overseeing the calculations and plan submittal thru the QC/QA process, the Engineer of Record is responsible for obtaining the seal and signature of any co-signed sheets in the bridge plans (geotechnical, H&H, etc). The Engineer of Record (EOR) is also responsible for assembling the complete final calculation documents in the format prescribed by the LA DOTD, assuring that all plan sheets include the designer's, design checker's, detailer's and detail checker's initials and for sealing and ensuring special provisions are accurately shown on the construction proposal.

The Engineer of Record will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory, available for audit.

The Engineer of Record for the bridge design related activities for this project is proposed to be John S. Weres, PE, the Louisiana Bridge Manager for GRESHAM SMITH. A separate Engineer of Record may be assigned for a particular bridge project at a later time, but we would consult with DOTD prior to that assignment.



3.0 PRE-PLANNING ACTIVITIES

Both the LA DOTD's and GRESHAM SMITH's QC/QA policies contain careful project execution planning, document control procedures, communication protocols and specific QC and QA procedures.

3.1 Development of the Project Plan

The GRESHAM SMITH team will prepare a Project Plan for distribution to the design team. The plan will contain:

- A project background description and scope summary,
- A design criteria document prepared in compliance with the LA DOTD's checklist. The design criteria document will be submitted to the LA DOTD for review and concurrence,
- Identification of the project team members, organization chart, contact information, and guidance on internal and external communication,
- Identification of all deliverables,
- Project design schedule and task budgets,
- Description of the project directory structure, filing of external communication and file naming conventions, etc.,
- Organization of calculation documents, in compliance with the LA DOTD's QA/QC policy,
- QC and QA procedures, responsibilities and documentation of QC/QA training,
- Specific technical task protocols, design tool templates and design tool validation documentation,
- Templates of all project forms (Letter, Memorandum, Meeting Minutes, Design tool validation forms, Drawing and Calculation QC forms (LA DOTD and GRESHAM SMITH), Quality Assurance forms (LA DOTD and GRESHAM SMITH) to use on the project,
- Description of internal project quality auditing, continual improvement, and client feedback processes.

The project plan is a living document, and will be revised as the design criteria, scope or other internal procedure is revised. As stated in the LA DOTD's QC/QA policy, revisions in the design criteria will be forwarded to the LA DOTD for review and concurrence.

3.2 Project Directory Structure and Bridge Calculation Document Organization

The GRESHAM SMITH QMS policy has established a standardized project directory structure for the documentation of all projects delivered by GRESHAM SMITH. However, this structure may be modified to meet specific requirements of the client and our teaming partners, including the LA DOTD's preferences and file naming requirements as established in the LA DOTD's ProjectWise procedures.

3.3 Development of Technical Task Protocols, Design Tools, and Validation of Software

The design team will prepare technical task protocols for the purpose of documenting and providing detailed direction on specific design tasks. The protocols will provide direction on the specific use of design tools and validated software involved in the completion of the task. The documents will be controlled; revisions to the protocols will be noted by revision number and updated in the Project Plan. All revisions to task protocols will be communicated to design staff. Design Tools (i.e. – Spreadsheets, MathCAD sheets, etc.) will be developed and utilized for specific design calculation functions. All design tools that are prepared will be validated as required by the GRESHAM SMITH QMS, documented, filed and available for audit.

To the extent possible, the design team will select from the pre-approved list of software posted on the LA DOTD Bridge Division website. Before using the pre-approved software, the program will be validated as directed in the GRESHAM SMITH QMS prior to use. For special applications where software not included in the pre-approved list must be used, a synopsis of the software will be provided to the LA DOTD Bridge Design Engineer for approval prior to use. Similar to the pre-approved software, all specialty software will be validated as directed in the GRESHAM SMITH QMS prior to use. It is anticipated that LEAP bridge and MDX will serve as the primary design software with RC-Pier and ConSpan, and /or hand calculations utilized as necessary for various design and analysis components. MIDAS would be utilized for any complex geometry or required finite element analysis, but this is not anticipated for this program.



4.0 QUALITY CONTROL AND QUALITY ASSURANCE REVIEWS

4.1 Design Deliverable Activities

The following are the key anticipated milestones for this project:

- Survey
- Hydraulic Reports
- Pre Plan-in-Hand (Prelim Design)
- Plan-in-Hand
- Post Plan-in-Hand

- Environmental & R/W Requirements
- Pre-Advanced Check Prints
- Advance Check Prints
- Borings or Pile Lengths Reviews
- Final Tracings

Specific expectations for each deliverable are summarized in the LA DOTD Bridge QC/QA policy. Prior to each of the formal submittals, a 3-tiered Quality Control (QC) design review will be performed as well as a Quality Assurance (QA) review. The following flow chart represents the GRESHAM SMITH's design workflow.





4.2 Discipline Level QC Review of Calculations and Drawings

In this first tier of QC review, detailed calculation and drawing review is performed. GRESHAM SMITH's standard Document Checking Process as detailed in Appendix B is supplemented as noted below to blend the standard GRESHAM SMITH process and the DOTD requirements. Preceding the review, design development for the design phase is completed, design activity is in a "pencils down" mode and review sets are produced. In the Discipline QC, each calculation and drawing is thoroughly checked for accuracy, completeness, and for compliance with the project's design task protocols. The reviewer is designated as a senior engineer within the Quality Control Team. The review is documented in the calculations and drawings using a check print stamp and a color-coded mark as indicated below:

- Yellow Confirmed
- Black General comment or suggestion
- Red Correction to be made
- Blue Indicates correction was made
- Green Back check and concurrence with comment or other resolution
- Pink verification by the reviewer that the comment was addressed

Once the Discipline QC review of the calculations is completed, verified and documented using GRESHAM SMITH's-based and LA DOTD-based checklists, the calculations are designated as ready for an independent peer review, as may be appropriate. Similarly, once the Discipline QC review of the drawings is completed, verified and documented using GRESHAM SMITH's-based and LA DOTD-based checklists, the drawings are designated as ready for the Independent Peer QC Review in parallel with an Inter-Discipline QC Review. Issues that cannot be resolved between the Discipline QC reviewer and the original designer will be elevated to the design team leader or deputy project manager for resolution. These processes are described below.

4.3 Independent Peer QC Review of Calculations and Drawings

Refer to Section 2.4 – No Independent Peer Review is anticipated for this project.

4.4 Inter-Discipline QC Review of Drawings

The Inter Discipline Review is a discipline leader and project manager review of the documents; and is intended to be an overall design coordination review to identify potential conflicts in the plans between disciplines (i.e. – Roadway and Geometry, Structures, Drainage, Utilities, Geotechnical, etc.). Preceding the Inter-Discipline review, the Discipline QC review will be completed, design activity is in a "pencils down" mode and a drawing set is produced for review. Similar to the Discipline Review process, comments are provided in black or red, concurrence or other resolution in green, corrections in blue, and verification by the reviewers in pink. Issues that cannot be resolved between



the Inter-Discipline QC reviewer and the original designer will be elevated to the design team leader or deputy project manager for resolution. This review is documented in the Drawing QC checklist form previously discussed.

4.5 Quality Assurance Review of Calculations and Drawings

Once the drawings and calculations have completed the tiered, Discipline QC, Independent Peer QC and Inter-Discipline QC review processes, the submittal is ready for a Quality Assurance review. This review is performed at GRESHAM SMITH by a specifically-trained senior engineer designated to be the Quality Manager for the project. The QA reviewer will examine all documented review materials, including plans, calculations and QC forms for compliance with the GRESHAM SMITH and LA DOTD policies and for completeness. In addition, the QA process verifies that the QC process was effective in preventing design and plan errors and in assuring consistency. Any comments provided by the QA reviewer on the QC process or documentation must be resolved and addressed prior to the QA reviewer approving the design package (plans and calculations) to be submitted.

4.6 Post QA Review Revisions

If for any reason (i.e. – Late inputs or other issue not anticipated) revisions are necessary during or after completion of the QA review, all revisions will be documented on the drawing or calculation check prints and forwarded with revised drawings or calculations to the QA reviewer for a secondary review, prior to submittal.

4.7 Submittal and Filing

Once the QA reviewer has verified that the QC process was completed satisfactorily, they will complete and sign the Document Release Record, allowing the submittal to be released to the client. All calculation, drawing and QC/QA documents will be filed and archived in the project folder, organized and filed by submittal.



5.0 DOCUMENTATION OF COMMENTS/RESPONSES

5.1 Documentation of Internal Comments and Responses

The documentation of all internal comments and resolution will be contained within Discipline QC drawing check prints and forms, calculation review check prints and forms, and in Independent Peer Bridge QC calculation review forms and drawing check prints. Similarly, the documentation of the Inter-Discipline QC comments and resolution will be contained within the drawing check prints and forms. All QC documents will be stored electronically in the project folder and be available for audit.

5.2 Documentation of Client Comments and Responses

At formal submittal client reviews, a comment log will be used to document all comments, by page number. A plan markup may also be provided by the client. The design team will promptly review all comments received and schedule a comment resolution meeting to resolve the comments and set forth an action list to be completed prior to the next formal submittal. Revisions in the action list will be documented on the drawing and calculation Discipline QC review check prints for the next formal submittal.

5.3 Quality Assurance Records

Finally, the documentation of the QA review will be contained within the Document Release Record form at the completion and verification of all QC and QA review activities. All QA documents will be stored electronically in the project folder and be available for audit.



6.0 CONTROL OF SUBCONSULTANT QC PROCESS

GRESHAM SMITH's approach to project management and delivery is to fully incorporate subconsultants and teaming partners into an integrated project team, as opposed to an approach where subconsultants operate independently, with their deliverables "plugged into" the overall formal submittal. Subconsultants are integrated into the project communication process thru weekly project coordination. Individual subconsultant resources are expected to work as an extension of and inclusive with GRESHAM SMITH's staff resources. As such, subconsultants are expected to be fully trained in the GRESHAM SMITH QMS policy and to participate in the Discipline QC and Inter-Discipline QC reviews.

As described previously, all project personnel (including subconsultants) will be trained in both the LA DOTD's Bridge QC/QA policy, as well as GRESHAM SMITH's QMS policy. The training will be done by the Quality Assurance Manager, or designated Project Manager or Deputy Project Manager familiar with and experienced in the LA DOTD's Bridge QC/QA policy or GRESHAM SMITH's QMS policy.



7.0 CLIENT FEEDBACK AND QUALITY AUDITS

7.1 Administrative Oversight and Continuous Improvement

A desired outcome of the GRESHAM SMITH QMS policy is continuous improvement. The process identifies issues where the design team (collectively and individually) can improve design processes and skills. Most importantly, feedback from the client is solicited and incorporated into our process of continuous improvement, for each formal submittal. All project performance issues are discussed internally with the design team in regularly scheduled design coordination meetings throughout the project.

7.2 Internal and External Quality Audits

GRESHAM SMITH's Office of the Risk Management Plan performs independent internal audits of projects to assure that the QC/QA program is being implemented correctly. As all quality records are maintained for each formal submittal in the project directory, all QC and QA documents are available for LA DOTD quality audits at their request.



APPENDIX A – PROJECT PRE-PLANNING GUIDANCE & FORMS

- LA DOTD Design Criteria Checklist
- LA DOTD Project Activity Log Sheet
- LA DOTD Consultant Project Bridge Design Kick-Off Meeting Agenda Checklist
- GRESHAM SMITH PM-2 Assigning Project Roles & Responsibilities (Page 1 of 12)
- GRESHAM SMITH PM-3 Developing/Updating a Project Plan (Page 1 of 9)
- GRESHAM SMITH PMF-11 Project Plan Summary
- GRESHAM SMITH SS-1 Developing a Safety & Security Plan (Page 1 of 10)
- GRESHAM SMITH WIPM-31 Developing a Quality Plan Page (1 of 7)



THE COVER PAGE OF APPLICABLE GRESHAM SMITH PROCEDURES AND POLICIES IS INCLUDED IN THIS DOCUMENT. THE FULL PROCEDURE WILL BE INCLUDED IN THE OPERATIONAL VOLUME OF THE QC/QA PLAN

APPENDIX A-DESIGN CRITERIA CHECKLIST

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

____ Cover sheet

The following information must be included on the cover sheet:

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

Governing Design and Construction Specifications and Other References

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

____ Design Assumptions and Design Exceptions

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

____ General Information

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

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

____ Hydraulic Design Criteria

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

___ Design Factors

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

____ Design Loads

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

____ Limit States

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

____ Bridge Barrier Railing

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

____ Guardrail

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

____ Approach Slab

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

____ Deck and Deck Drainage

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

____ Bearing

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

____ Joint

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

____ Superstructure

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

_____ Substructure

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

____ Piles and Drilled Shafts

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

____ Geotechnical Design

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

____ Mechanical Design

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

____ Electrical/Lighting Design

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

As-Designed Bridge Rating Criteria

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

____ Software

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

APPENDIX J—PROJECT ACTIVITY LOG SHEET

Project No.:

Project Name:

Bridge Task Manager:

Date	Project Activity	Comments

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.)


QMS Process Section: Planning and Managing Work	Revision: 4 Date: 06SEP2018	Number: PM-2
Procedure: Project Roles and Responsibilities	Approval: McGormley/Wharton	Page: 1 of 9

A. PURPOSE

This procedure and associated exhibits address Gresham Smith's definition of project roles, standard practice for assigning project roles and responsibilities, and the minimum expectations of those individuals assigned a role to assure consistency in completing the responsibilities.

B. SCOPE

- 1. This procedure describes the process for assigning project roles and provides guidance to enable scalable application to suit all Gresham Smith projects.
- 2. This procedure and its associated exhibits define the primary project roles and summarizes general project responsibilities for each role.
- 3. This procedure does not address roles and responsibilities for personnel performing project support roles (e.g., IT, Document Control, etc.), nor does it address personnel performing business operations roles.

Note: Project role names may be labeled differently for external use to match client preferences.

C. DEFINITIONS

- 1. Authority: The assigned power or right to give instructions or make decisions.
- 2. Project Role: The project-specific job description assigned to an employee.
- 3. Responsibility: A functional duty or obligation of an employee or employees by the nature of their assigned project role. Responsibility cannot be shared or delegated.
- 4. Roles
 - a. Assistant Project Manager (APM): The APM position works with project managers (PM) in managing the project from the fee proposal stage through close-out. This position will work with project managers in creating, maintaining and communicating all aspects of the Project Plan, monitoring



QMS Process Section: Planning and Managing Work	Revision: 4 Date: 03JUN2019	Number: PM-3
Procedure: Developing/Updating a Project Execution Plan	Approval: John Wharton	Page: 1 of 10

A. PURPOSE

1. This procedure addresses Gresham Smith's standard practice for planning projects. It identifies all the elements of a well-planned project and identifies how these elements are pulled together into a cohesive plan. This procedure addresses the project activity after award of the project and prior to the kick-off meeting.

B. SCOPE

- 1. This procedure forms the core of the planning process and shows the relationship between the project execution plan and other portions of the "Planning and Managing Work" process.
- 2. This procedure applies to all projects in Gresham Smith. The degree of development of each project execution plan element is intended to be scalable to match the size and complexity of the project.
- 3. Note: The Project Execution Plan is a <u>living document</u>; The PM should update and re-issue the Plan throughout the project duration as changes occur.

C. DEFINITIONS

- 1. Agreement: The contractual instrument between the Client and Gresham Smith.
- Digital Data: AIA E203 defines Digital Data as "information, including communications, drawings, specifications and designs, created or stored for the Project in digital form." The term Digital Data includes the Model, CAD files, Word files, Excel files, and PDF files.
- 3. Qualified Reviewer: A person who has experience <u>directly relevant</u> to the project he/she is being asked to review, <u>and</u> who demonstrates the technical capabilities to perform as a checker. Ideally, the qualified reviewer has designed and/or been in responsible charge of a project very similar in nature, scope and complexity.
- 4. Quality Assurance (QA): Part of quality management focused on providing <u>confidence that quality requirements as defined in our QMS will be fulfilled</u>. It is aimed at preventing errors and building in quality throughout the process. This

Gresham Smith

Quality Management System			
QMS Forms: Project Execution Plan	Revision: 6 Date: 03JUN2019	Number: PMF-31	Page: 1 of 1
Project Information			
Project Name/Location:	ABC Facility and Site Expansion		
Client:	ABC Company, LLC		
Project Manager:	Jones	PX:	Anderson
Gresham Smith Project Numbe	12365.05	Gresham Smith Responsibility:	Prime
Date Prepared:	7-Jan-2019	Revision Date:	
	Form of Plan/Document:	Describe Location of Plan or	r Details or Link:
1 Agreements		(Overwrite folder link if nece	ssary)
Agreement: Client	Gresham Smith Standard	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\01Agrmnts
Digital Data Agreement: Client	AIA E203, Digital Model Execution Plan	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\01Agrmnts
Agreement: Subconsultants	Gresham Smith Standard	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\01Agrmnts
Digital Data Agrmnt: Subconsultant	AIA E203, Digital Model Execution Plan	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\01Agrmnts
Digital Data Agrmnt: 3rd Party	Gresham Smith Waiver	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\01Agrmnts
Amendments/Changes:	Located in Agreements folder	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\01Agrmnts
Invoicing Process:	Gresham Smith Standard	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\00Financial
2 Risk Management Plan			
Risk Management Plan:	See tab RMF41	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\02RiskMgmt
3 Staffing Plan / Roles an	d Responsibilities		
Staffing Plan:	See tab PMF21	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\03TeamR&R
4 Scope of Services			
Scope of Services:	Scope incorporated into Agreement	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\04Scope
5 Schedule and Deliverab	les		
Project Schedule:	Located in Schedule folder	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\05Schedule
Team Meetings:	Every Two Weeks	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\05Schedule
6 Budget			
Budget Plan:	Budget Breakdown in Vision	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\06Budget
Earned Value:	Earned Value in Vision	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\06Budget
7 Work Breakdown			
Work Breakdown Structure:	See Vision	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\07WBS
8 Quality Plan			
Quality Assurance Plan:	Gresham Smith QMS procedures	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\08Quality
Quality Control Plan:	See tab PMF32	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\08Quality
Subconsultant Quality Plan:	Subs follow our QC Plan	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\08Quality
Client Quality Process:	No Special Client Requirements	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\08Quality
9 Technology Plan			
Document Management:	Gresham Smith Standard - NewForma	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProiPlan\09PracticeTech
Technology Validation Plan	See tab DPF101	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\09PracticeTech
Digital Model Execution Plan	Located in PracticeTech folder	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProiPlan\09PracticeTech
10 Safety & Security Dian			
Safety & Security Plan	See tab SSE11	\\global.gsp\data\nflcg_nf02\1236505\04	PM\01ProiPlan\10Safety
		nglosal.gopiaalainnog 1102/1200303/04	
11 Sustainability Plan			
Sustainability Plan:	See tab PMF33	\\global.gsp\data\nf\cg_nf02\1236505\04	PM\01ProjPlan\11Sustainability



QMS Process Section: Safety and Security	Revision: 1	Number:
	Date: 06SEP2018	SS-1
Procedure: Developing a Safety & Security Plan	Approval: John Wharton	Page: 1 of 10

A. PURPOSE

 This procedure documents a Safety & Security Plan and provides the details necessary to support the development of a complete and effective plan. The procedure provides a methodology for the identification of the potential risks, evaluation of the probability and severity of those risks, and potential plans to mitigate or eliminate the risk. The Safety & Security Plan is one of the tools for the Project Manager to plan and execute the project.

B. SCOPE

- 1. This procedure applies to all projects and provides the standard template for capturing all issues related to Safety and Security.
- 2. Safety & Security Management begins during the "Pursuing" phase before a proposal has been submitted and continues throughout the life-cycle of the project. The major efforts will take place during both the Pursuing and Planning phases, after which the efforts will primarily focus on ensuring the plan is followed by the project team, identifying additional risks that may arise, and monitoring for compliance to the plan.
- 3. The intent is to address all elements of the project that are included in our scope including work in the home office, client's site, and construction site. Guidance is provided for typical scenarios, but is not to be considered comprehensive.
- 4. The plan requires the PM to identify issues that are beyond the scope of "typical" hazards for which the majority of our staff will have been trained. These atypical or unusual hazards are to be identified and then a plan must be developed to address how we will work in a safe and secure manner. The PM is not expected to identify every possible hazard.



QMS Process Section: Planning and Managing Work	Revision: 3 Date: 03/UN2019	Number: WIPM-31
Work Instruction: Developing a Quality Control Plan	Approval: John Wharton	Page: 1

A. PURPOSE

1. This work instruction addresses Gresham Smith's standard practice for creating and maintaining a Quality Control Plan.

B. SCOPE

1. This work instruction applies to all projects in Gresham Smith. The degree of development of the Quality Control Plan is intended to be scalable to match the size of the project.

C. DEFINITIONS (See <u>QM-7: Definitions</u>)

- 1. Formal Check: Types of Formal Checking Include: Off-Team Discipline QC Check, Cross-Discipline Coordination (CDC) Check, Constructability Check
- 2. Quality Assurance (QA)
- 3. Quality Control (QC)
- 4. Quality Assurance (QA) Plan
- 5. Quality Control (QC) Plan
- 6. Quality Management System (QMS)
- 7. Roles: Constructability Reviewer (CR), Project Professional (PP), Qualified Reviewer (QR)

Notes:

- If a Market has a listing of designated Qualified Reviewers and Constructability Reviewers, the QR or CR must be from this list.
- Although the QR is not part of the project team, the team is encouraged to inform the QR periodically as significant decisions are made. This will provide valuable context to the QR prior to their review.
- 8. Scope of Services (SOS)
- 9. Self-Check
- 10. Work Breakdown Structure (WBS)



DOTD Project No. (8 Various Numbers) IDIQ Contracts for Bridge Preservation Bridge Design QC/QA Plan

APPENDIX B – DISCIPLINE & INTER-DISCIPLINE QC FORMS

- LA DOTD Final Calculation Book Checklist
- LA DOTD Off-System Guidelines Survey Checklist Not Anticipated
- GRESHAM SMITH DP-7 Checking and Authorization (Page 1 of 13)
- GRESHAM SMITH DP-10 Developing a Technology Plan (Page 1 of 5)
- GRESHAM SMITH DPF-71 QC Check Cover Sheet (Pages 1 & 2 of 2)



THE COVER PAGE OF APPLICABLE GRESHAM SMITH PROCEDURES AND POLICIES IS INCLUDED IN THIS DOCUMENT. THE FULL PROCEDURE WILL BE INCLUDED IN THE OPERATIONAL VOLUME OF THE QC/QA PLAN

APPENDIX B—FINAL CALCULATION BOOK CHECKLIST

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

_ Cover Sheet

The following information must be included on the cover sheet:

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

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

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

____ A PDF File of the As-Designed Rating Report Only

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

SURVEY CHECK LIST

PROJECT NO .:	
PARISH:	
DATE:	
CHECKED BY:	

- 1. _____ Minimum of 4 TBMs (one at each end of project & at each bridge end)
- 2. North arrow
- 3. _____ Scale:
- 4. ____ Name of roadway:
- 5. _____ Type of roadway:
- 6. _____ Width of roadway:
- 7. _____ Centerline elevations 2 decimals (Asphalt or Concrete) 1 decimal (Gravel)
- 8. Bearings
- 9. Curve data
- 10. Showing distance to the nearest intersecting roadway on both ends of survey?
- 11. Elevations & plusses of centerline of channel
- 12. Stream traverse shown & stationed where it ties to the survey line
- 13. Structure Number:

14. _____ Description of existing structure in upper right corner?

- 15. Description of existing structure: W- x L-
- 16. # of Spans:
- 17. Type of Bridge:
- 18. Exist. structure dashed/spans in the plan view
- 19. Exist. structure dashed/spans in the profile view
- 20. All existing pipe dashed
- 21. _____ All cross drains shown in profile (dashed) with flow lines
- 22. Pipe diameters shown
- 23. Name of waterway:
- 24. Flow arrows in stream shown
- 25. _____ Type of fence spelled out. # strands of B/W shown? Y N N/A
- 26. Utilities in plan & profile (if buried) shown
- 27. Utility Owners
- 28. Existing / Assumed / Apparent R/W
- 29. Reference Points
- 30. Low Chord Elevation:
- 31. Drainage Map
- 32. Lettering & symbols correct size & weight? Will be legible when reduced to half-size?
- 33. _____ State Project number and Parish name on field book(s) in permanent ink?
- 34. Certification in field book(s)?
- 35. _____ Point listing: numerical order with description, coordinates, elevations?
- 36. _____ Point listing: station & offset, descriptions, elevations?
- 37. _____ Point listing: roadway cross section points; station, offset, elevations?
- 38. _____ Point listing: stream cross section points; station, offset, elevations?
- 39. Plotted roadway and stream cross sections
- 40. Copy of color photos for DOTD file?
- 41. _____ State plane coordinates shown at 2 points (min.) on survey?
- 42. _____ QC/QA Certification



QMS Process Section: Design and Consulting Practices	Revision: 2 Date: 06SEP2018	Number: DP-7
Procedure: Document Checking and Authorization	Approval: J. Wharton	Page: 1

A. PURPOSE

1. Establish minimum requirements for checking and authorizing documents.

B. SCOPE

- 1. The scope of this document applies to technical reports, drawings, technical specifications, calculations, and cost estimates.
- 2. This procedure describes a process for checking documents to ensure quality work has been produced. Proactive efforts are required to produce quality work through daily commitment to the project plans, and close coordination with colleagues, Clients, and external parties.
- 3. All Formal Issue documents REQUIRE an Off-Team Discipline QC Check prior to issue. This check is performed by a Qualified Reviewer who is not part of the project team.
- 4. All Formal Issue documents that involve multiple disciplines REQUIRE the Project Professionals to perform a Cross-Discipline Coordination Check prior to issue.
- 5. Constructability Checks are strongly recommended prior to each Formal Issue, if applicable.
- 6. Informal Issues of Documents For Information Only do not require a formal check.
- 7. The scope of this document <u>includes our subconsultants</u>. Any documents that are produced by others under our prime agreement with the Owner must go through an Off-Team Discipline QC Check (using their own resources to perform the check). Subconsultants must also fully participate in our Cross-Discipline Coordination Check prior to each formal issue. Subconsultants are <u>required</u> to produce a cover sheet DPF-71 as evidence that the check took place and provide the signed copy to the GS&P Project Manager for each Formal Issue.

C. DEFINITIONS

1. Authorization: Individual's signature or initials on a document indicating the document is approved for Formal Issue.



QMS Process Section: Design and Consulting Practices	Revision: 2 Date: 06SEP2018	Number: DP-10
Procedure: Developing a Technology Plan	Approval: J. Wharton	Page: 1

A. PURPOSE

1. This work instruction addresses Gresham Smith's standard practice for creating and maintaining a Technology Plan.

B. SCOPE

- 1. This procedure applies to all projects in Gresham Smith.
- 2. The Technology Plan is the minimum requirement; however, many projects will require a Digital Model Execution Plan.
- 3. This procedure addresses the use of the following types of software products:
 - a. Commercially licensed software
 - b. Vendor-supplied software
 - c. Client-supplied or Client-mandated software
 - d. In-house developed software
 - e. Excel Spreadsheets used to impact design or deliverables
 - f. Public domain software
 - g. New Versions/Updates to any of the above
- 4. This procedure does not apply to software that is developed by Gresham Smith for use outside of Gresham Smith. Software developed for external use must be approved by the MVP and CFO.
- 5. This procedure does not apply to technology that is being used only to record data or information. For example, an Excel spreadsheet that is used to create a table of information.

C. DEFINITIONS

- 1. Commercial product: A product available for sale on the commercial market that provides results that we will use to impact our deliverables.
- 2. In-House Developed Software: Software developed by Gresham Smith that is not to be transferred outside of Gresham Smith. (Software developed for transference outside of Gresham Smith requires corporate approval.)

Gresham Smith Quality Management System

QMS Forms: QC Check Cover Sheet	Revision: 2	Number:	Page: 1
	Date: 06SEP2018	DPF-71	

Project Information	
Project Name/Location:	
Client:	
Project Manager:	PX:
Gresham Smith Project Number:	Date Prepared:
Project Professional:	Discipline:
Submittal Description:	Submittal Date:
Qualified Reviewer:	Constructability Reviewer:

Off-Team Discipline QC Check – Signature Block			
Action: Signature: Date:			
Submitted by Project Professional:			
Checked by Qualified Reviewer:			
Resolved by Project Professional:			

Cross-Discipline Coordination Check – Signature Block			
Discipline Designation	Originating PP: Confirm Review (Signature)	Discipline Designation	Originating PP: Confirm Review (Signature)
Choose an item.		Choose an item.	
Choose an item.		Choose an item.	
Choose an item.		Choose an item.	
Choose an item.		Choose an item.	
Choose an item.		Choose an item.	
Originating Discipline Resolved and Back-Checked Comments:			
Resolved By PP:		Date:	

Constructability Check – Signature Block				
Action:	Signature:	Date:		
Submitted by Project Professional:				
Checked by Constructability Reviewer:				
Resolved by Project Professional:				

Note: Completed Forms are to be stored digitally in the Newforma Folder: 04PM\01ProjPlan\08Quality

QMS Forms: QC Check Cover Sheet	Number: DPF-71	Page: 2

Project Professional's Notes to Reviewer(s)			
Documents to be Checked in this review (PP to List or Attach List)			
Document Name/Description (Drawings, Reports, Specs, Calculations, etc.)	Revision/Date		

Supporting Documents (PP to List or Attach List)	
Document Name/Description (Design Basis, Code Analysis, AHJ Comments)	Revision/Date



DOTD Project No. (8 Various Numbers) IDIQ Contracts for Bridge Preservation Bridge Design QC/QA Plan

APPENDIX C – INDEPENDENT PEER REVIEW BRIDGE QC FORMS

Not Required for this Bridge Project.



DOTD Project No. (8 Various Numbers) IDIQ Contracts for Bridge Preservation Bridge Design QC/QA Plan

APPENDIX D – QUALITY ASSURANCE & DELIVERABLE RELEASE RECORD FORMS

- LA DOTD QA Information Package Checklist
- LA DOTD QC/QA Certification
- LA DOTD Consultant Submittal QC/QA Certification
- GRESHAM SMITH QM-5 Internal Project Auditing (Page 1 of 11)
- GRESHAM SMITH QMF-52 Corrective Action Report Form (Page 1 of 1)
- GRESHAM SMITH WIDP-71 Signing and Sealing Documents (Page 1 of 18)

THE COVER PAGE OF APPLICABLE **GRESHAM SMITH** PROCEDURES AND POLICIES IS INCLUDED IN THIS DOCUMENT. THE FULL PROCEDURE WILL BE INCLUDED IN THE OPERATIONAL VOLUME OF THE QC/QA PLAN

APPENDIX C—QA INFORMATION PACKAGE CHECKLIST

Project No.:

Project Description:

 Calculation Book
 Plans
 Special Provisions
 Cost Estimate
 Other Documents

APPENDIX D—QC/QA CERTIFICATION

Project No.:

Project Name:

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

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

APPENDIX I—CONSULTANT SUBMITTAL QC/QA CERTIFICATION

Project No.: Project Name:

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

Submittal Description

Supervisor or Team Leader Name

Signature

Date



QMS Process Section: Quality Management	Revision: 1 Date: 15SEP2017	Number: QM-5
Procedure: Internal Project Auditing	Approval: John Wharton	Page: 1 of 11

A. PURPOSE

To define the steps for internal auditing of projects. Audits are conducted to verify conformance to process definitions, procedures, work instructions, and policies, in order to determine the effectiveness of the Quality Management System.

B. SCOPE

This procedure applies to internal audits only, and covers the complete audit process, from identification of the need for an internal audit, method of conducting an audit, reporting of audit findings, to completion of follow-up on corrective actions.

Internal audits are generally scheduled in advance, but an unscheduled audit may be initiated when a procedure breakdown has been identified, significant quality problem has arisen, or at other times as identified by the Director of Quality or Market Vice President.

C. DEFINITIONS

- 1. Audit Terms:
 - a. Complete: All information is provided and filed properly in the project directory. All form blanks requesting information are addressed, or identified as "Not Applicable". All actions are performed according to the relevant procedure or work instruction.
 - b. Partially Complete: Information is entered that is meaningful for a portion of the document that is being audited, but other relevant parts of the document are incomplete or incorrect.
 - c. Maintained: Documents have been created, and have been updated as the project has changed or evolved with time. For example, the project plan and the 11 modules that supplement the project plan are created at the beginning of the project, and those documents especially schedules frequently require maintenance as things change.



QMS Process Section: Quality Management	Revision: 2	Number:
	Date: 06SEP2018	QMF-52
QMS Forms: Corrective Action Report	Approval: Wharton	Page: 1 of 1

Project Name/Location:	Project Name						
Client Name:	Client Name						
Project Manager:	Name		PX:	Nam	е		
Auditor's Name:	Name		Gresham Smith Project No:	0000	00.00		
Auditee's Name:	Name		Gresham Smith Office:	Choc	ose an	item.	
Project Phase being audited:	Choose an item.		Date Prepared:	5-Jar	า-2017		
Note: Turn on "Review"	"Track Changes" to a	llow tracking of Co	omments and Signatu	ires			
<u>Auditor's Description of Non-</u> <u>Conformance</u> (Include a list of Project documents that do not conform to QMS Requirements, and list QMS documents that address the requirements)							
	Comply with Procedu	re, Non-Conforman	ce will be Corrected:		Yes		No
	Recommend a Change	e to the Procedure (Explain Below):		Yes		No
	Other (Explain Below):			No			
Auditee Proposed Corrective Action Plan:							
Auditor Posponso:	Corrective Action Plar	Approved:			Yes		No
<u>Auditor Nesponse.</u>	Corrective Action Plar	Disapproved:			Yes		No
Corrective Action Completed (Auditee):	Signature:		Date:				
Corrective Action Confirmed (Auditor):	Signature:		Date:				
	Follow-up Action Req	uired:			Yes		No
Director of Quality Response:	Procedure Revision to	be Implemented:			Yes		No



QMS Process Section: Design and Consulting Practices	Revision: 1	Number:
	Date: 06SEP2018	WIDP-71-EX4
Work Instruction: Signing and Sealing Documents:	Approval:	Page: 1 of 4
Exhibit 4 – Issuing Digitally Certified Documents	Wharton/Munkel	

Process for Creating "Digitally Certified" Documents

- 1. <u>PP</u>: Before applying seals and signatures, create a "backup" folder and store copies of PDFs to be sealed. The signing process sometimes has glitches and creating a backup can avoid having to re-publish PDFs from CAD.
- 2. <u>PP</u>: Apply the electronic seal image.
 - a. Method 1: Apply the electronic seal image and date in the native format (CAD or Revit) file. Generate the PDF file with the seal embedded. Be sure to use the correct <u>PDF naming convention</u>.
 - Method 2: Apply the electronic seal image in the PDF after the PDF has been generated from the native format (CAD or Revit) file. This is done in Adobe Reader DC using the "Stamp" tool. Select "Tools", then "Stamp". Click on the "Stamp" icon in the top banner. From the drop-down list, select "Seal". If you created a custom stamp (See Exhibit 3), it will appear as an image. Drag the image to the correct location and click to place it.
- <u>PP</u>: Apply the date (If the date was not already placed in the native format file prior to creating the PDF file): In Adobe Reader click "Tools", then click "Comment". Click on the text box symbol I. Then place the text box on the PDF file. The date normally goes below the professional seal, but be sure to check the state



licensing laws and policies to ensure you are complying. Insert the appropriate date in the text box. The box should be formatted with no border.

3. <u>PP</u>: Place the digital signature/certificate on each document:

Note: If you are using the Entrust verification system, insert your USB token with the Entrust Certificate into a USB port now.

Note: The PP <u>must perform a final review of the PDF contents</u> to ensure the PDF is complete and ready for signature.

- a. Open one or multiple PDFs using Adobe Reader DC. Up to about 10 PDF's can be opened at a time.
- b. Zoom / pan to the area in the plan where the seal resides.

Gresham Smith– Quality Management System			
QMS Process Section: Design and Consulting Practices	Revision: 1	Number:	
	Date: 06SEP2018	WIDP-71-EX4	

Work Instruction: Signing and Sealing Documents:Approval:Page:Exhibit 4 – Issuing Digitally Certified DocumentsWharton/Munkel2 of 4

- c. Click the "Tools" tab and then click the "Certificates" icon. Click "Digitally Sign"
- Select the Location of the digital signature: A box will appear. Place the box and resize if necessary to place the signature block in the correct location. The signature normally goes across the professional seal, but be sure to check the state licensing laws and policies to ensure you are complying.



e. Apply the Digital Certificate: A pop up box, "Sign with a Digital ID" will appear. Select the correct digital ID, and hit the "Continue" button. Note: Typically, there will just be one choice, unless you have certificates with both Entrust and IdenTrust.



- f. Choose how the signature will appear: Another box "Sign As..." will appear. Select the "appearance" box to make the selection.
 - Method 1: The default signature is the text certificate, and is the more secure method. Below is an example of a text, time and date stamp digital signature.
 Stephen Brown Brown Brown Date: 2017.07.07 15:11:28-05'00'
 - Method 2: If the client, AHJ or State Licensing Board requires a scanned image of a manual signature, click on the drop-down box next to "Appearance" and select the transparent signature image created in the setup process (Exhibit 3).

Gresham Smith– Quality Management System				
QMS Process Section: Design and Consulting Practices	Revision: 1	Number:		
	Date: 06SEP2018	WIDP-71-EX4		
Work Instruction: Signing and Sealing Documents:	Approval:	Page:		
Exhibit 4 – Issuing Digitally Certified Documents Wharton/Munkel 3 of 4				

- g. The "Sign as "YOUR NAME"" screen will appear. Select "Lock document after signing".
- h. Complete the signing process:
 - i. Enter your password created during the setup process.

Sign as Jo	hn Doe"	~
Appearance	Created 2017.12.29 16:05:33 -05' 🗸	Create Edit
	1/1).
	gr h l	10-C
€ Lock docu	ment after signing	View Certificate Detail:
☑ Lock docu Review docur	ment after signing	View Certificate Detail Review

- ii. Select the "Sign" button.
- iii. The "Save As" Windows dialog will appear. Click the "Save" button.
 Another dialog box will appear asking if you want to replace the existing file. Click "Yes". This will overwrite the original PDF with the new signed, secure version.
- iv. Close the individual PDF (not the Adobe window).



Note: After you save the file, be careful not to click again in the PDF until after the save command is complete which can take a few seconds. Clicking while it is saving can cause you to inadvertently apply two signatures which can frequently crash Adobe Reader DC.

Note: You may will see an error message after the save process competes. This is a glitch that typically has no adverse effects associated with viewing the final secure pdf and can typically be disregarded.

Gresham Smith– Quality Management System			
QMS Process Section: Design and Consulting Practices	Revision: 1	Number:	
	Date: 06SEP2018	WIDP-71-EX4	
Work Instruction: Signing and Sealing Documents:	Approval:	Page:	
Exhibit 4 – Issuing Digitally Certified Documents	Wharton/Munkel	4 of 4	

- 4. <u>PP</u>: Repeat the signing steps with the remaining PDFs. If you keep the active Adobe Reader DC window open during the entire multiple PDF signing process, you will not be prompted to enter your password each time you apply a signature.
- 5. <u>PP or Designee</u>: After the process is complete for multiple sheets, re-open each of the files to verify the signature has been properly applied and the security certificate is valid.
- 6. <u>All PP's: Applying multiple signatures</u>: If multiple signatures are required on a single sheet, for example, a Project Manual cover sheet, each registrant should apply their seal and signature as above, but DO NOT click on "Lock document after signing" as described above. If that box is checked, it will not be possible to add more signatures without invalidating the signatures already in place. Only the last registrant will click on "Lock document after signing".
- 7. <u>PP:</u> Signed documents should always be retained internally in accordance with various state board regulations and GSP document retention policies. Be careful to not delete any securely signed documents. These are considered originals.

<u>Tips:</u>

- Note: If you must apply anything other than your signature in Adobe, do so prior to applying the signature. For example, if the seal or date is left off, it can be applied in Adobe before applying the signature. Once you select "Lock document after Signing", "Sign", and save the file, <u>you cannot make any changes</u> to the document without invalidating the document.
- Non-secure documents such as transmittals can be signed simply using the "Sign" tool in "Fill & Sign". Typically, secure signatures are only needed in sealed documents or other sensitive documents.

Fill & Sign *	[Ab] X ✓ ○ − ●	🖧 Sign)
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REVISION HISTORY

Rev. No.	Date	Approval	Summary of Changes
1	05JAN2017	Wharton	General Revisions
2	06SEP2018	Wharton	Format Change

22. Sub-consultant Information:

Firm Name (as registered with Louisiana's Secretary of State)	Address	Point of Contact and email address	Phone Number
WSP USA Inc.	1100 Poydras Street, Suite 1175 New Orleans, LA 70163	Max Nassar, Vice President Senior Managing Director, Max.Nassar@wsp.com	225.218.3584
Burgess & Niple, Inc.	1511 N. Westshore Blvd. Suite 500 Tampa, FL 33607	Drew Appler, PE Drew.Appler@BurgessNiple.com	407-929-7846
Bridge Diagnostics	740 S. Pierce Ave., Unit 15 Louisville, CO 80027	Scott Aschermann, PE scotta@bditest.com	303.494.3230
APS Engineering and Testing, LLC	5261 Highland Rd. PMB #320 Baton Rouge, LA 70808	Sergio Aviles P.E., M.ASCE sergio@aps-testing.com	225.456.5714
Civil Design & Construction, Inc.	PO Box 857, Port Allen, LA 70767/3251 Southern Pacific Rd.	Karla E. Weston, PE kweston@cdcbr.com	225.765.1802
Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C., A Professional Corporation	2798 O'Neal Lane, Building F, Baton Rouge, LA 70816	Chad Turner cturner@mnwe.com	337.349.7755
Meyer Engineers, Ltd.	4937 Hearst Street, Suite 1B Metairie, LA 70001	David Dupre, P.E. ddupre@meyer-e-I.com	504.885.9892

(Add rows as needed)

23. Location:

This project will be managed locally by Gresham Smith from our office located at 10,000 Perkins Rowe Suite 280 Baton Rouge, LA 70810. Much of the work will be performed by our Baton Rouge staff, located in this office, and supported by our regional experts and our talented subconsultants.



Alpharetta, GA Atlanta, GA Baton Rouge, LA Birmingham, AL Charlotte, NC Chattanooga, TN Chicago, IL Cincinnati, OH Columbus, OH Dallas, TX Ft. Lauderdale, FL Jackson, MS Jacksonville, FL Knoxville, TN Lexington, KY Louisville, KY Orlando, FL Memphis, TN Miami, FL Nashville, TN Richmond, VA Suwanee, GA Tallahassee, FL Tampa, FL

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